

Preliminary Construction & Pedestrian Traffic Management Plan

Centre of Music & Drama, Lingwood Campus Administration & Student Centre and, Junior School Playground – Meriden School, Strathfield

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1 Introduction

1.1 Overview

Ason Group has been engaged by Meriden School to prepare a Preliminary Construction Pedestrian and Traffic Management Plan (CPTMP) for the proposed alterations and renovations at the Meriden School, Strathfield (the School). Works proposed across the three School campuses include:

- **At the Senior School Campus** (the Senior Campus), 3-13 Margaret Street and 10 – 12 Redmyre Road, a new Centre of Music and Drama (CMD).
- **At the Junior School Campus** (the Junior Campus), 36 – 38 Redmyre Road, a new landscaped playground.
- **At the Lingwood Prep School Campus** (the Lingwood Campus), 16B - 16 Margaret Street, Stage 2 works include provision of a new Administration and Student Centre (A & S Centre). It is noted that construction is currently being undertaken for the Stage development on the Lingwood Campus.

This Preliminary CPTMP has been produced in response to the Secretary's Environmental Assessment Requirements (SEARS) received in relation to the State Significant Development Application (SSDA) for the above Proposal. With regard to the CPTMP, the SEARs state:

The preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following:

- *assessment of cumulative impacts associated with other construction activities (if any)*
- *an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity*
- *details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process*
- *details of anticipated peak hour and daily construction vehicle movements to and from the site*
- *details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle*
- *details of temporary cycling and pedestrian access during construction.*

The purpose of this report is to detail a traffic plan for construction that would minimise traffic impacts on the surrounding road network, ensure the safety and efficiency of all workers, pedestrians and road

users, and provide information regarding the construction vehicle access routes and any changed road conditions (if applicable).

It is expected that this plan would be updated should any necessary changes to the currently proposed arrangements arise in the future and would be further detailed as part of CC works for submission to Council and any other government authorities in response to the relevant conditions of consent. Any changes to this plan shall be done in consultation with the Department of Planning & Environment (DPE), Strathfield Council (Council) and the Sydney Coordination Office (SCO). Any special events (if required) would be subject to a separate request for a specific permit not covered by this report.

Please note, Ason Group is responsible for the preparation of this Plan only and not for its implementation, which is the responsibility of the project manager / builder.

1.2 CPTMP Compliance with SEARs

A summary of the relevant requirements of the SEARs and this CPTMP's compliance with each is provided below for clarity.

Table 1: SEARs Compliance Table

Reference	Requirement	Response
-	The preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following:	N/A
i)	Assessment of cumulative impacts associated with other construction activities (if any)	Cumulative traffic and safety impacts of construction activities at key intersections have been outlined within Section 3.1.3 and Section 3.1.4.
ii)	An assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity	Section 3.1.4. outlines the cumulative traffic and pedestrian impacts at key intersections surrounding the Site.
iii)	Details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process	The anticipated construction program can be found in Section 2.1.
iv)	Details of anticipated peak hour and daily construction vehicle movements to and from the site	Section 3.1.1 outlines estimated heavy vehicle movements while Section 3.1.2 outlines the estimated light construction traffic vehicle generation.

Reference	Requirement	Response
v)	Details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle	Access and on-site car parking arrangements for site have been detailed within Section 2.3, 2.4 and 3.3. No on-site car parking will be provided. It is noted that Traffic Control Plans (TCPs) for the Construction would be produced, following consultation with Council and the SCO.
vi)	Details of temporary cycling and pedestrian access during construction.	Refer to Section 3.4 for Cycling and Pedestrian access during construction.

1.3 Site Location

The School is located within the Strathfield Council LGA, and lies approximately 10 kilometres south-east of Parramatta and 11 kilometres west of the Sydney CBD.

The School has three campus sites in close proximity to each other. The Senior Campus is bordered by Redmyre Road to the north, Margaret Street to the south, and residential dwellings to the east and west. The Junior Campus is bordered by Vernon Street to the west, Redmyre Road to the north, Margaret Street and a health care centre to the east, and residential dwellings to the south. The Lingwood Campus is bounded by Margaret Street to the north, a health care centre to the west, and residential dwellings to the east and south.

The Site is an approximate 7-minute walk (700m) from Strathfield Train station. The Location and Road Hierarchy Plan presented as **Figure 1** provides an appreciation of the Site and its location.

1.4 Road Hierarchy

The road hierarchy in the vicinity of the Site is shown in **Figure 1**, with the following roads considered noteworthy:

- **Raw Square** – an RMS State Road (MR668) that generally runs in a north-south direction located to the north of the Site which connects to Redmyre Road to the south and Leicester Avenue and Everton Road to north. This road provides a key linkage between Strathfield and the A44 and M4 motorways via the rail underpass.
- **Redmyre Road** – an RMS State Road (MR668) located north-west of the Site that provides a connection between The Boulevarde and Chalmers Road in an east-west direction. It generally carries three lanes of traffic in both direction along the northern frontage of the school before tapering back into 1 lane in each direction along the western street frontages. A bus lane occupies the right lane of the westbound direction along the northern street frontage. On-street parking is

available along the western section of Redmyre Road. The speed limit is 50km/hr however, reduces to 40km/hr during School Peak hours.

- **The Boulevarde** – an RMS State Road (MR668) that generally runs in a north-south direction located to the east of the Site which connects to Margaret Street and Redmyre Road to Strathfield Town Centre and provides access to Strathfield Train Station. The road generally provides two lanes of traffic in both direction with on-street parking available on the southbound side of the road. The Boulevarde carries approximately 20,700 vehicles per day both ways. A key pedestrian bridge is located above The Boulevard between Russell Street and Carrington Avenue.

- **Margaret Street** – a local road that generally runs in an east-west direction between the school campuses and provides a link between Redmyre Road to the west and The Boulevarde / Morwick Street to the east. Margaret Street provides vital links for traffic and pedestrian links to all three campuses. A mid-block pedestrian crossing links the southern Prep School Campus and Junior Campus to the northern Senior Campus. There are currently timed parking restrictions on the southern kerb line of Margaret Street, while timed Bus Zone and No Parking restrictions on the northern side of Margaret Street. There is one lane in each direction and has a speed limit of 50km/hr during off-school hours, reducing to 40km/hr during school peak hours.

- **Morwick Street** – an RMS regional road (SR2027) that runs in an east-west direction to the east of the Site. It connects The Boulevarde and Margaret Street via a signalised intersection and terminates to the east at the Wentworth Road and Railway Parade intersection. The road generally provides two lanes of traffic in both direction with restricted parking available on both sides of the street.

- **Vernon Street** – a local road that generally runs in a north-south direction located along the Junior Campus' western street frontage. A single lane of traffic is provided for each direction and on-street parking is available. The speed limit is usually 50km/hr but reduces to 40km/hr during School Peak hours.

- **Carrington Avenue** – a local road that generally runs in an east-west direction located to the south of the Site which connects to Vernon Street and the Boulevarde. The east of the avenue provides pedestrian links to The Boulevarde pedestrian bridge.

The Sites are conveniently located with primary access to the arterial and local road network serving the region (The Boulevarde, Redmyre Road and Raw Square). It is therefore able to effectively distribute traffic onto the wider road network, minimising traffic impacts on local roads.



Figure 1: Site and Road Hierarchy

1.5 Non-Car Access

The Site's proximity to public transport is shown in **Figure 3**, which highlights the locations and distances to bus and train services surrounding the Site.

1.5.1 Existing Train Services

The *Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area* (Transport for NSW (TfNSW), December 2013), states that train services influence the travel mode choices of areas within 800 metres walk (approximately 10 minutes) of a train station.

It is therefore noteworthy that the Site is located within 800 metres (approximately 500 metres) from the Strathfield Train Station. Strathfield Station is a major central train station hub that provides the following frequent services:

Sydney Trains Services:

- T1 North Shore, Northern & Western Line
- T2 Inner West & Leppington Line
- T3 Bankstown Line
- T7 Olympic Park Line

Intercity Trains Services:

- BMT – Blue Mountain Line
- CCN – Central Coast & Newcastle Line
- North Coast NSW
- North West NSW
- Western NSW

Accordingly, a proportion of workers travelling to and from the Site would be expected to use the train services at Strathfield Train station.

1.5.2 Existing Bus Services

The Site is accessible by a number of bus services and includes a bus stop located immediately adjacent to the subject site. It is noteworthy that there are several bus stops within 400 metres walking distance from the Site on Redmyre Road, The Boulevarde, Morwick Street and Albert Road. A major bus interchange is located at Strathfield Station providing an accessible location to transfer to different buses services.

There are twelve bus routes within walking distance, which are listed below:

Table 2: Public Bus Services

Bus Number	Route
407	Burwood to Strathfield
408	Burwood to Rookwood Cemetery
415	Campsie to Chiswick
458	Burwood to Ryde
480	Strathfield to Domain via Homebush Road
483	Strathfield to Domain via South Strathfield
525	Parramatta to Burwood via Olympic Park
526	Burwood to Rhodes Shopping Centre
913	Strathfield to Bankstown via Greenacre
914	Strathfield to Bankstown via Chullora
950	Strathfield to Hurstville
M90	Metrobus Burwood to Liverpool

The Site has good access to bus services, noting that bus routes 480, 415, 913, 914 and 450 are serviced by bus stops on Redmyre Road and The Boulevarde which are in close proximity to the School.

1.5.3 Pedestrian Connectivity

Pedestrian access is provided by footpaths along Redmyre Road, Vernon Street, Margaret Street, Raw Square, The Boulevarde and the majority of roads within the Strathfield Town Centre.

These footpaths are generous in width, especially at Margaret Street with footpath widths of up to 2.5m provided on both sides of the road. Footpaths near the Strathfield Town Centre are wide and well-integrated into the street amenities to handle large pedestrian volumes.

Figure 2 and **Table 3** outlines the location and provides a brief description of key pedestrian crossings around the vicinity of the Site.



Figure 2: Key Pedestrian Road Crossings

Table 3: Pedestrian Crossings

Number Reference	Location	Pedestrian Crossing Description
1	Redmyre Road / Raw Square	Signalised crossing on western and northern leg with pedestrian refuge island
2	Redmyre Road / The Boulevard	Signalised crossing on western and northern leg with pedestrian refuge islands
3	The Boulevard / Margaret Street / Morwick Street	Signalised crossing on southern and western leg / zebra crossing on western leg with pedestrian island
4	The Boulevard / Russell Street / Carrington Avenue	Pedestrian Bridge crossing The Boulevard / zebra crossing through Russell Street / Unsignalised crossing through Carrington Avenue
5	Vernon Street / Redmyre Road	Unsignalised crossing through Vernon Street
6	Margaret Road / Redmyre Road	Unsignalised crossing through Margaret Street with pedestrian refuge island
7	Margaret Road	Mid-block pedestrian crossing
8	Carrington Avenue	Mid-block pedestrian crossing

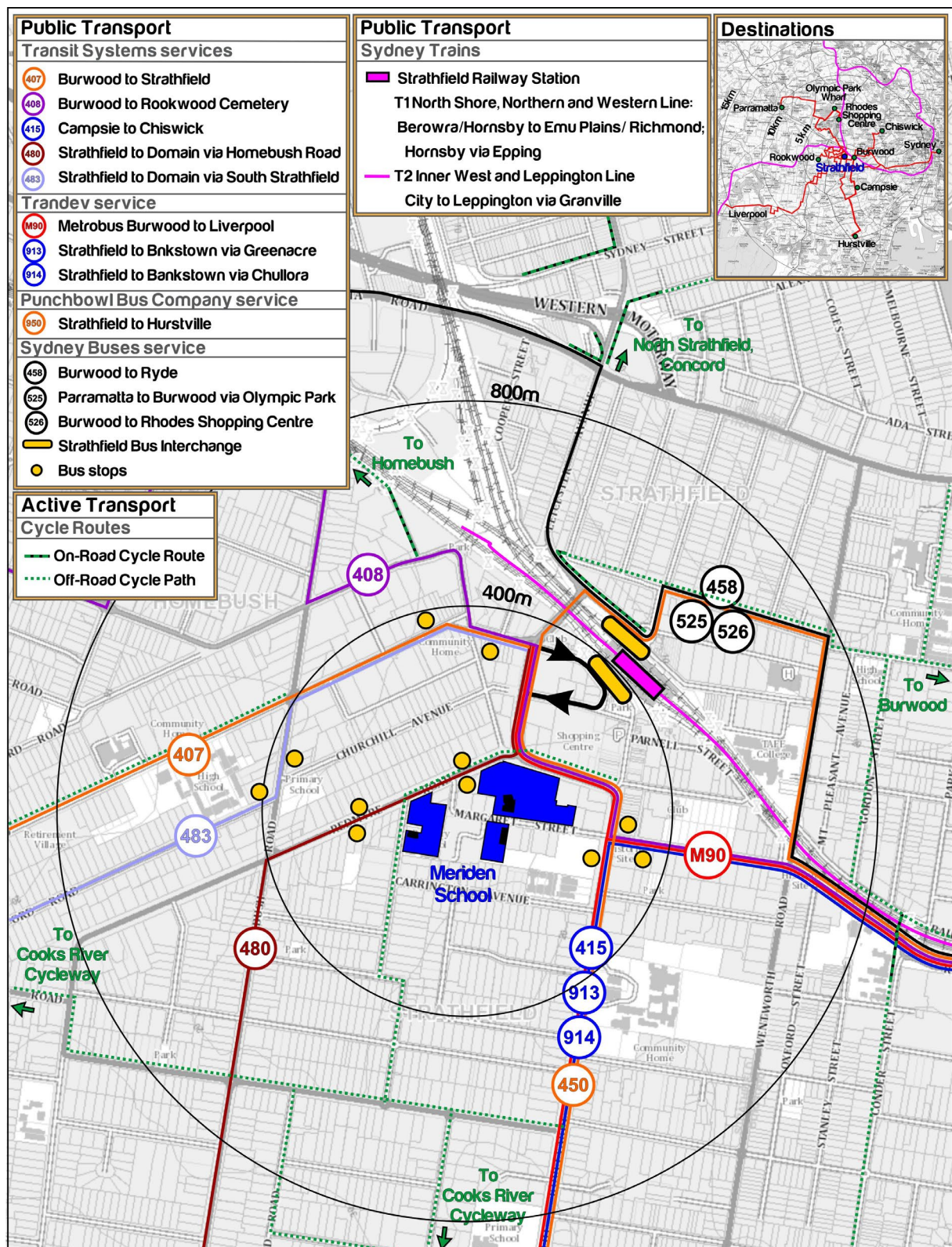


Figure 3: Existing Public Transport Map

1.5.4 Cycle Routes

There are currently limited cycling facilities and routes that directly connects with the Meriden School Site. The existing Strathfield Council Cycling Map details local bike routes to the south and north-west of the Site. The Bay-to-Bay route, located to the west of the School, includes off road sections along Cooks River which runs generally in a north-south direction. The existing cycling route is detailed in Figure 4.

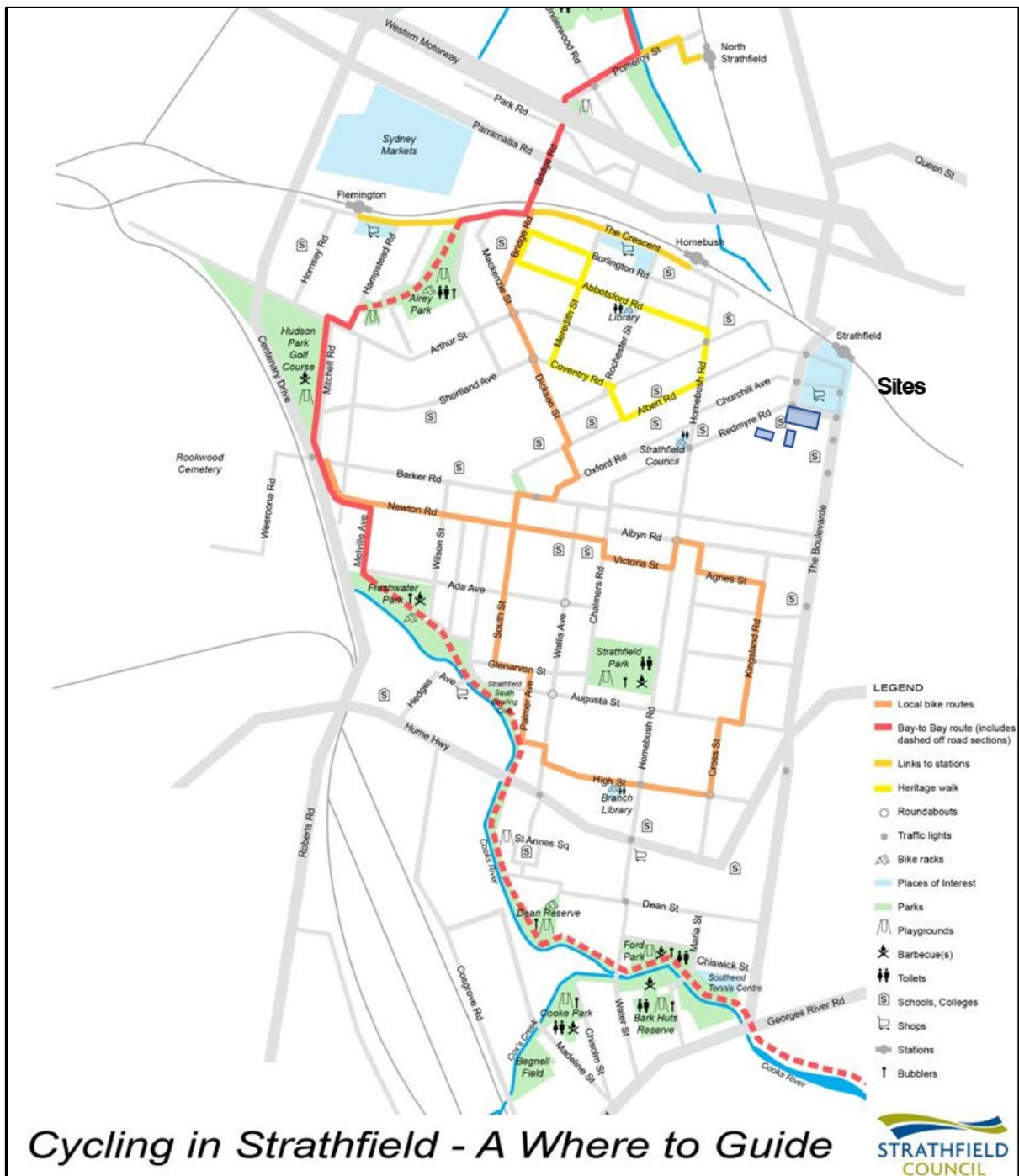


Figure 4: Existing Strathfield Cycling Routes

2 Overview of Works

2.1 Staging and Duration of Works

Recognising the purpose of this CPTMP, it is estimated that the total duration for the completion of all three developments will take approximately 2 years from the commencement date. The start date for construction will be finalised once approval has been given. It is noted that it is currently envisaged that the main works will be delivered in two stages:

- Stage 1: Lingwood Campus A & S Centre and Junior Campus Playground; and
- Stage 2: Senior School CMD.

It is expected that construction would commence on Stage 1 in January 2020 and be complete by December 2020. Construction on Stage 2 would commence in January 2021 and is expected to be complete by April 2022.

The following table summarises key aspects of the construction stages for each development.

Table 4: Construction Program Overview in Weeks

Development	Demolition	Excavation	General Construction	Concrete Pours	External Finishes	Kerb / Footpath Works
Music & Drama Centre	4	10	30	15	8	TBA
Lingwood A & S Centre	4	2	28	12	8	TBA
4 Vernon Street Playground	3	1	10	10	6	TBA

2.2 Hours of Operation

The type of work being undertaken will vary depending on the phase of construction and associated activities. This includes both construction and design personnel. Notwithstanding, all works will be undertaken in accordance with the CC conditions of consent. The following indicative timeframes are as follows:

- Monday to Friday (other than Public Holidays): 7:00am – 5:00pm.
- Saturday: 8:00am – 1:00pm.
- Sunday & Public Holidays: No works to be undertaken.

Any work to be undertaken outside of the standard construction hours shall be required to obtain an Out of Hours (OOH) approval; any such works would necessarily be undertaken in accordance with the appropriate OOH protocols and approval processes.

2.3 Proposed Site Access

During construction, it is proposed that there will be four (4) site accesses. **Table 5** outlines the Site access and egress for each site.

Table 5: Construction Site Access

Development	Site Access	Site Egress
Music & Drama Centre	Existing crossover (with minor modifications) on Margaret Street (north)	Separate crossover on Margaret Street (north)
Lingwood Stage 2	Temporary crossover on Margaret Street (south)	Existing crossover on Margaret Street (south)
4 Vernon Street	Existing crossover (with minor modifications) on at 4 Vernon Street, and Work Zone	Existing crossover on at 4 Vernon Street, and Work Zone

Note: Work Zone to be outlined within Section 2.5

Figure 6 details the proposed vehicle access plan for the Site. The different site access arrangements will be discussed in the following sections below.

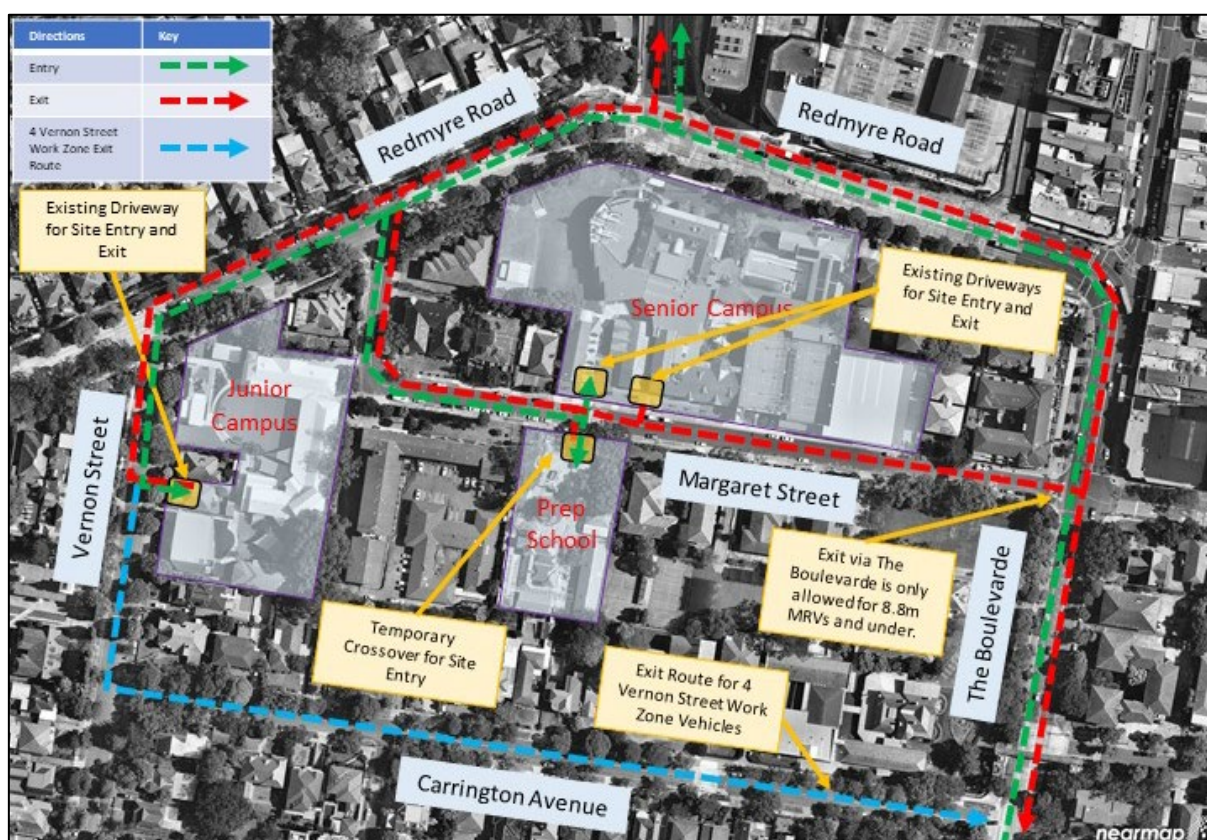


Figure 5: General Construction Site Access Plan

During the early stages of demolition, the largest vehicle capable of accessing the CMD Site would be an 8.8m bogie. Once initial demolition has progressed, there would be sufficient room for larger trucks to manoeuvre within the Site. The largest vehicle to access the CMD Site during construction would be a 19.5m Truck & Dog during the later demolition and excavation stages. During general construction and concrete pours, it is currently understood that it would be required for trucks (with the largest being a 12.5m Heavy Rigid Vehicle (HRV)) to reverse from Margaret Street into the CMD Site. The strategy for this would be further developed in consultation with the relevant agencies. However, it is noted that this would be controlled through Authorised Traffic Controllers.

The largest vehicle to access the A & S Centre and Junior Campus sites would be a 12.5m HRV truck. Trucks accessing the A & S Centre Site can enter the site, turn around within the site boundaries and then exit in a forward gear. A reverse manoeuvre from Vernon Street would be required for trucks accessing the existing Junior Campus driveway.

Appendix B demonstrates the required turning movements to access the Site.

Given the constraints of each of the respective construction sites, no Contractor parking will be provided which is a standard arrangement for these types of construction sites. Contractors would be actively encouraged to travel by public transport to the School and actively discouraged from using on-street

parking. The Builder would give consideration to including, as part of the Employee Agreement signed by all contractors, the requirement for employees to utilise public transport facilities in lieu of driving to the School to minimise parking demand and the impact of construction activities on on-street parking.

Pedestrians attempting to cross the Site's heavy vehicle accesses are to be managed through signage, pedestrian barriers and Traffic Controllers.

Emergency vehicle access to and from the Site will be available at all times while the Site is occupied by construction workers. This process would be implemented through emergency protocols on the site which will be developed by the Contractor.

2.4 Construction Vehicle Access Routes

All construction vehicles would enter and exit the Site via the routes shown in **Figure 6**. The routes shown are to be utilised by all construction vehicles travelling to and from the site and represents the shortest route available - hence minimising the impacts of the construction process. A copy of the approved routes will be distributed by the Contractor to all drivers before their arrival to Site.

2.4.1 Arrival to Site:

All vehicles would access the construction site via Parramatta Road / M4 Motorway or Liverpool Road, as outlined within **Figure 6**.

CMD

- From the North: From Parramatta Road / M4 Motorway, to Leicester Avenue, right onto Raw Square, right onto Redmyre Road and another left into Margaret Street before turning left into the Site.
- From the South: For large trucks – from Liverpool Road, onto The Boulevarde, straight onto Redmyre Road, left into Margaret Street before turning left into the Site. For trucks smaller than an 8.8m bogie, can also turn left turn into Margaret Street, from The Boulevard and then right into the site.

A & S Centre

- From the North: From Parramatta Road / M4 Motorway, to Leicester Avenue, right onto Raw Square, right onto Redmyre Road and another left into Margaret Street before turning right into the Site.
- From the South: From Liverpool Road, onto The Boulevarde, straight onto Redmyre Road, left into Margaret Street before turning right into the Site.

4 Vernon Street

- From the North: From Parramatta Road / M4 Motorway, to Leicester Avenue, right onto Raw Square, right onto Redmyre Road and another left into Vernon Street before turning left into the Site.
- From the South: From Liverpool Road, onto The Boulevarde, straight onto Redmyre Road, left into Vernon Street before turning left into the Site.

2.4.2 Departure Routes

All vehicles would depart the construction site via the following routes, as outlined within **Figure 6**.

CMD

- To the North: From right out on the Site onto Margaret Street, right onto Redmyre Road, left onto Raw Square, left onto Leicester Avenue before heading onto Parramatta Road / M4 Motorway for trucks larger than an 8.8m bogie. Smaller trucks (i.e. 8.8m bogies) can exit the site by turning left onto Margaret Street and left at the intersection with The Boulevard and continue onto Parramatta Road / M4 Motorway by way of Raw Square.
- To the South: From right out on the Site onto Margaret Street, right onto Redmyre Road, straight onto The Boulevarde before joining Liverpool Road.

A & S Centre

- To the North: From right out on the Site onto Margaret Street, left onto The Boulevarde, straight onto Redmyre Road, right onto Raw Square, left onto Leicester Avenue before heading onto Parramatta Road / M4 Motorway.
- To the South: From left out on the Site onto Margaret Street, right onto Redmyre Road, straight onto The Boulevarde before joining Liverpool Road.

4 Vernon Street

Non-Work Zone Vehicles

- To the North: From right out on the site onto Vernon Street, right onto Redmyre Road, left onto Raw Square, left onto Leicester Avenue before heading onto Parramatta Road / M4 Motorway.
- To the South: From right out on the site onto Vernon Street, right onto Redmyre Road, straight onto The Boulevarde before joining Liverpool Road again.

Work Zone Vehicles (To be outlined within Section 2.5)

- To the North: From Work Zone to southbound on Vernon Street, left onto Carrington Avenue, left onto the Boulevard, straight onto Redmyre Road, left onto Raw Square, left onto Leicester Avenue before heading onto Parramatta Road / M4 Motorway.
- To the South: From Work Zone to southbound on Vernon Street, left onto Carrington Avenue, right onto the Boulevard before joining Liverpool Road.

Any oversized or over-mass vehicles travelling to and / or from the Site will be required to obtain a permit from the Roads and Maritime Services (RMS) and / or the National Heavy Vehicle Register (NHVR). Notwithstanding, this CPTMP relates to general construction which does not seek the use of oversize vehicles. A separate application would be submitted to Council if required.

Swept paths (attached in Appendix B) demonstrate all turns into and out of site that can be undertaken.

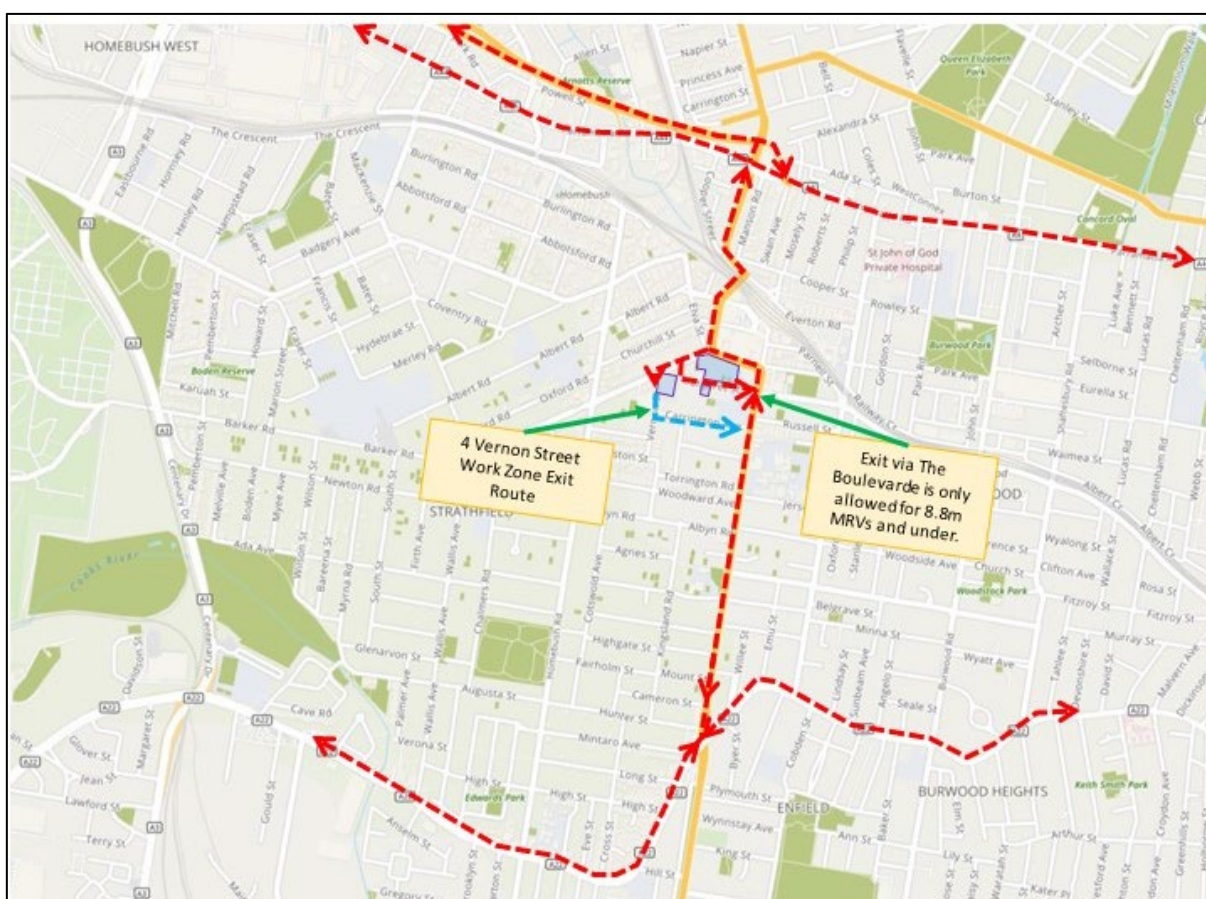


Figure 6: Construction Vehicle Route

2.5 Work Zone

A Work Zone may be required along at 4 Vernon Street along the street frontage of the Site. This Work Zone will only be utilised during the Concrete Pours period which is estimated to have a duration of 10 weeks. The largest vehicle to utilise the Work Zone would be a 12.5m Heavy Rigid Vehicle. A Traffic

Control Plan (TCP) for the Work Zone at 4 Vernon Street is to be developed to detail the proposed pedestrian and traffic management measures to mitigate pedestrian and traffic impacts.

An application for the Work Zone would be submitted to Council prior to commencement and the CPTMP would be updated (in consultation with Council) to address any impacts to the Kiss & Ride facilities. It is noted that the Work Zone would be a maximum of 12m long, which equates to 2 car spaces. The temporary suspension of these spaces would not materially impact the operation of the Kiss & Ride zone. It is expected that the Kiss & Ride zones on Margaret Street would be unaffected by construction. Although this would be confirmed once the access strategy has been refined for the implemented CPTMP.

2.6 Fencing Requirements

Security fencing will be erected along the entire boundary of each site which will be maintained for the duration of the construction program. The fencing is to ensure unauthorised persons are kept out of each Site. The Site's access gates would be provided along Margaret Street and Vernon Street and will be closed at all times outside of the permitted construction hours.

Hoarding layout and timings may change throughout the development, however prior approval shall be sought from Council.

2.7 Materials Handling

It is proposed that all materials loading and unloading will occur within the construction site boundary. Equipment, materials and waste will be kept within the construction site boundary. Should materials handling be required from the public roadway then prior approval shall be sought and obtained from Strathfield Council.

2.8 Site Management

Site management will be required to notify adjacent properties of any temporary traffic restrictions and measures being implemented at least fourteen (14) days in advance.

Some works may be required within the roadway during the external finishes stage. These works would most likely be undertaken at night or during off peak periods to limit any interaction with peak traffic conditions along Margaret Road and Vernon Street.

Any Traffic Control measures necessary for these works will be submitted to Council for approval and 14 days' notice would be provided to adjoining property owners as required by Council. Pedestrian amenities and footpaths will be kept to serviceable conditions during the construction periods.

Remediation of any damaged footpaths and pedestrian facilities will be undertaken at the discretion of Council.

2.9 Cumulative Construction Management

As the commencement date remains unclear while the required approval is sought for the Proposal, it is currently unknown what other construction sites would be in operation in the surrounding area.

However, it is noted that construction is currently planned to commence in January 2020. The 3 current construction sites which are in operation within the vicinity of the School include 26 Parnell Street, 1 Lyons Street and 70 Railway Parade. It is noted all these sites are nearing completion and therefore it is expected that these would be completed by January 2020. The CPTMP would therefore reconsider any construction sites in the vicinity of the School at an appropriate time and would be updated as necessary (following consultation with Council and the SCO).

Coordination between each of the respective Project Contractors will be necessary for any major construction activities.

3 Assessment of Traffic & Transport Impacts

3.1 Construction Vehicle Traffic Generation

3.1.1 Truck Movements

Information provided by Gledhill indicates the following breakdown of truck movements:

Table 6: Truck Movement Overview – Stage 1

Stage	Demolition	Excavation	General Construction	Concrete Pours	External Finishes	Footpath Works
Stage 1						
<u>A & S Centre</u>						
Truck Movements Per Day	18	18	12	60	10	4
Peak Hour Truck Movements	8	8	4	8	2	2
Largest Vehicle Size	12.5m HRV					
<u>Junior School Campus</u>						
Truck Movements Per Day	12	12	8	60	8	4
Peak Hour Truck Movements	4	4	4	8	4	2
Largest Vehicle Size	12.5m HRV					
<u>Potential Stage 1 Combined Truck Movements</u>						
Truck Movements Per Day	30	30	20	120	18	8
Peak Hour Truck Movements	12	12	8	16	6	4

Table 7: Truck Movement Overview – Stage 2

Stage	Demolition	Excavation	General Construction	Concrete Pours	External Finishes	Footpath Works
Stage 2						
<u>CMD</u>						
Truck Movements Per Day	18	18	12	60	10	4
Peak Hour Truck Movements	8	8	4	8	2	2
Largest Vehicle Size	19.5m Truck & Dog					

The peak period for construction would be during Stage 1, where it is estimated that there would be a combined peak of 120 truck movements a day and a peak of 16 truck movements per hour during the peak periods (8 in and 8 out).

It is understood that peak volumes would be associated with concrete pours. During these peak periods, trucks are expected to arrive and depart the Site between the hours of 7:00am – 5:00pm. Gledhill indicates that at each construction site, a peak of 8 truck movements per hour will occur during the concrete pour's activities (4 in & 4 out for each of the construction sites).

In order to ameliorate any concerns raised by the DPE, TfNSW, RMS and Council, it is proposed to restrict truck-heavy activities during school and traffic peak hours. Truck movements will be maximised to occur outside of peak-hours and on Saturdays. It should however be noted that 16 truck movements during the AM and PM peak periods are required (as noted above) for more intense construction activities such as concrete pours.

It is expected that Meriden School may restrict truck movements between school peak hours to minimise traffic and pedestrian impacts.

3.1.2 Light Vehicle Movements

In relation to light vehicle movements, it is anticipated that a maximum of 110 workers could be on-site at any one time during the peak construction periods. A maximum of 70 workers would typically on-site at any other times. No on-site parking will be provided, and on-street parking would not be allowed. All staff are encouraged to travel via the readily available public transport services in the area. It is noteworthy that the Strathfield Train Station and ancillary bus stops are less than 800m from the Site, therefore construction vehicles workers have several methods to access the site other than driving.

Any light vehicle traffic generation would be generally associated with staff movements to and from the Site. Due to the lack of on-site parking, only a small number of private vehicles would be used by higher-level staff such as project managers. The workforce arrival and departure periods (6.30-7.00AM and 5.00-5.30PM) represent the peak construction traffic generation periods which sits outside the existing network peaks. It is anticipated that the contractor traffic generation would be of a low order due to the lack of parking options and staff would also be encouraged to car share or use public transport.

3.1.3 Cumulative Traffic Impacts

There are three (3) construction projects within the close proximity to the Sites which will most likely coincide with construction works. These projects include 26 Parnell Street, 1 Lyons Street and 70 Railway Parade.

The location of the construction sites at 26 Parnell Street and 1 Lyons Street indicates that construction vehicles would enter southbound on Raw Square and head eastbound along Redmyre Road before turning north into The Boulevarde to exit right into Parnell Street to reach their respective sites. Vehicles leaving those sites would need to use Wentworth Road to head north back onto the Great Western Highway.

It is noted that construction at 26 Parnell Street and 1 Lyons Street is in the latter stages and would likely be complete by commencement of construction of this proposal (in January 2020).

The construction site at 70 Railway Parade could potentially be using Raw Square, Redmyre Road and Morwick Street for their haulage route to and from the Site. However, construction on this site is also nearing completion and therefore not expected to coincide with the construction of this development.

The CPTMP would review any construction sites in the vicinity of the School at an appropriate time and would be updated as necessary (following consultation with Council and the SCO).

As mentioned within Section 2.1, construction is due to commence in January 2020. However, given that this subject to securing the appropriate approvals, there is no definitive commencement date for construction at this stage. Therefore, the CPTMP would need to be reviewed as part Construction Certificate Works to review other construction activities in the area. This would be done in consultation with Council and the SCO to identify the relevant sites.

3.2 Vehicle Management

3.2.1 Principles

In accordance with RMS requirements, all vehicles transporting loose materials would have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the

roadway during travel to and from the site. All drivers are to be familiar with the Driver Code of Conduct before attending the Site. A copy of the Code is included in **Appendix A**.

Further to covering/securing the load to prevent deposits onto the roadway, a Shaker / Cleaning Device is proposed to be installed at the point of vehicle egress to minimise the risk of dirt on the local roads. It is the responsibility of the driver to ensure that the Shaker Grid is driven over would be included as part of the Driver Code of conduct.

All subcontractors must be inducted by the Contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. The Head Contractor will monitor the roads leading to and from the site and take all necessary steps to rectify any road deposits caused by site vehicles.

Vehicle movements 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, vehicles, refuse skips or the like, under any circumstances.

3.2.2 Queuing

It is expected that a schedule for deliveries of materials and goods will be established prior to that day, with Traffic Controllers maintaining radio contact with construction vehicles at all times. Thus, at no stage shall queueing occur on the public road network. No trucks are to be queued on local roads.

3.3 Contractor Parking

As previously mentioned, there will be no parking provided on-site. No on-street parking will be allowed for construction workers. Consideration would be given to including in the Employee Agreement, signed by all contractors, the requirement for all employees to utilise the excellent public transport facilities in lieu of driving to the Site to minimise parking demand and the impact of construction activities on on-street parking.

Contractors would be encouraged to utilise the available public transport services within the area. If Contractors have no alternative options other than to use private vehicles travelling to and from site, then there are several public car parks which can be utilised within the immediate vicinity of the Site.

3.4 Pedestrian and Cyclist Access

The majority of construction activities would occur off-street with exception of a temporary Work Zone for concrete pours that would be located at the street frontage of 4 Vernon Street. Although construction activities occur off-road, the pedestrian and cycle connections across Site access points would be managed by traffic controllers and boom gates during construction activities. It is proposed that traffic

controllers be at each vehicle access to control pedestrian boom gates at the vehicle accesses to control the pedestrian flow.

Pedestrians and cyclists using the footpath fronting the Site or Work Zone will be halted by an accredited Traffic Controller using a remote-controlled boom gate while construction vehicles are exiting the Site. An expandable barrier (pedestrian boom gate or equivalent) would be installed on both sides of the driveway, to be operated when construction vehicles are on approach / ready to depart from the Site. Once the construction vehicles are clear from the footpath, the Traffic Controller can allow the pedestrians and cyclists to continue along their journey.

The Contractor shall make clear to Traffic Controllers that pedestrians have right of way and, as far as reasonable (mostly associated with exit vehicle movements). An on-Site waiting bay and stopping location is proposed for all Heavy Vehicle exiting movements. This will allow co-ordination and management of pedestrian/cyclist right of Way and interaction with traffic controllers.

In addition, it will provide Traffic Controllers the ability to advise drivers the appropriate time to approach the Site's boundary.

The Traffic Controllers would use these extendable gates to create a physical barrier that would restrict pedestrians walking across the driveway, while maintaining radio communication with the construction vehicle driver at all times.

As noted, and discussed in Section 2.5, the only construction activities expected to occur on-street would involve a temporary Work Zone for concrete pours, located at the street frontage of 4 Vernon Street. An application for this Work Zone would be submitted to Council prior to it being required and the CPTMP would be updated (in consultation with Council) to address any impacts to the Kiss & Ride facilities.

Nevertheless, it is expected at this stage that the Work Zone would be a maximum of 12m long, which equates to 2 car spaces. The temporary suspension of these spaces would not materially impact the operation of the Kiss & Ride zone.

It is expected that the Kiss & Ride zones on Margaret Street would be unaffected by construction activities. Although this would be confirmed once the access strategy has been refined for the implemented CPTMP.

3.5 Traffic Control

The RMS guide "Traffic Control at Worksites" (TCAW) manual contains standard traffic control plans (TCPs) for a range of work activities. The manual's objective is to maximise safety by ensuring traffic

control at worksites complies with best practice. The RMS TCAW outlines the requirements for a Vehicle Movement Plan (VMP).

A VMP is a diagram showing the preferred travel paths for vehicles associated with a work site entering, leaving or crossing the through traffic stream. A VMP should also show travel paths for trucks at key points on routes remote from the work site such as places to turn around, accesses, ramps and side roads.

Regarding construction work on roads with an average daily total (ADT) in excess of 1,500 vehicles, approach speeds of between 60 km/hr and 80 km/hr, with truck movements > 20 veh/shift, and sight distance is less than 2d, (where d equals the posted speed limit and in this instance the sight distance is required to be up to 120 metres), the following is required for the Margaret Road and Vernon Street accesses by the RMS TCAW:

- TCP with Traffic controllers/Traffic Signals
- VMP
- Warning Signs required during shifts

Regardless of the above, it is proposed to develop and implement TCP's for each of the construction sites.

3.6 Authorised Traffic Controller

Authorised Traffic Controllers will be present on-site throughout the construction stage of the project. Responsibilities include:

- Supervision of all construction vehicle movements into and out of site at all times,
- Supervision of all loading and unloading of construction materials during the deliveries in the construction phase of the project, and
- Pedestrian management, to ensure that adverse conflicts between vehicle movements and pedestrians do not occur, while maintaining radio communication with construction vehicles at all times.

4 Monitoring and Communication Strategies

The CPTMP has been based on the existing site conditions and information provided by Meriden School. Consultation with Council will continue to be undertaken to ensure that the cumulative traffic impacts of construction within the area does not adversely impact the road network.

The CPTMP will be reviewed and monitored frequently to confirm that the construction traffic methodologies reflect the current traffic situation in the Site's locality.

4.1 Development of Monitoring Program

The development of a program to monitor the effectiveness of this CPTMP shall be established by the lead contractor. It is not anticipated that the monitoring of the processes will have any material cost implications. We note the following items to consider when developing the processes and tasks involved within monitoring the CPTMP.

This CPTMP shall be subject to ongoing review and will be updated accordingly. Regular reviews will be undertaken by the on-site coordinator. As a minimum, review of the CPTMP shall occur monthly, however a weekly review would be preferred.

All and any reviews undertaken should be documented, however key considerations regarding the review of the CPTMP shall be:

- Tracking deliveries against the estimated volumes.
- To identify any shortfalls and develop an updated action plan to address issues that may arise during construction (Parking and access issues)
- To ensure TCP's are updated (if necessary) by "Prepare a Work Zone Traffic Management Plan" card holders to ensure they remain consistent with the set-up on-site.
- Regular checks undertaken to ensure all loads are leaving site covered as outlined within this CPTMP.

4.2 Communications Strategy

The communications strategy will outline the most effective communication methods to ensure adequate information within the community and assist the project team to deliver the traffic changes with minimal disruption to the road network.

All surrounding occupants shall be notified of any work that is deemed disruptive to the surrounding network prior to commencement. Ongoing communication is also proposed so that all stakeholders are kept up to date of works and potential impacts.

Nearby property owners that may be affected by the construction works shall be included within the communications strategy.

5 Summary

This Preliminary CPTMP has been prepared to ensure appropriate pedestrian, cyclist and traffic management is undertaken during construction of the proposed alterations and renovations at the School. This CPTMP report has regard for the principles outlined in the RMS Traffic Control at Worksites Manual (2010) and AS1742.3 and is recommended to inform the Full CPTMP to be developed as part of a Condition of Consent with any DA Approval.

Any variation to these standards is considered acceptable having regard to the constraints inherent by the 3 sites and proposed development. The following measures should be undertaken to minimise the impacts across each construction phase:

- Traffic control would be required to manage and regulate construction vehicle traffic movements into and out of the site during construction.
- All vehicles transporting loose materials will have the load covered and/or secured to prevent any items depositing onto the roadway during travel to and from the Site.
- All vehicles to enter and exit the site in a forward direction with reverse movements to occur only within the property boundary as necessary, prior approval and subject to supervision.
- Construction and delivery vehicles would be limited to the use of surrounding arterial roads and the necessary local roads.

In summary, the Preliminary CPTMP report is proposed in accordance with the RMS TCAW. This Preliminary CPTMP would be further developed at CC stage in consultation with the Project Contractor, DPE, Council, and other authorities. However, it provides a detailed and clear indication of the future construction methodology and principles to be adopted.

Appendix A

Driver Code of Conduct

- Driver Code of Conduct -

Drivers Code of Conduct

Safe Driving Policy for Meriden School

Objectives of the Drivers Code of conduct

- To minimise the impact of earthworks and construction on the local and regional road network;
- Minimise conflict with other road users;
- Minimise road traffic noise; and
- Ensure truck drivers use specified routes

Code of Conduct

All vehicle operators accessing the site must:

- Take reasonable care for his or her own personal health and safety.
 - Not adversely, by way of actions or otherwise, impact on the health and safety of other persons.
 - Notify their employer if they are not fit for duty prior to commencing their shift.
 - Obey all applicable road rules and laws at all times.
 - In the event an emergency vehicle behind your vehicle, pull over and allow the emergency vehicle to pass immediately.
 - Obey the applicable driving hours in accordance with legislation and take all reasonable steps to manage their fatigue and not drive with high levels of drowsiness.
 - Obey all on-site signposted speed limits and comply with directions of traffic control supervisors in relation to movements in and around temporary or fixed work areas.
 - Ensure all loads are safely restrained, as necessary.
 - Drive over cattle grids – located at the Site's access – to vibrate off any loose material attached to construction vehicles.
 - Operate their vehicles in a safe and professional manner, with consideration for all other road users.
 - Hold a current Australian State or Territory issued driver's licence.
 - Notify their employer or operator immediately should the status or conditions of their driver's license change in any way.
-

- Comply with other applicable workplace policies, including a zero tolerance of driving while under the influence of alcohol and/or illicit drugs.
- Not use mobile phones when driving a vehicle or operating equipment. If the use of a mobile device is required, the driver shall pull over in a safe and legal location prior to the use of any mobile device.
- Advise management of any situations in which you know, or think may, present a threat to workplace health and safety.
- Drive according to prevailing conditions (such as during inclement weather) and reduce speed, if necessary.
- Have necessary identification documentation at hand and ready to present to security staff on entry and departure from the site, as necessary, to avoid unnecessary delays to other vehicles.

Crash or incident Procedure

- Stop your vehicle as close to it as possible to the scene, making sure you are not hindering traffic. Ensure your own safety first, then help any injured people and seek assistance immediately if required.
 - Ensure the following information is noted:
 - Details of the other vehicles and registration numbers
 - Names and addresses of the other vehicle drivers
 - Names and addresses of witnesses
 - Insurers details
 - Give the following information to the involved parties:
 - Name, address and company details
 - If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.
 - Ensure that the police are contacted should the following circumstances occur:
 - If there is a disagreement over the cause of the crash.
 - If there are injuries.
 - If you damage property other than your own.
 - As soon as reasonably practical, report all details gathered to your manager.
-

Appendix B

Swept Path Analysis



Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:

VC

Client:

Meriden School

Project:

0686
Meriden School

Drawing Title:

Centre for Music and Drama
Initial Demolition Stages - 8.8m Bogie

Date:

13-May-19

Scale @ A3:

N.T.S

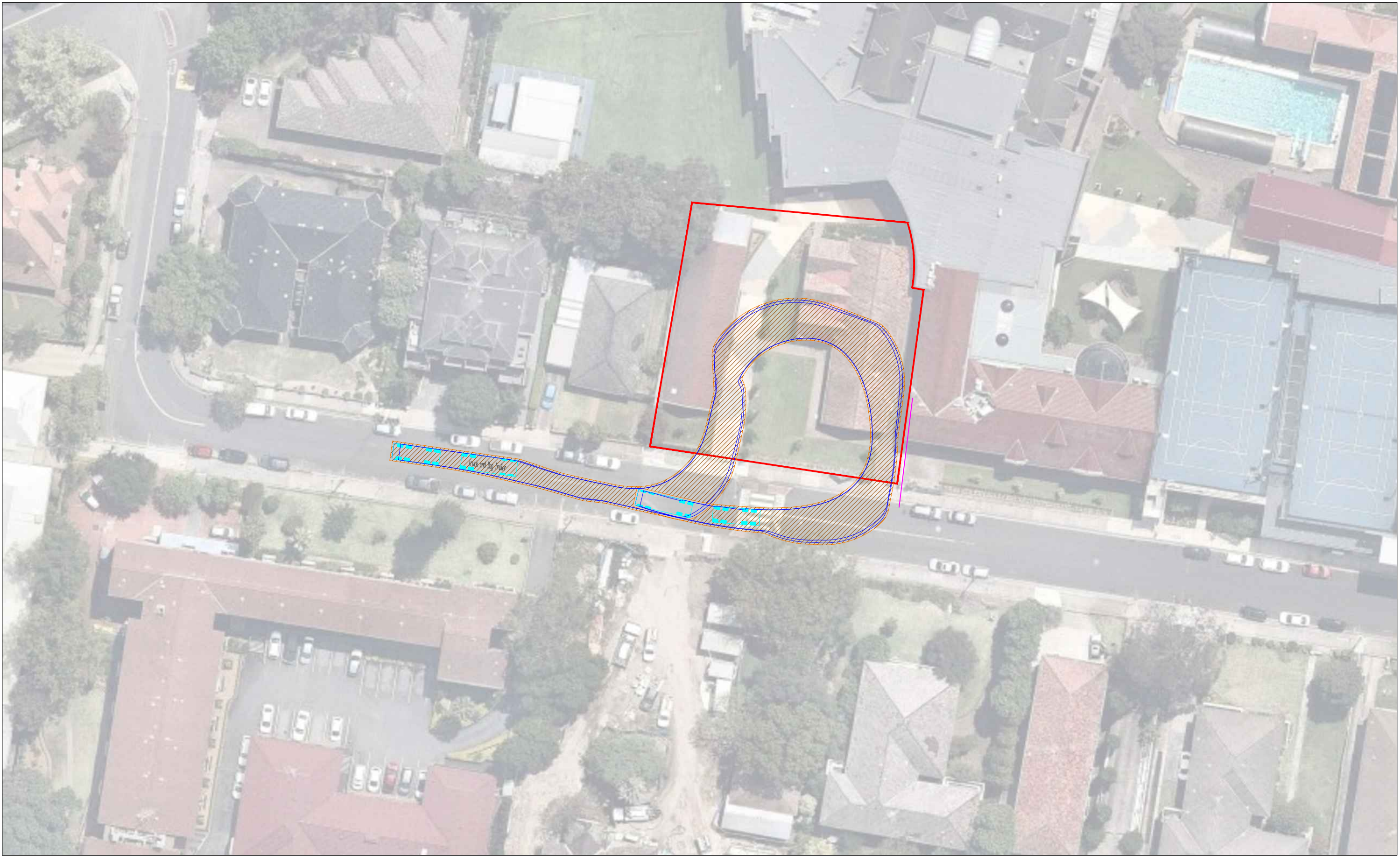
Drawing Number:

01

asongroup

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Sydney NSW 2000

info@asongroup.com.au



Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:
VC

Client:
Meriden School

Project:
0686
Meriden School

Drawing Title:
Centre for Music and Drama
Demolition and Excavation Stages - Truck & Dog

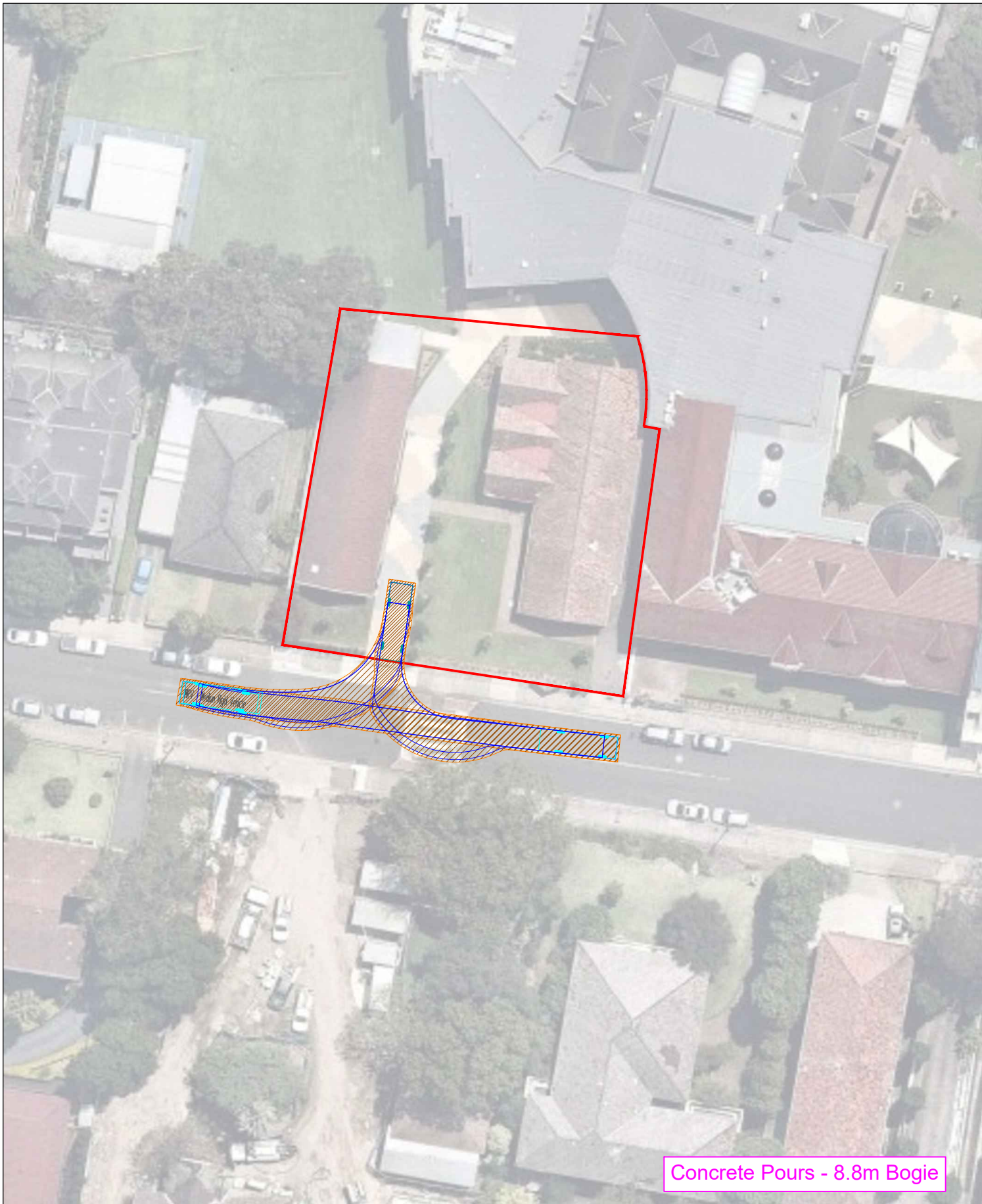
Date:
13-May-19

Scale @ A3:
N.T.S

Drawing Number:
02

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Concrete Pours - 8.8m Bogie



Deliveries - 12.5m HRV

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:

VC

Client:

Meriden School

Project:

0686
Meriden School

Drawing Title:

Centre for Music and Drama
Reverse Manoeuvre

Date:

13-May-19

Scale @ A3:

N.T.S

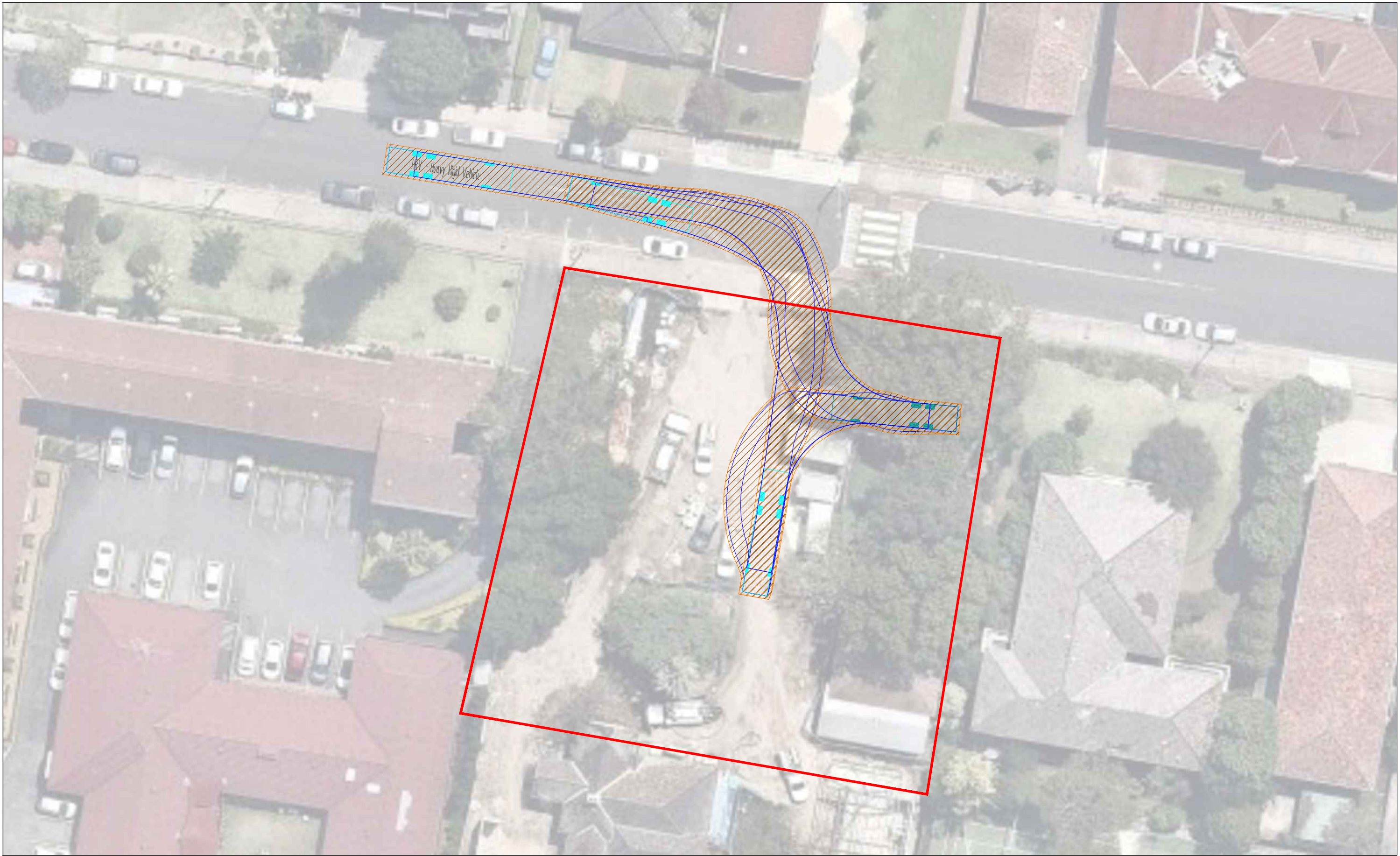
Drawing Number:

03

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Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:
VC

Client:
Meriden School

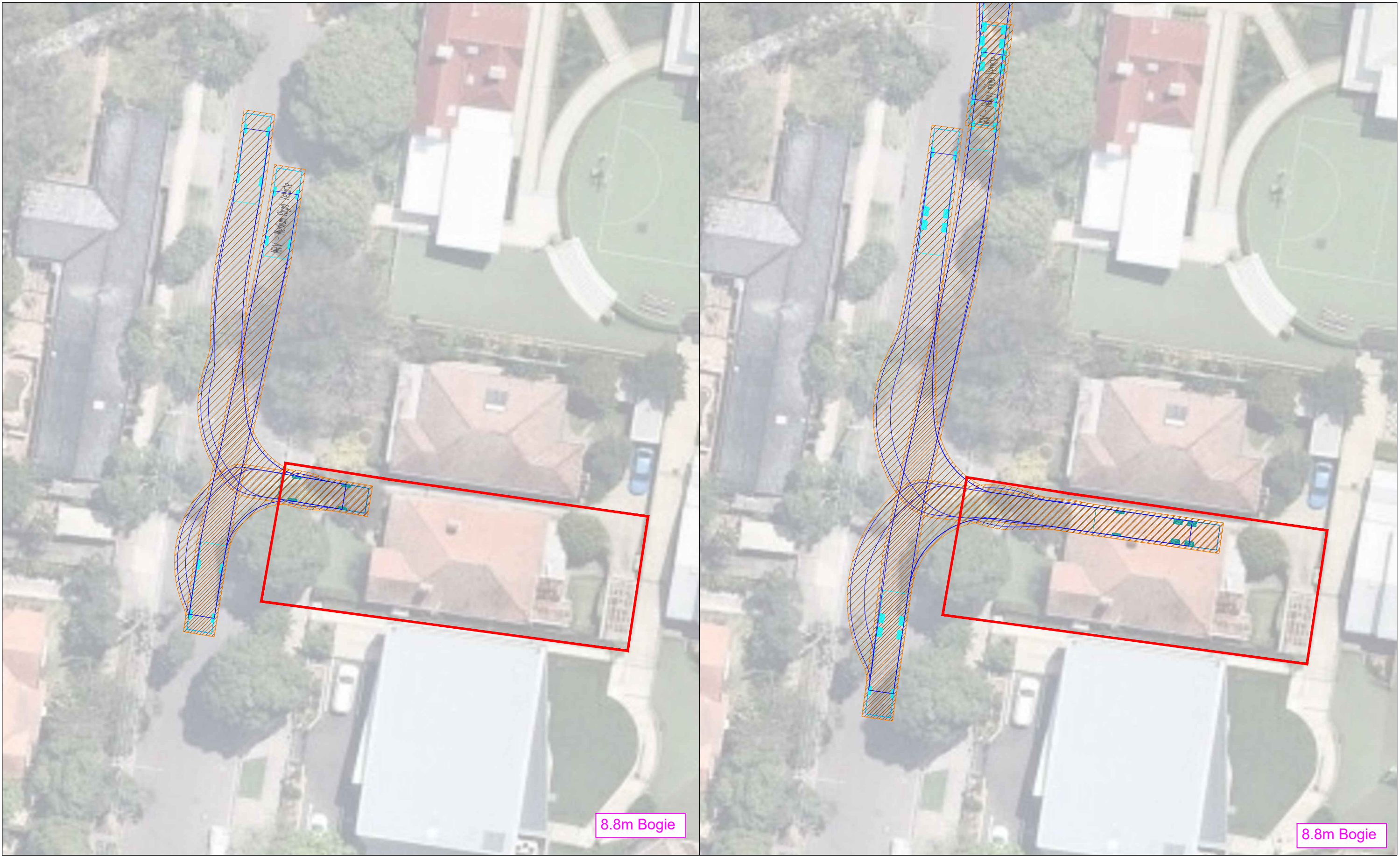
Project:
0686 Meriden School

Drawing Title:
Swept Path Analysis - 12.5m HRV Lingwood Campus

Date:
13-May-19
Scale @ A3:
N.T.S
Drawing Number:
04

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Revision notes:		
Rev:	Date:	Notes:
For information purposes only - not for construction		

Drawn By:
VC
Client:
Meriden School

Project:
0686 Meriden School
Drawing Title:
Vernon Street Reverse Manoeuvre

Date:
13-May-19
Scale @ A3:
N.T.S
Drawing Number:
05



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