



**Concept  
Construction Traffic  
Management Plan -  
SSDA;**

**Mosman High School**

For SINSW  
7th June 2021

**parking;  
traffic;  
civil design;  
wayfinding;  
ptc.**

## Document Control

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## 1. Introduction

### 1.1 Project description

School Infrastructure New South Wales (SINSW) is proposing an expansion of Mosman High School (MHS) which involves the uplift of the current capacity of 1,116 Year 7 – 12 students to 1,200 students by 2031. The increased capacity will be achieved through the construction of a new school building including associated core infrastructure, new outdoor play areas, roof top play areas and associated landscaping works.

Mosman High School is located at 745 Military Road, Mosman NSW 2088 (see Figure 1). The school lies within the Mosman Local Government Area (LGA) and is bounded by Belmont Road to the north, Military Road to the east, Avenue Road to the west and Gladstone Avenue to the west. There are several pedestrian access gates along each frontage and the existing car park access is located on Gladstone Avenue.

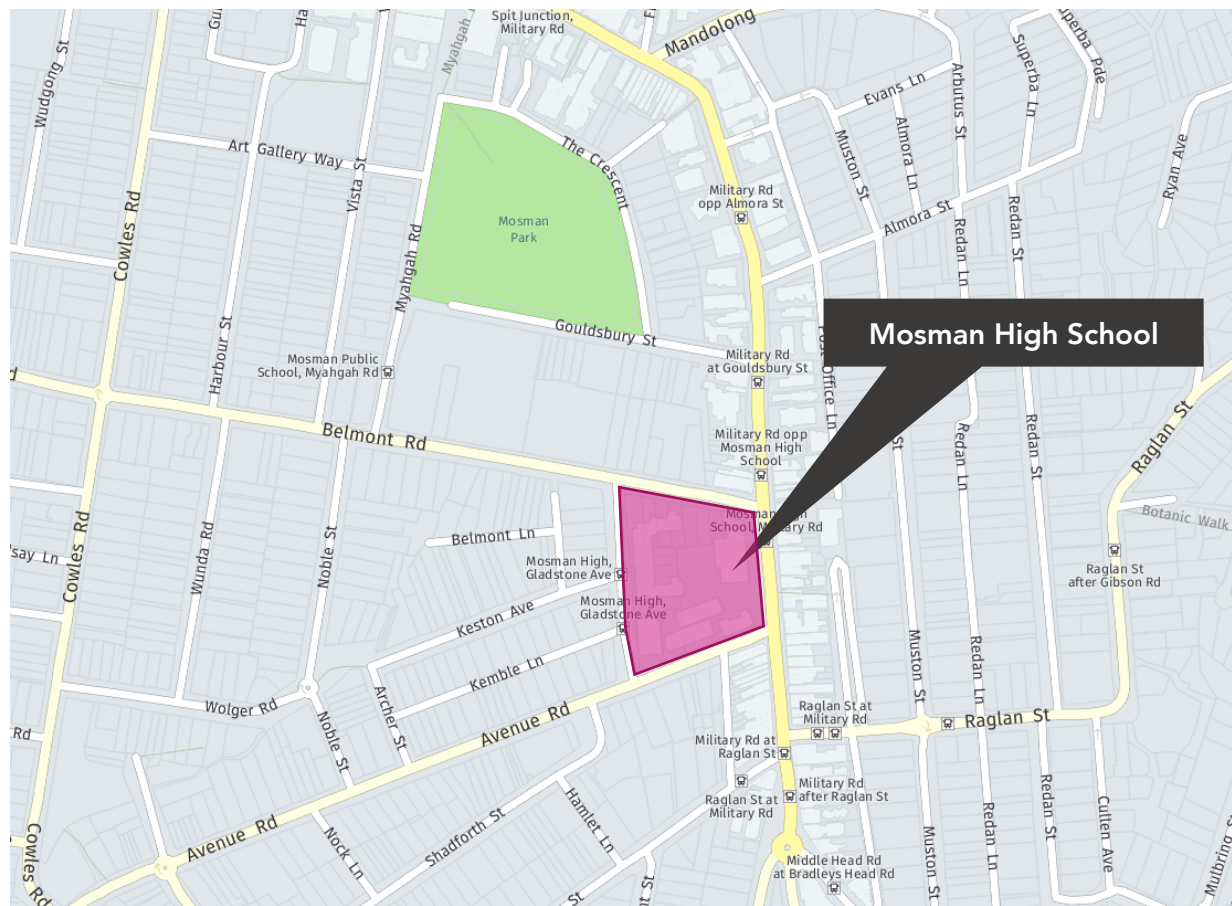


Figure 1 – Site location (Source: HERE WeGo Maps)

## 1.2 Purpose of this report

The Concept Construction Traffic Management Plan (CCTMP) addresses the 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 Mosman High School.

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



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### 3. Development proposal

The development proposal for the Mosman High School involves the expansion of the School to accommodate an increased capacity of 84 students (from the current 1,116 student capacity to 1,200 students) by 2031.

It is also anticipated that the current catchment area for students will be more enforced in the future, meaning that students from outside the official area will not be accepted at MHS.

The following CCTMP will cover the scope of the SSDA (Construction Sstage 2 – Main Works), which includes:

- Demolition of Building B, Building C and part Building E;
- Removal of existing sports court and surrounding retaining walls and nominated trees;
- Construction of a new part 3/ part 4 storey building plus lift overrun and net enclosure to rooftop multi-court (Building G) on the corner of Military Road and Belmont Road providing:
  - administration and staff facilities;
  - multipurpose gym/hall;
  - library;
  - canteen facilities;
  - general and senior learning units;
  - science learning unit;
  - health / PE and performing arts unit; and
  - learning and admin support unit.
- Associated landscaping works including new outdoor play areas, a rooftop play space and rooftop multi-purpose court; and
- Relocation of the main pedestrian entrance from Military Road to Belmont Road.

The proposed site layout plan for the SSDA phase of MHS is illustrated in Figure 3.



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## 4. Existing Transport Facilities

### 4.1 Road hierarchy

MHS is served primarily by Military Road on the eastern frontage which is a Regional Road between Spit Road and the Taronga Zoo Wharf, but transitions into a State Road at the intersection of Military Road/Spit Road. Military Road provides the main connection between Mosman and the Sydney CBD and the northern beaches. A network of Council-managed Local Roads provide access to the school and the greater suburb of Mosman. The surrounding road network is illustrated in Figure 4.

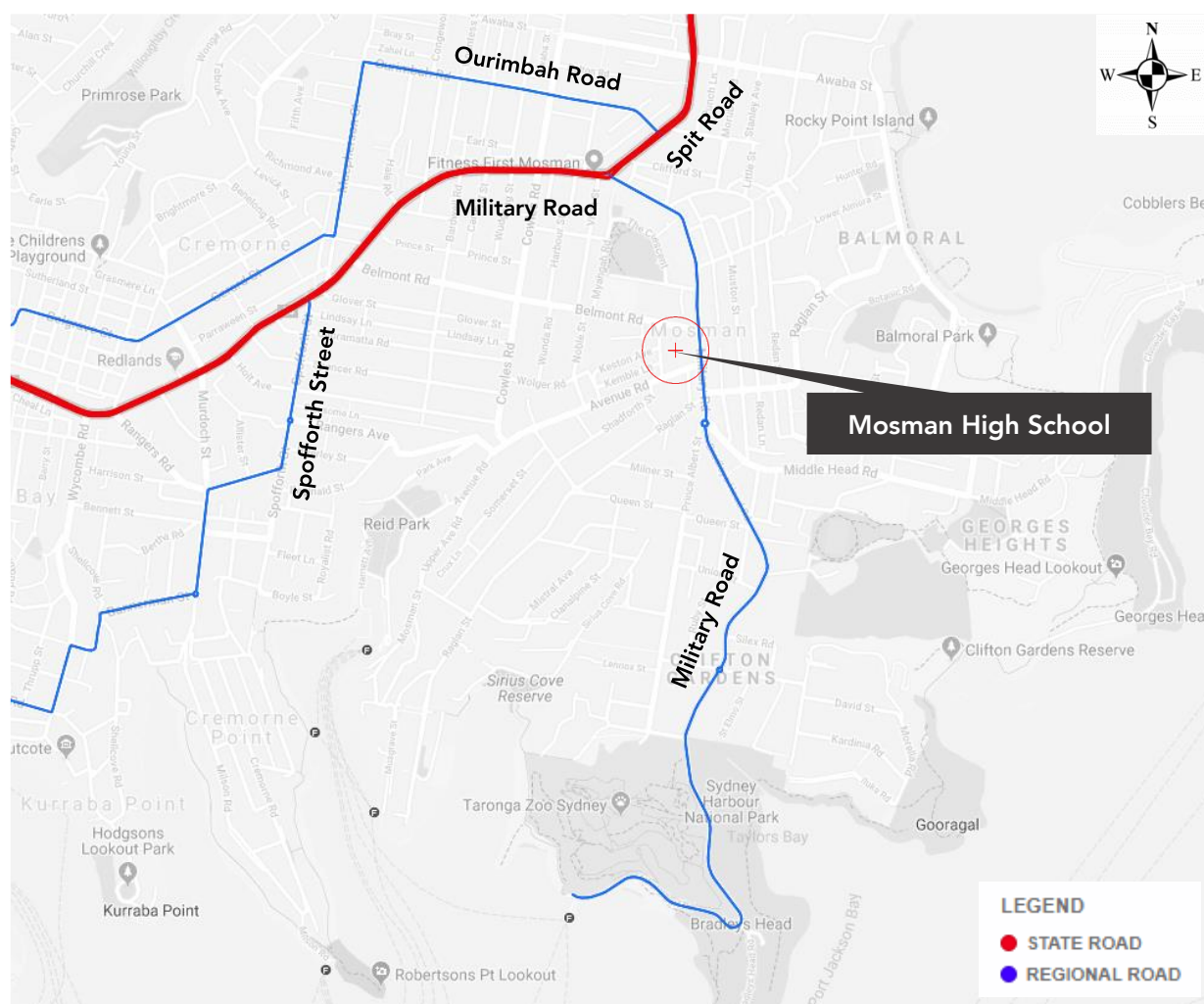


Figure 4 – Road Hierarchy (Source: RMS Road Hierarchy Review)

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)

### Military Road

Road Classification	Regional Road (within vicinity of MHS); Military Road becomes a State Road at intersection of Spit Road/Military Road
Alignment	North - South (within the vicinity of MHS)
Number of Lanes	1 lane in each direction with parking lanes on either side of the carriageway
Carriageway Type	Undivided
Carriageway Width	13 metres
Speed Limit	50 km/h
School Zone	Yes
Parking Controls	Time-restricted parking on both sides of the carriageway
Forms Site Frontage	Yes



Figure 5 – Military Road (Southbound towards Raglan Street)

### Belmont Road

Road Classification	Local Road
Alignment	East - West
Number of Lanes	1 lane in each direction with parking lanes on either side of the carriageway
Carriageway Type	Undivided
Carriageway Width	12.5 metres
Speed Limit	50 km/h
School Zone	Yes
Parking Controls	Time-restricted parking on both sides of the carriageway
Forms Site Frontage	Yes



Figure 6 – Belmont Road (Westbound towards Gladstone Avenue)



### Gladstone Avenue

Road Classification	Local Road
Alignment	North - South
Number of Lanes	1 lane in each direction with parking lanes on either side of the carriageway
Carriageway Type	Undivided
Carriageway Width	12.5m
Speed Limit	50 km/h
School Zone	Yes
Parking Controls	'No Parking, 8:00am – 9:30am & 2:30pm-4:00pm School Days Only' and Bus Zone on the eastern side; unrestricted parking towards the northern end of Gladstone Avenue
Forms Site Frontage	Yes



Figure 7 – Gladstone Avenue (Northbound towards Belmont Road)

### Avenue Road

Road Classification	Local Road
Alignment	East - West
Number of Lanes	1 lane in each direction with parking lanes on either side of the carriageway
Carriageway Type	Undivided
Carriageway Width	12.5m
Speed Limit	50 km/h
School Zone	Yes
Parking Controls	Time-restricted parking on both sides of the carriageway
Forms Site Frontage	Yes



Figure 8 – Avenue Road (Eastbound towards Military Road)

## 4.2 Key intersections

The key intersections in the vicinity of the site and their characteristics are listed below and shown in Figure 9:

- Military Road / Belmont Road (East): signalised 3-arm intersection;
- Military Road / Belmont Road (West): signalised 3-arm intersection;
- Belmont Road / Gladstone Avenue: non-signalised T section intersection;
- Avenue Road / Gladstone Avenue: non-signalised T section intersection;
- Military Road / Avenue Road: non-signalised T section intersection;
- Military Road / Spit Road: signalised 3-arm intersection;
- Military Road / Middle Head Road /  
Bradleys Head Road / Prince Albert Street: Roundabout Intersection.



Figure 9 – Key Intersections



### 4.3 Public Transport

A review of the public transport network within the vicinity of MHS has been undertaken to determine accessibility via public transport modes.

Within the radius of 400m walking distance from the school, there are many local bus services operating along Military Road. They provide connectivity within the suburb of Mosman and to the Sydney CBD and the northern beaches.

The available public transport options such as buses and trains within comfortable walking distance are shown in Figure 10.

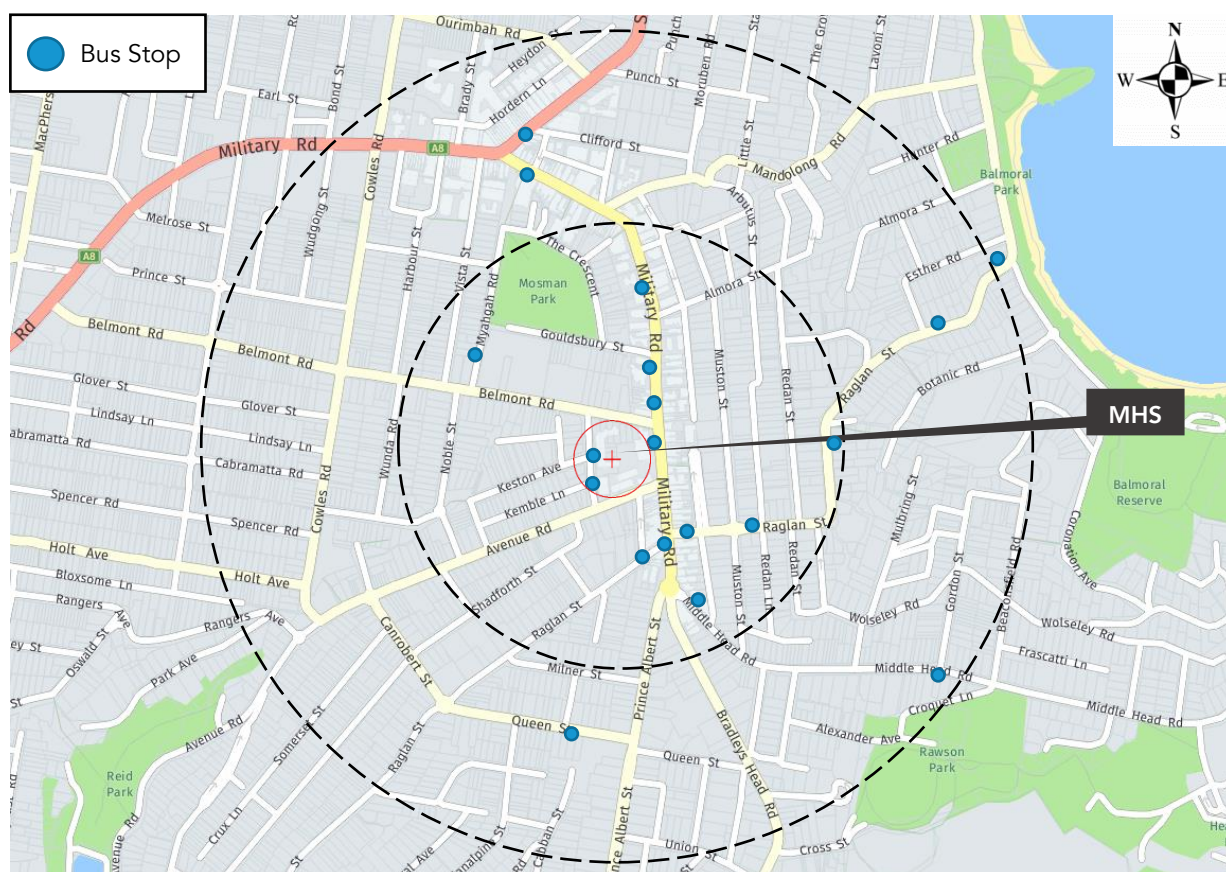


Figure 10 – Public Transport Accessibility Map

The review indicates that the public transport mode which is most easily accessible is via bus, with numerous services operating along Military Road providing connectivity to the Sydney CBD and the northern beaches. The closest public bus stop is located immediately adjacent to the school on Military Road.

#### 4.3.1 STA Bus Services

The review indicates that the most easily available public transport mode is via bus, with numerous services operating along Military Road providing connectivity to the Sydney CBD and the northern beaches. The closest public bus stop is located immediately adjacent to the school on Military Road.

A map of the existing bus network is illustrated in Figure 11.

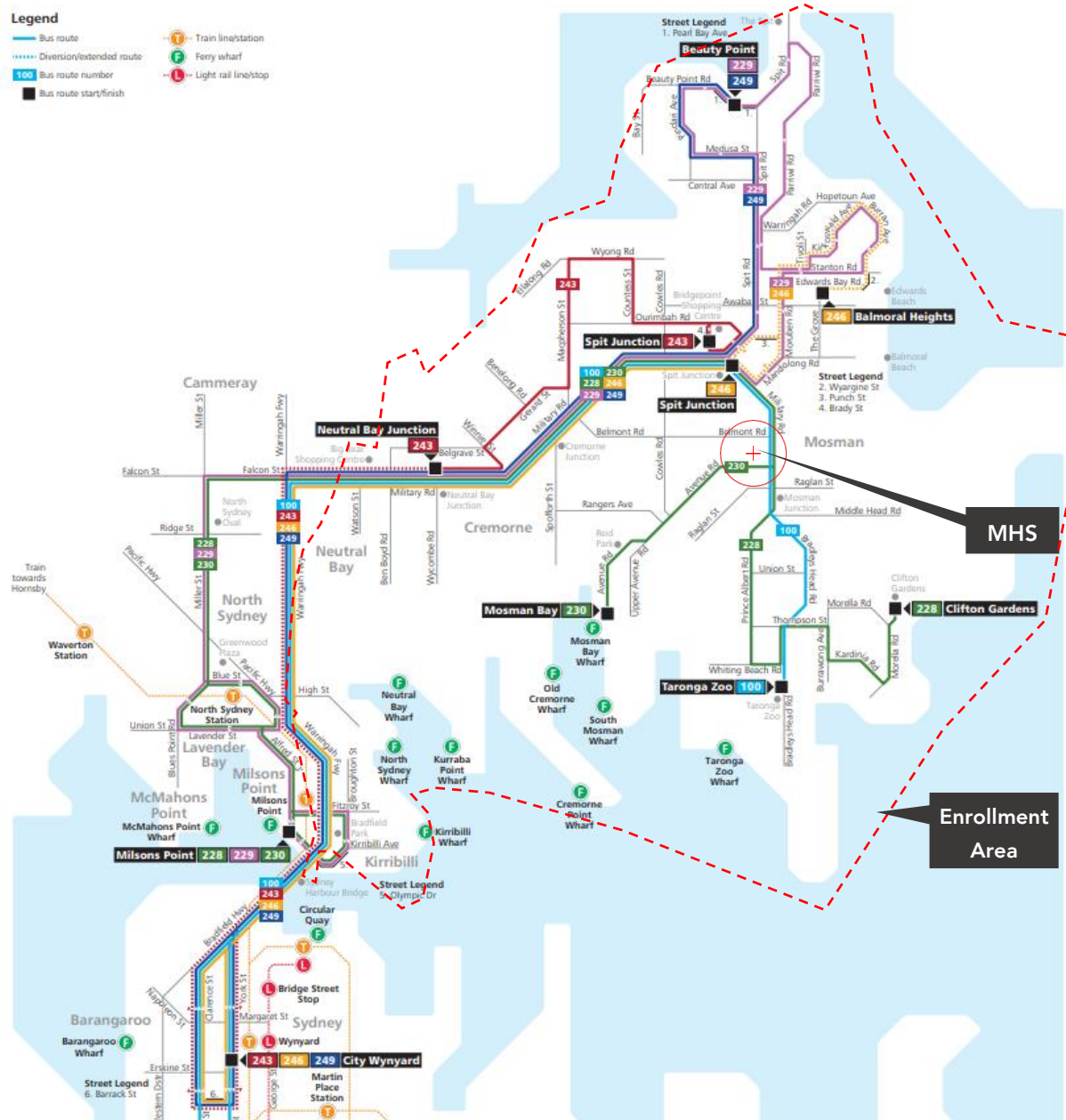


Figure 11 - Bus Network Map (Source: Transport for NSW, 2018)

A summary of the existing public bus frequencies and services operating from the bus stop adjacent to MHS offering the 1-seat trip is outlined in Table 1.

Table 1 - Summary of Public Bus Services

Route No.	Frequency (approximate)	Coverage	Bus Stop	Walking Distance to Bus Stop
114	Once a day	Balmoral to Royal North Shore Hospital	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m
	Services every 2-30 min from 5:51am to 12:33am on weekdays	Royal North Shore Hospital to Balmoral	Stop ID: Mosman High School, Military Road - 208864	45m
		Balmoral to Royal North Shore Hospital	Stop ID: Military Road opposite Mosman High School - 208847	110m
230	Services every 2-30 min from 5:22am to 12:42am on weekdays	Mosman Wharf to Milsons Point via North Sydney	Stop ID: Mosman High School, Military Road - 208864	45m
		Milsons Point to Mosman Wharf via North Sydney	Stop ID: Avenue Road at Carney Lane - 2088162	60m
111	Once a day	Chowder Bay to South Mosman Wharf	Stop ID: Gladstone Avenue near Mosman High, Mosman - 208867	25m
	Services every 12-60 min from 5:22am to 8:27pm on weekdays	Chowder Bay to South Mosman Wharf	Stop ID: Military Road at Raglan Street - 208863	176m
		South Mosman Wharf to Chowder Bay	Stop ID: Military Road at Raglan Street -208863	176m
100	Services every 4-20 min from 5:06am to 12:54am on weekdays	Taronga Zoo to City QVB	Stop ID: Mosman High School, Military Road - 208864	45m
		City QVB to Taronga Zoo	Stop ID: Military Road opp Mosman High School -208848	110m
228	Limited to 5-7 services per day	Clifton Gardens to Milsons Point	Stop ID: Military Road at Raglan Street - 208863	45m
		Milsons Point to Clifton Gardens	Stop ID: Military Road near Belmont Rd (opposite Mosman High School – 208847)	110m

Based on the frequency of services and the number of routes operating within the vicinity of MHS, the school is considered to be well connected via bus.

#### 4.3.2 Ferry Services

It is noted that ferry services also operate in the locality with the nearest ferry wharf being the Mosman Bay Wharf. The wharf is located approximately 1.6km walking distance from MHS. Although this is outside of the comfortable walking catchment of 800m, it is anticipated that some staff may utilise this as a method of

travel to and from the school, particularly in combination with a bicycle, or bus services connecting the wharf and the school.

Table 2 - Ferry Services

Route No.	Frequency (approximate)	Coverage
F6	Services every 30 min during weekdays and every 1 hour during weekends and public holidays	Circular Quay to Mosman Bay

## 4.4 Active Transport

The vicinity of the School has been assessed for the potential for attractive walking and cycling opportunities for students and staff. When defining accessibility, the NSW Planning Guidelines for Walking and Cycling (2004) suggests that a 400m – 800m catchment represents a comfortable walking distance to public transport or local amenity access.

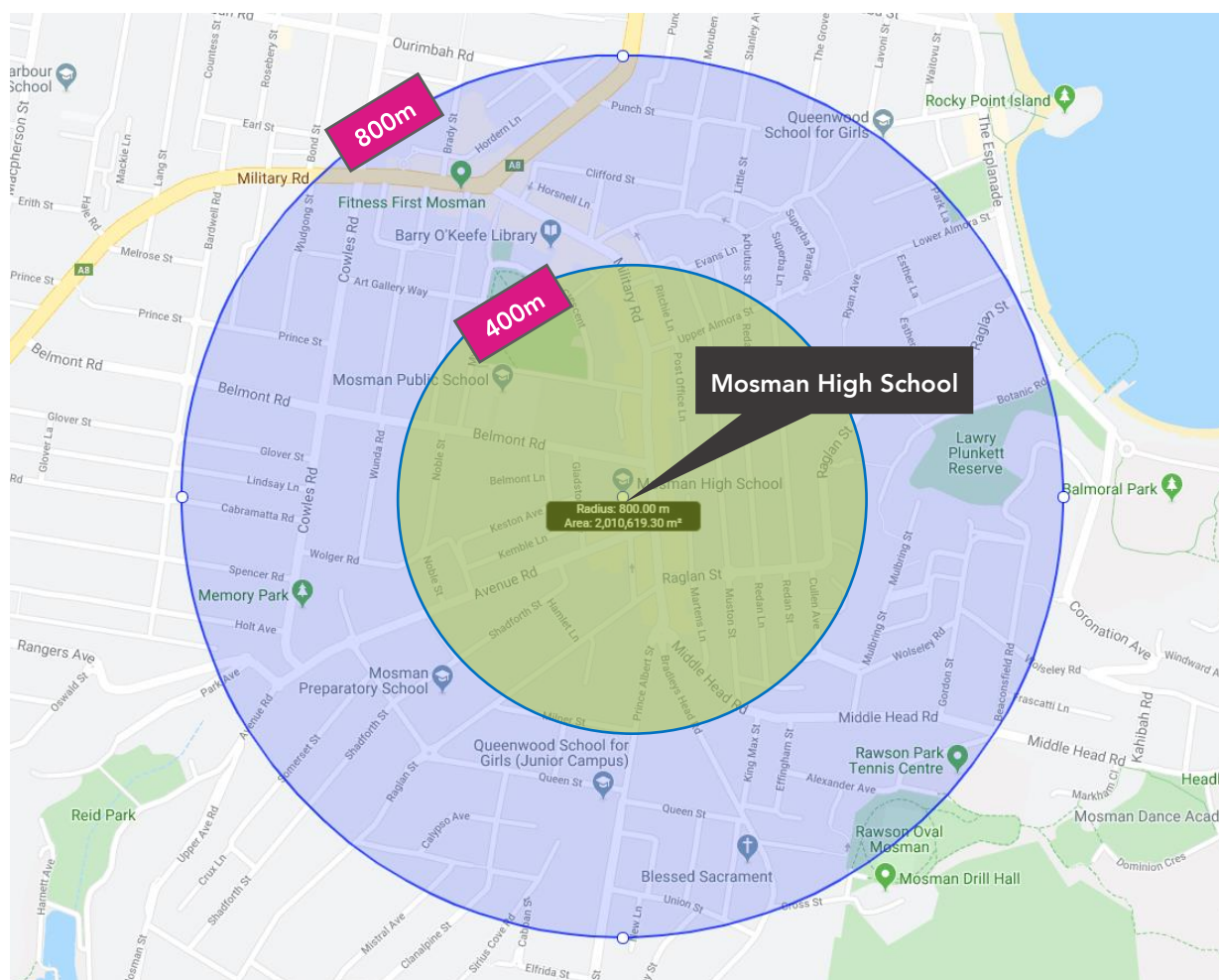


Figure 12 – Mosman High School walking catchment 400 m – 800 m



#### 4.4.1 Walking

The pedestrian network in the locality of the School has been assessed to provide a reasonably high level of amenity within the vicinity of the school with raised pedestrian crossings adjacent to the intersections of Military Road/Avenue Road and Belmont Road/Gladstone Avenue. Signalised pedestrian crossings are provided on each of the approach arms of the Military Road/Belmont Road intersection, which facilitates pedestrian movement across Military Road.

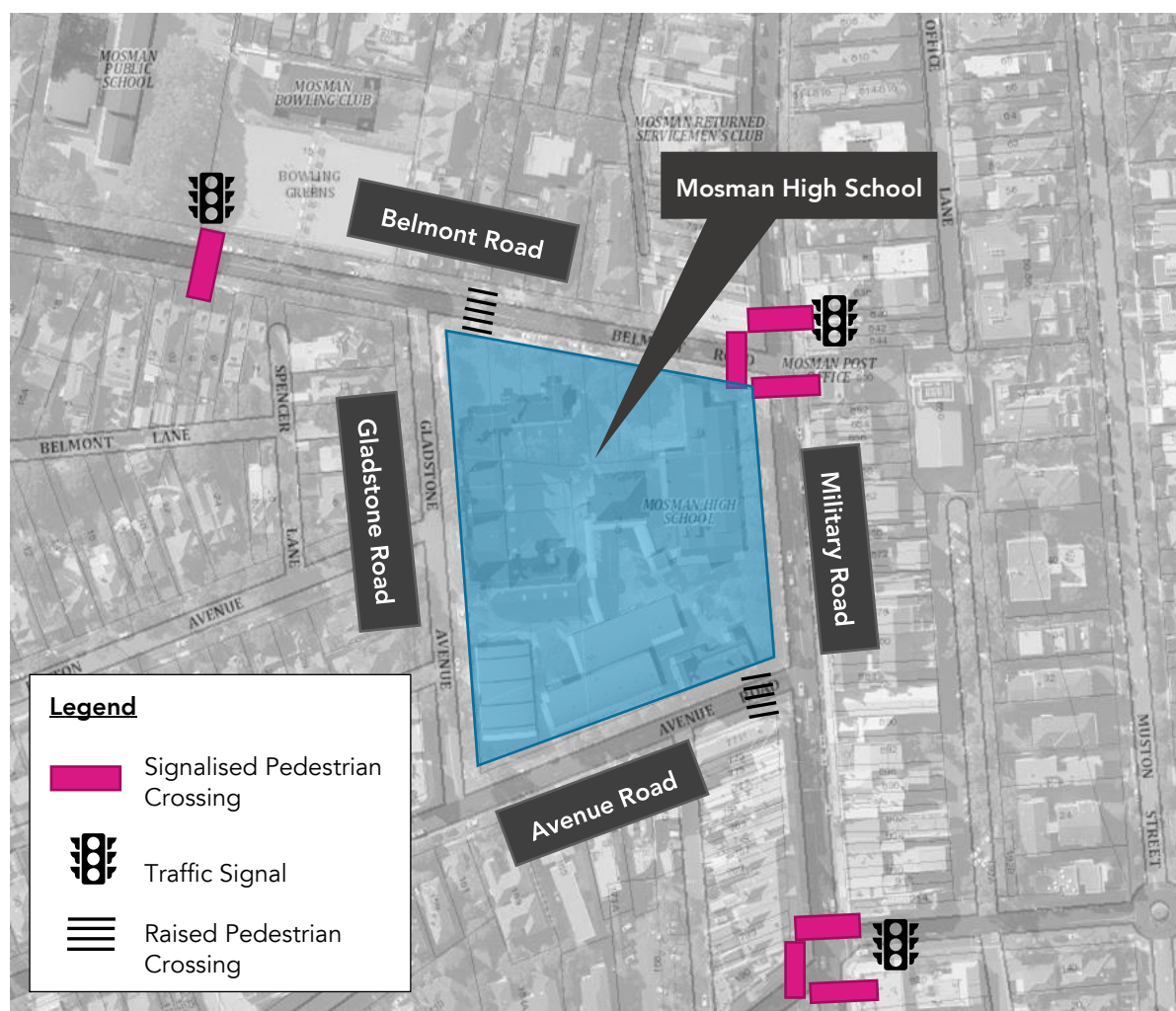


Figure 13 – Surrounding pedestrian infrastructure



#### 4.4.2 Cycling

The surrounding locality within the vicinity of MHS comprises predominantly of on-road marked cycle routes as shown in Figure 14. The on-road cycle paths extend across the Mosman LGA, providing connection to Spit Junction, Clifton Gardens, Balmoral and Georges Heights.

It is acknowledged, however, that Military Road extends along a downward slope towards the Taronga Zoo Wharf, which may mean that cycling as a mode of transport would be influenced by the residential location of students and staff and their ability to ride across steep terrain in some areas. Nonetheless, the cycling connections provided makes this a feasible mode of transport to and from the school.

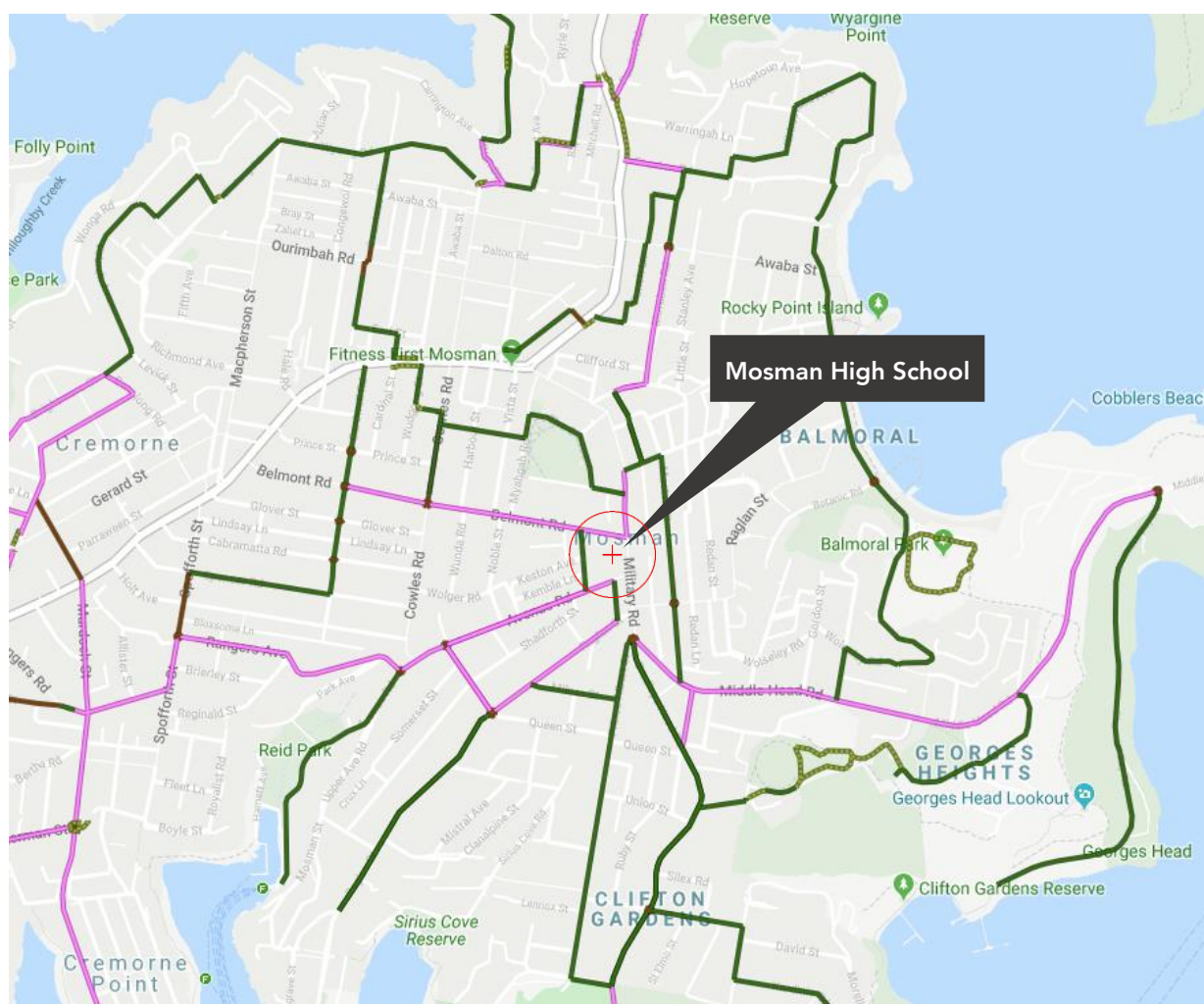


Figure 14 – Cycling Infrastructure within Mosman (Source: RMS Cycleway Finder, 2019)

## 5. Concept Construction Traffic 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 hours are not known and therefore we have assumed the following working hours associated with the construction activity:

- Monday to Friday 7:00am to 6:00pm;
- Saturday 8:00am to 1:00pm; and
- Sunday, Public Holidays No works to be undertaken without prior approval.

### 5.3 General requirements

In accordance with Transport for NSW (TfNSW) 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 to 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 Mosman Municipal Council.

## 5.4 Construction staging

The overall project is proposed to be split into two stages, Stage 1 – Early Works and Stage 2 – Main Works.

The Early Works are expected to take approximately 5 months and will consist of enabling works in order to maintain school operations upon the commencement of the Main Works. Early works were recently approved under Part 5 of the EP&A Act by School Infrastructure NSW as 'development without consent' under ISEPP. Other works are proposed as 'Exempt Development' under ISEPP.

This CCTMP covers work of Stage 2 only.

An indicative construction program received from Multiplex sets a timeframe of 12.5 months for Stage 2 – Main Works, with the overall anticipated construction works being approximately 17.5 months. The exact dates for construction works are to be confirmed (TBC) at construction stage. An excerpt from the construction program is shown in Figure 15, whereas the entire construction program is presented in Attachment 2.

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Figure 15 – Construction Program (Source: Multiplex)

The program shows that different vehicles are required during different construction stages, with white stages representing the requirement for rigid vehicles and orange stages representing the requirement for articulated vehicles (semies). The vehicle numbers have been summarised to determine the maximum truck movements per day differentiated by the types/size of vehicles required. A maximum of 3 semies and 8 rigid trucks (Heavy Rigid Vehicle or a smaller agitator truck) per day is anticipated. This represents one to two trucks per hour.

As discussed in Section 3, the SSDA phase (Stage 2 – Main Works) will include the following:

- Demolition of Building B, Building C and part Building E;
- Removal of existing sports court and surrounding retaining walls and nominated trees;
- Construction of a new part 3/ part 4 storey building plus lift overrun and net enclosure to rooftop multi-court (Building G) on the corner of Military Road and Belmont Road providing:
  - administration and staff facilities;

- multipurpose gym/hall;
- library;
- canteen facilities;
- general and senior learning units;
- science learning unit;
- health / PE and performing arts unit; and
- learning and admin support unit.
- Associated landscaping works including new outdoor play areas, a rooftop play space and rooftop multi-purpose court; and
- Relocation of the main pedestrian entrance from Military Road to Belmont Road.

The abovementioned construction works are to be completed within one phase. The plan for the proposed phase is shown in Figure 16.

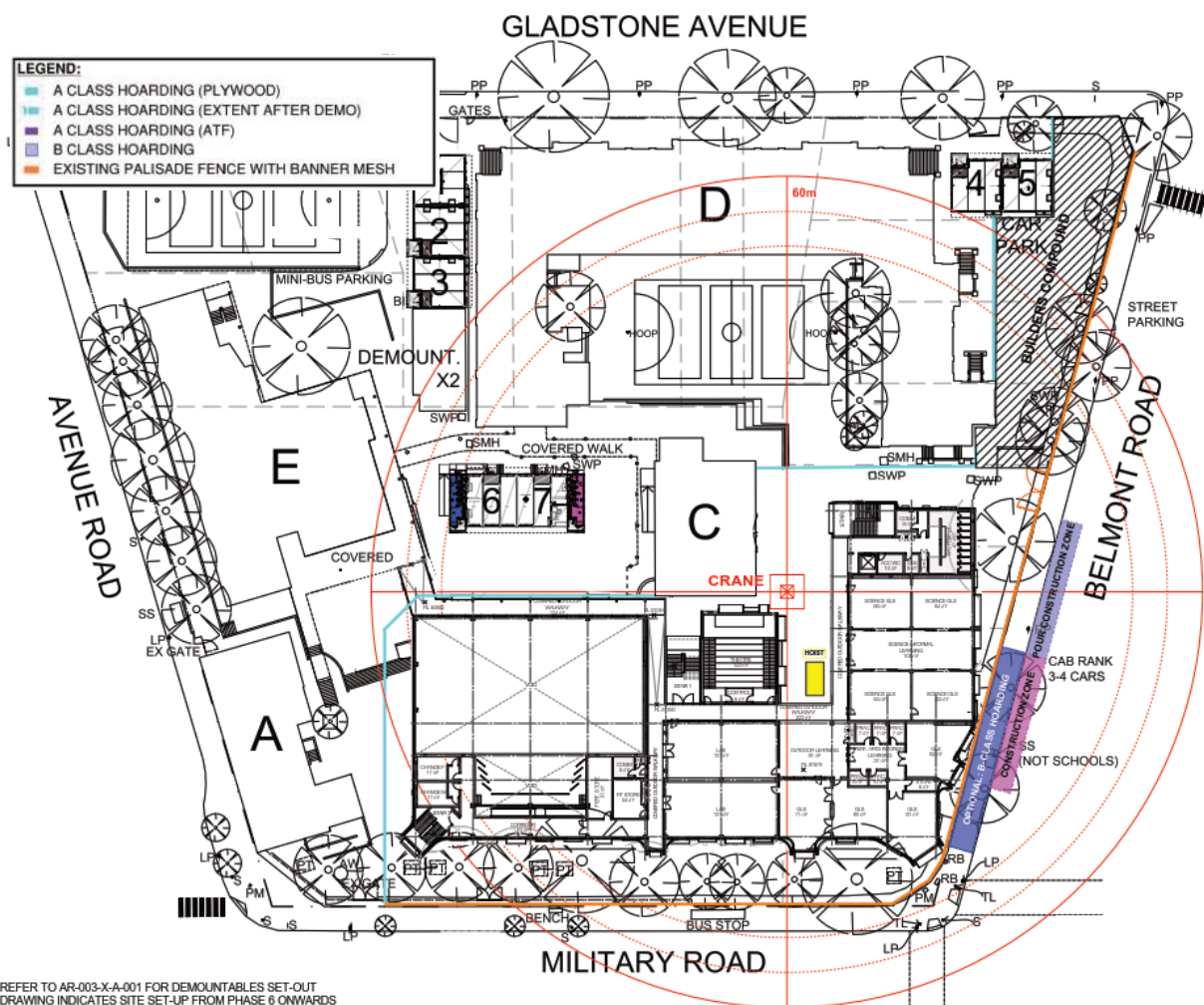


Figure 16 – Construction Plan

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## 5.5 Construction Vehicle Types

The construction during the SSDA stage will involve Articulated Vehicles (AV) and Heavy Rigid Vehicles (HRV) with the vehicles size limited up to a 20m AV for all phases. Larger vehicles will be dealt with separately, with the submission of required permits to and subsequent approval by Mosman Municipal Council.

## 5.6 Construction Vehicles Routes

The site is located in Mosman 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.

The work zone for the construction is proposed to be located along Belmont Road, details of which are described in Section 5.7.

All vehicle routes to and from site are constrained to existing public roads that have the physical geometry to accommodate the turning movements.

In order to reach the proposed work zone, different routes are proposed for AVs and HRVs as described in the following sub-sections.

### 5.6.1 AV

All AVs will arrive via Military Road, turn right at the Split Junction and turn right at Belmont Road. While exiting the site, the AVs will leave via Belmont Road and turn left into Military Road

The AV route is shown in Figure 17.



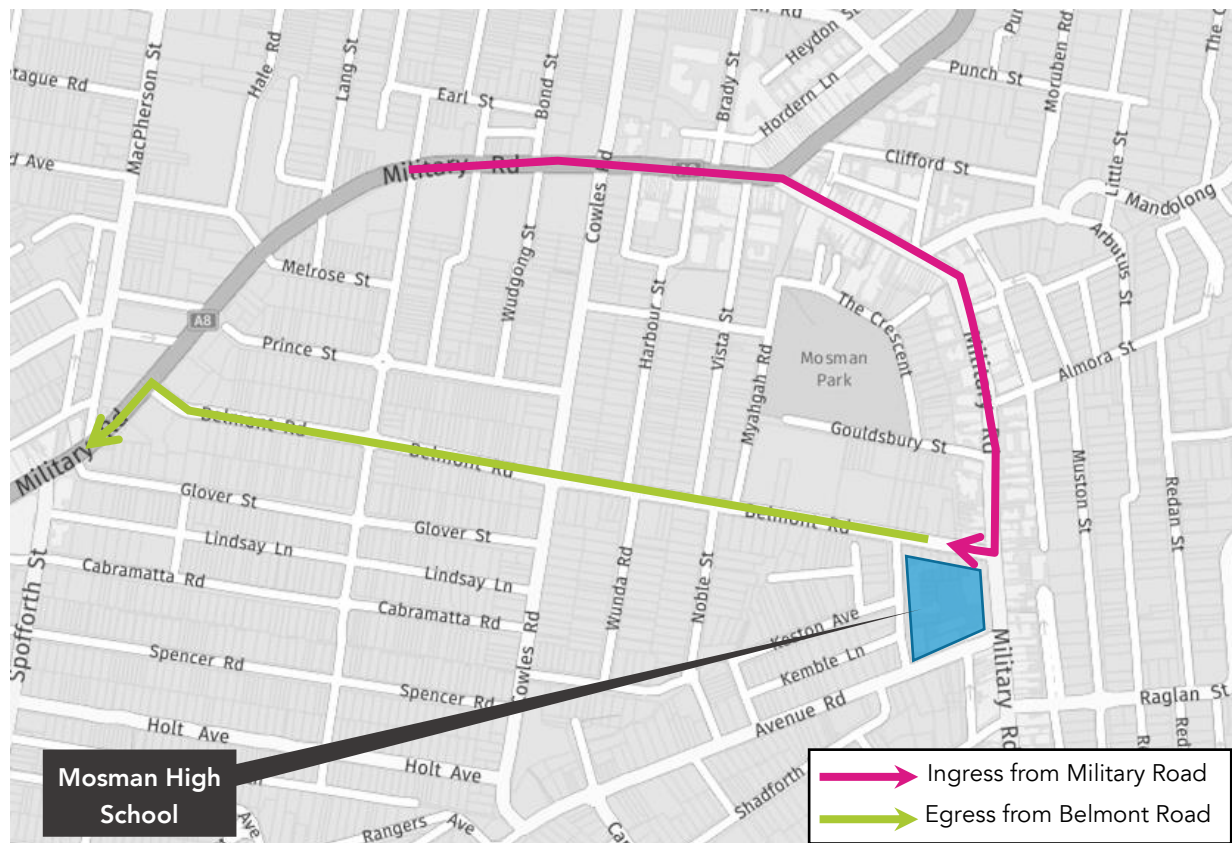


Figure 17 – AV Routes

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 and what management measures may be required.

Swept paths showing a 20m long AV entry and exit routes are shown in **Attachment 1**.

The taxi rank on Belmont Road will need to be relocated so that an AV can access the work zone, refer to Section 5.8.1 for details.

### 5.6.2 HRV

Two different entry and exit routes are proposed for an HRV. The HRV movements will be distributed evenly along both routes.

- Entry Route 1: arrive via Belmont Road, loop around the school before reaching Belmont Road.
- Entry Route 2: arrive via Military Road, turn right at the Spit Junction towards Military Road, turn right at Belmont Road.
- Exit Route 1: leave via Belmont Road.
- Exit Route 2: loop around the school before leaving via Military Road.

The HRV ingress and egress routes are shown in Figure 18 and Figure 19 respectively.

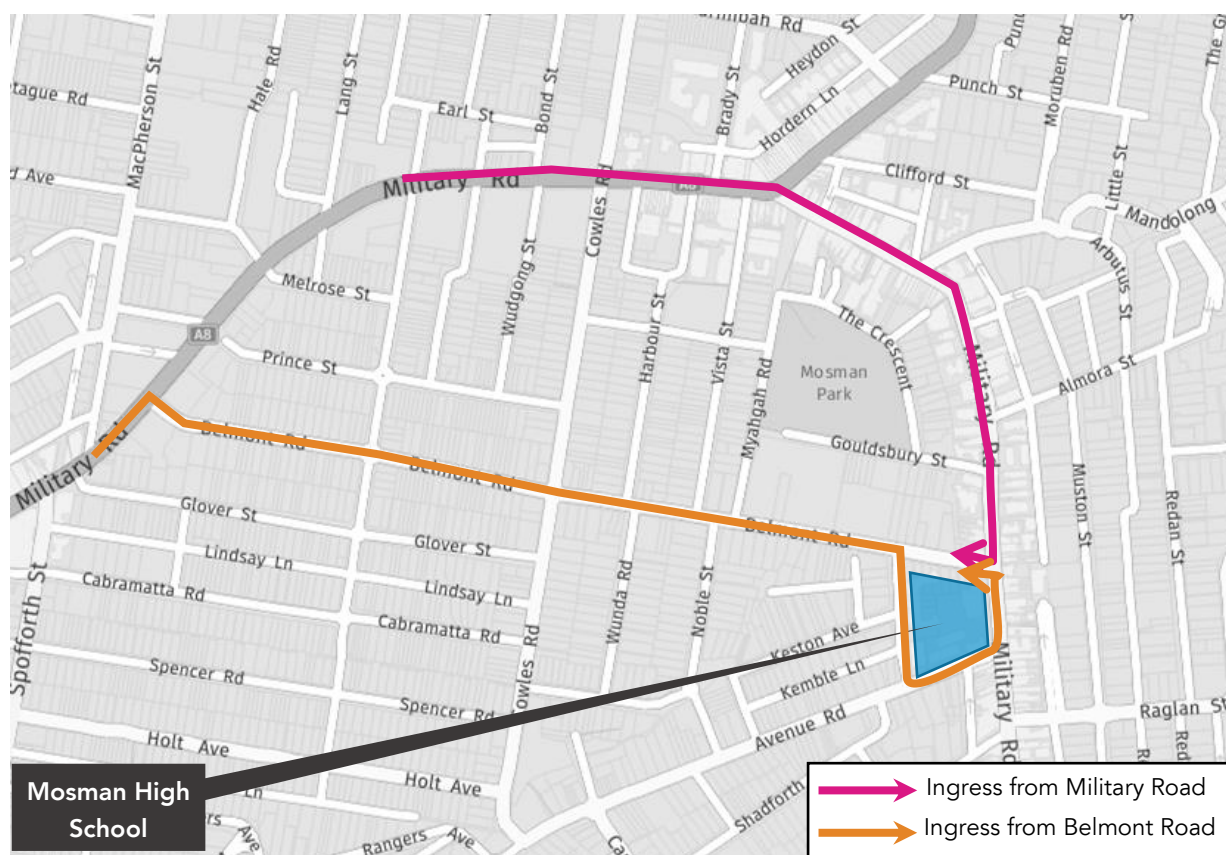


Figure 18 – HRV Ingress Routes

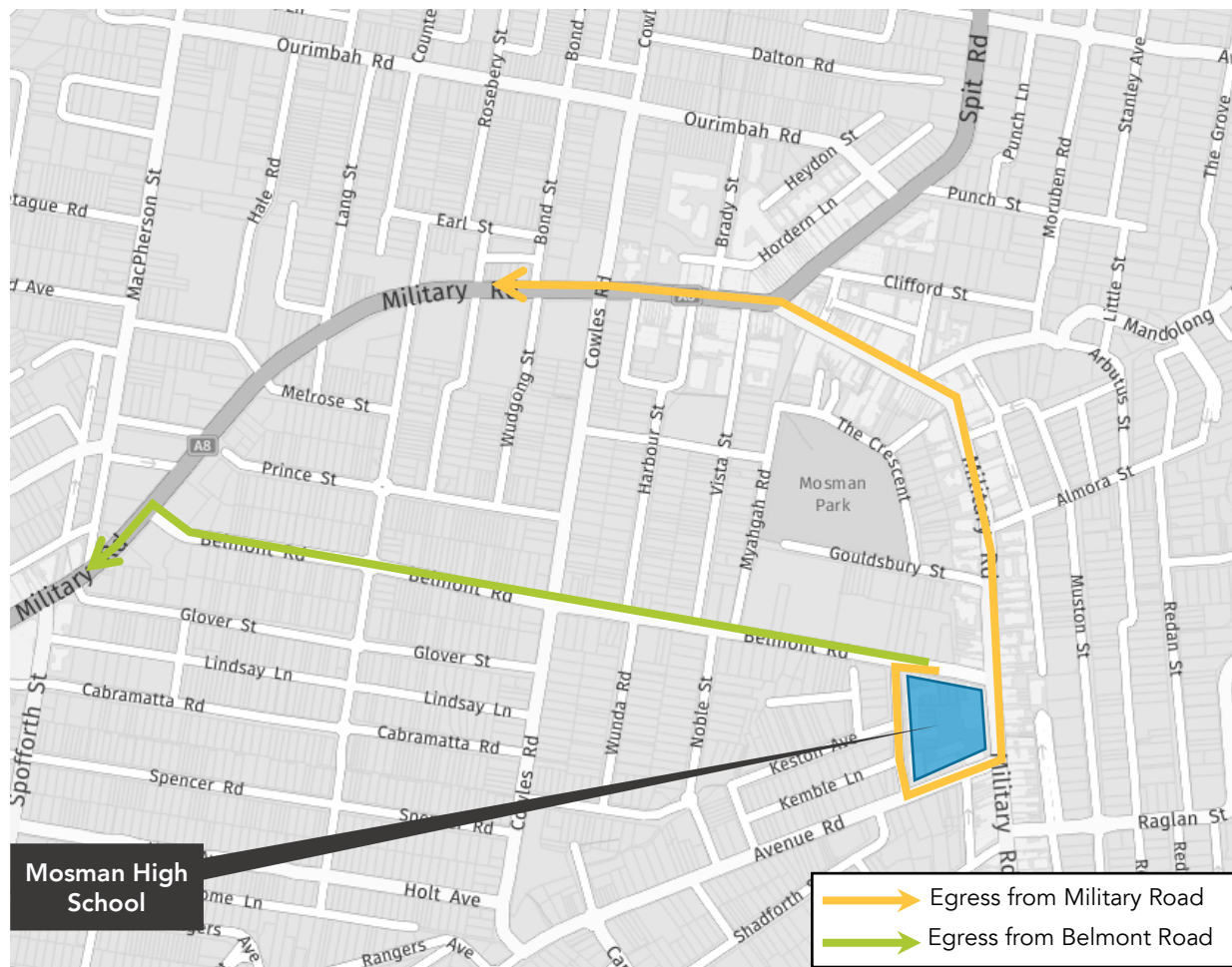


Figure 19 – HRV Egress Routes

A swept path assessment has been undertaken to confirm that the HRV movements are possible in the nearby intersections and what management measures may be required.

The swept paths for a 12.5m long HRV for all entry and exit routes are shown in **Attachment 1**.

## 5.7 Work Zone

Throughout the entire SSDA stage, a work zone will be required on Belmont Road which will be approximately 45m long to allow 19m AV access. Approximately nine existing 2P car spaces need to be temporarily removed to service the work zone. It is also proposed to temporarily relocate the existing taxi zone located at the eastern end of Belmont Road to the western side of the work zone (refer to Section 5.8.1). 12m of the taxi zone closest to the intersection will be converted to have 'no stopping' restrictions. A contractor's entrance will be added to allow access into the site from the work zone.

Traffic controllers will be present at both ends of the work zone to guide construction vehicles in and out of the work zone.

A traffic control plan will be prepared to inform drivers of turning vehicles (refer to Section 5.9.1).

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 20 shows the location of the SSDA work zone.



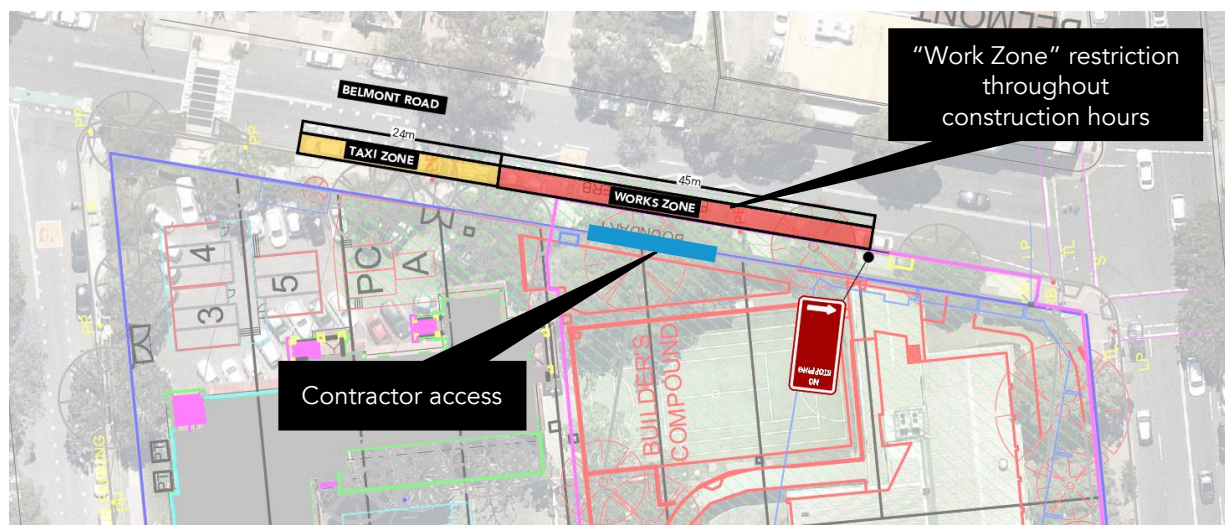


Figure 20 – Work zone

## 5.8 Parking Controls

### 5.8.1 Taxi Zone Relocation

As discussed in Section 5.7, a total of approximately nine car spaces will be temporarily removed due to the work zone and it is proposed to relocate the taxi zone on Belmont Road. The “Work Zone” restriction needs to be in place throughout the construction hours, even if construction vehicles are not arriving or leaving.

Currently, there is a total of nine 2P parking spaces and a taxi zone that can accommodate three taxis along the southern edge of Belmont Road.

The proposed “Work Zone” will require the conversion of eight parking spaces, comprising six existing 2P parking bays and two Taxi Zone spaces on the southern side of Belmont Road to ‘Work Zone 7am – 7pm Mon-Fri, 7am – 5pm Sat’ in line with the permitted construction hours outlined in Section 5.2. The three Taxi Zone spaces will be relocated to the western side of the Work Zone while the remaining space on the eastern side will be converted to “No Stopping”.

Figure 21 shows the proposed parking controls on Belmont Road.

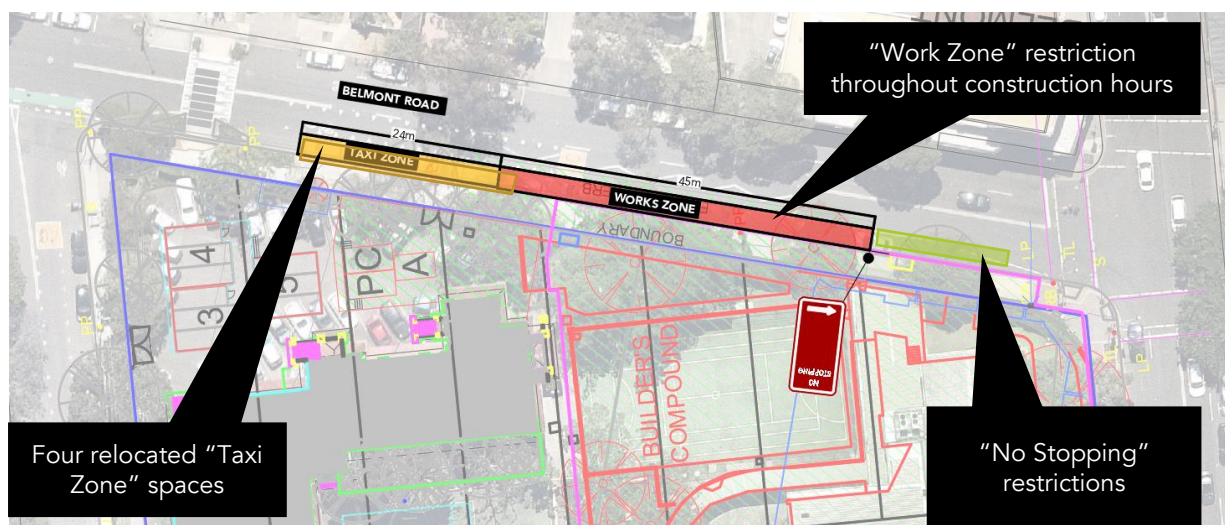


Figure 21 – Parking controls on Belmont Road

## 5.9 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.

Any vehicles exceeding the maximum vehicle type will require specific TCPs. These specific TCPs will be provided by the traffic management contractor prior to commencement of works and submitted to Council / TfNSW for approval.

### 5.9.1 Work Zone

Signage will be required to inform road users of turning trucks. Therefore, a TCP 195 will be incorporated on both approaches of the work zone.

The specific TCP will be provided by the traffic management contractor prior to commencement of works and submitted to Council / TfNSW for approval.

## 5.10 Pedestrian Management

Access for students, staff and visitors will be maintained at all times, and the locations are shown in Figure 22.

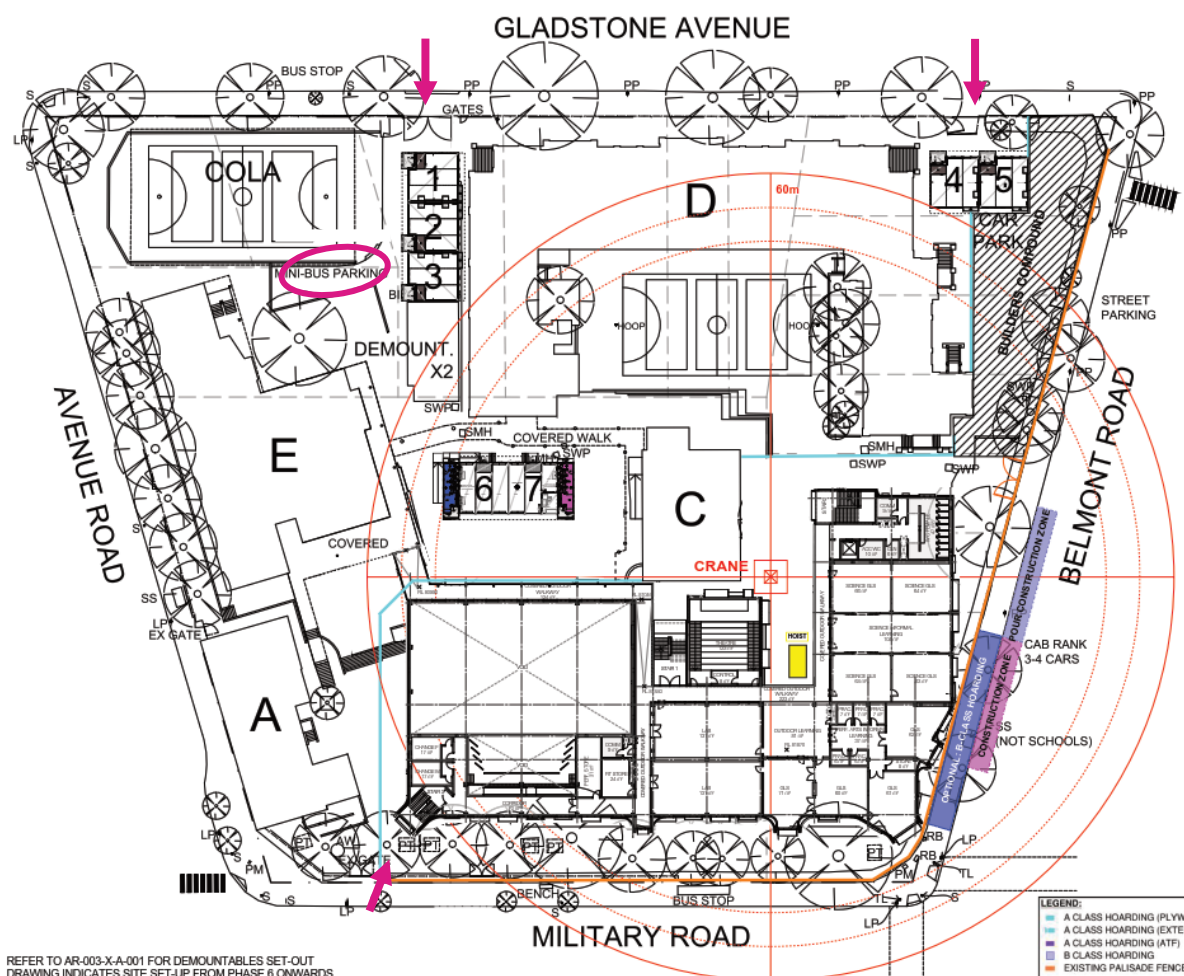


Figure 22 – Pedestrian Access



Access off Belmont Road will be closed for public and instead used as a contractor access. The existing car park will be utilised as temporary classrooms during the construction, and access to those demountables will be provided via the existing gate. The gate off Gladstone Avenue will remain in use as it currently is, with the addition of public entry exit. The northern and currently main access off Military Road will be closed, but instead the southern gate will be opened and temporarily used for students and staff to enter the school.

Cyclists can enter through the gates off Military Road and Gladstone Avenue. It is proposed that bicycle facilities are temporarily located within the existing bus bay (refer to the magenta circle in Figure 22).

The entire site (and any remote work areas when applicable) and during all phases will be physically separated from the School via A-Class or ATF type 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.

There will also be a B class overhead hoarding, which will be provided along the work zone on Belmont Avenue to allow safe pedestrian through movements without the requirement to block off the footpath.

Exact location of the hoarding and fencing will be agreed at construction stage.

### **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 Mosman Municipal Council prior to any delivery.

### **5.13 Staff Parking**

School staff parking will be temporarily unavailable during the redevelopment of the site. School staff will be advised to shift to alternative transport modes for the duration of the construction including carpooling and public transport utilisation, as discussed in Section 4.3.

The contractor will put their usual processes in place to reduce car usage among construction staff. These measures include delivering all tools and equipment required to the site in the morning and removing it in the afternoon so that construction workers are not reliant on a car. The site personnel will be advised to carpool and use the public transport options available in the vicinity of the site (refer to Section 4.3.)

### **5.14 Work Site Security**

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 or ATF type temporary fencing. The extents of fencing will be modified during the works as required to suit the works occurring at each project stage.

The work zone along Belmont Road will be secured by B-Class hoarding, so that the footpath can remain open throughout the construction.

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.

Exact location of the hoarding and fencing will be agreed at construction stage.

### **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 Belmont Road or Military Road.

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 landowners 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 an appropriate accreditation in accordance with Section 8 of Traffic Control at Worksites.

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

### **5.19 Method of Communicating Traffic Changes**

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 TfNSW 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, TfNSW, Councils or any other authority requirements.



## Attachment 1 Swept Path Assessment

## 1. Work Zone Along Belmont Road

### 1.1 AV Routes and Swept Paths

A 19m long and 2.5m wide Articulated Vehicle (AV) is used for the swept path analysis.

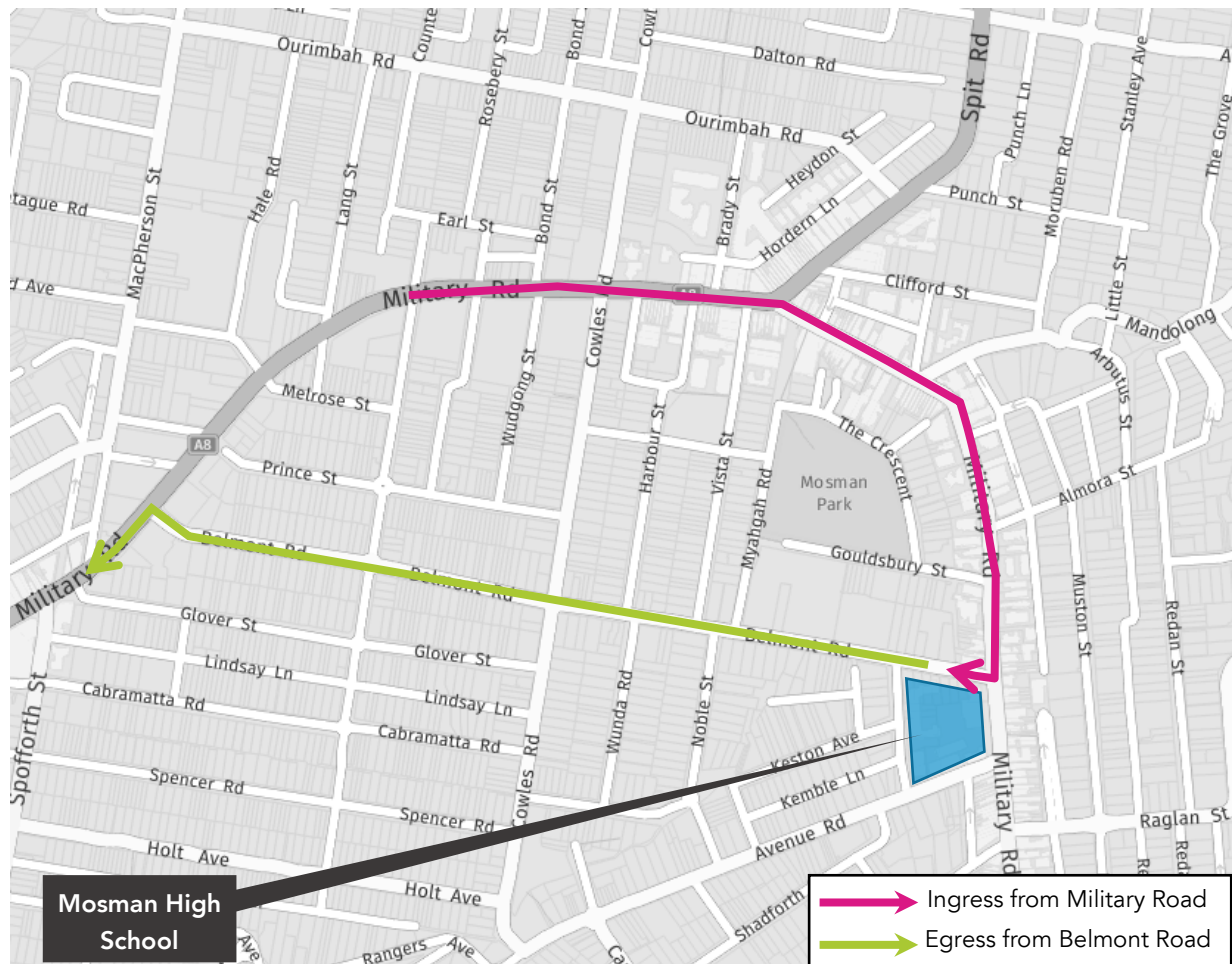


Figure 1 – AV Entry and Exit Routes



## 1.1.2 Exit Route via Belmont Road

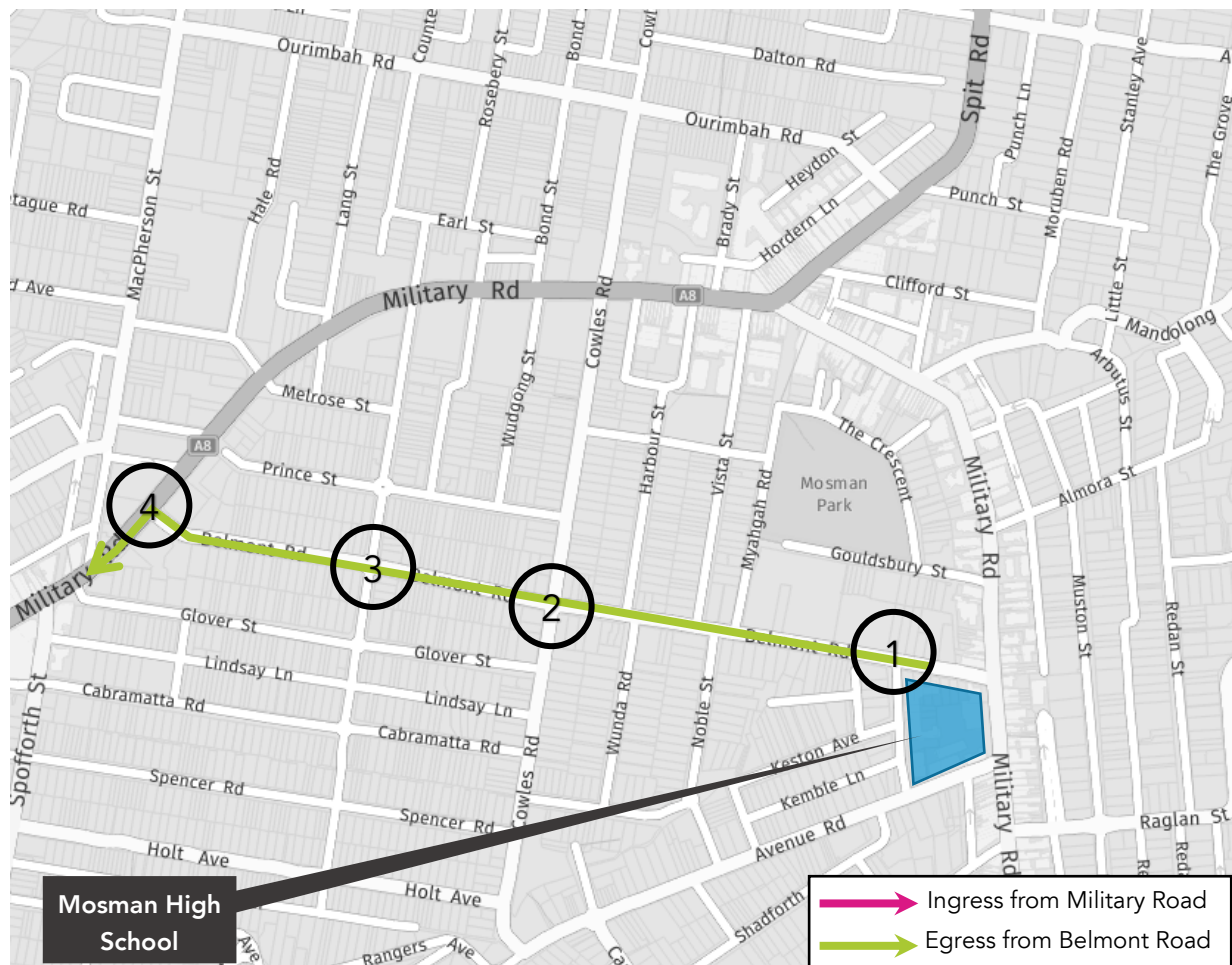
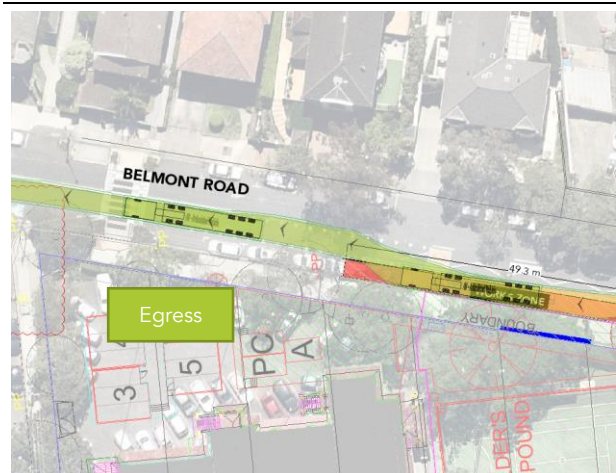


Figure 3 – Exit Route via Belmont Road

### Exit Route via Belmont Road

#### 1 – Belmont Road near Gladstone Avenue



- No traffic control measures required.
- It is to be confirmed that the existing power lines do not encroach the minimum height clearance requirement of 4.5m as per AS2890.2.



**Exit Route via Belmont Road****2 – Belmont Road / Cowles Road**

- No traffic control measures required.

**3 – Belmont Road / Bardwell Road**

- No traffic control measures required.

**4 – Belmont Road / Military Road**

- No traffic control measures required.

## 1.2 HRV Routes and Swept Paths

A 12.5m long and 2.5m wide Heavy Rigid Vehicle (HRV) is used for the swept path analysis.

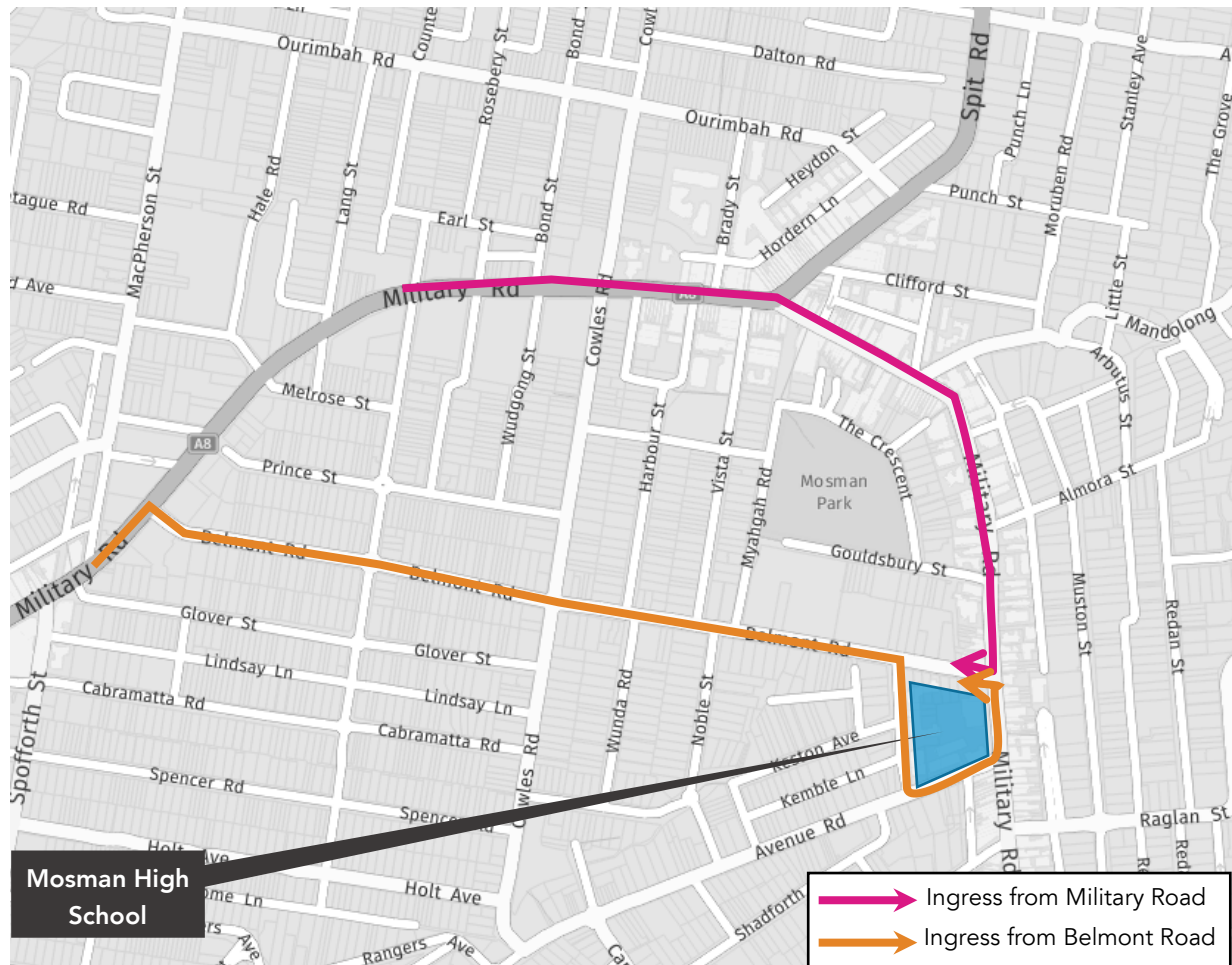


Figure 4 – HRV Entry Routes

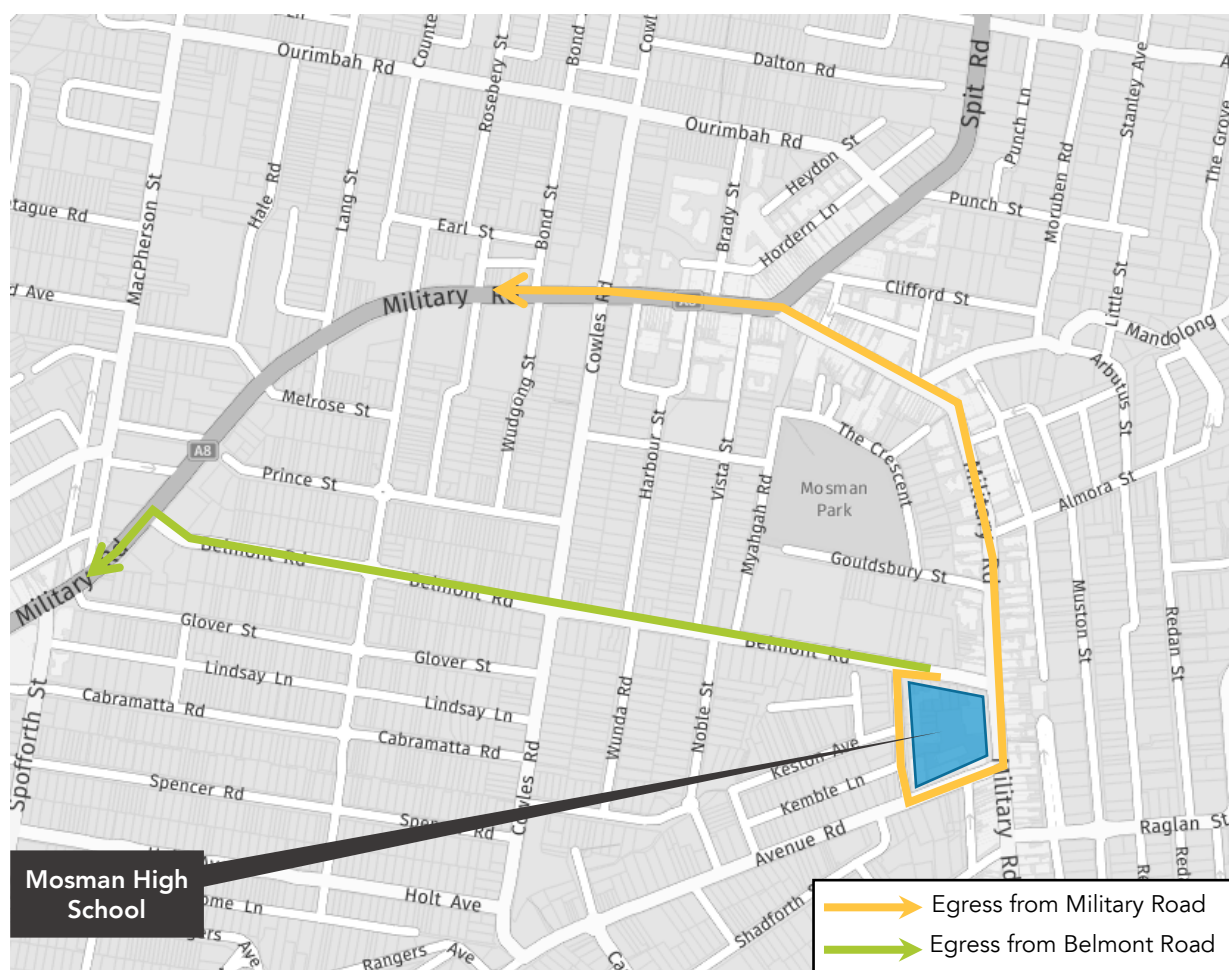


Figure 5 – HRV Exit Routes







## 1.2.2 Exit Route via Military Road

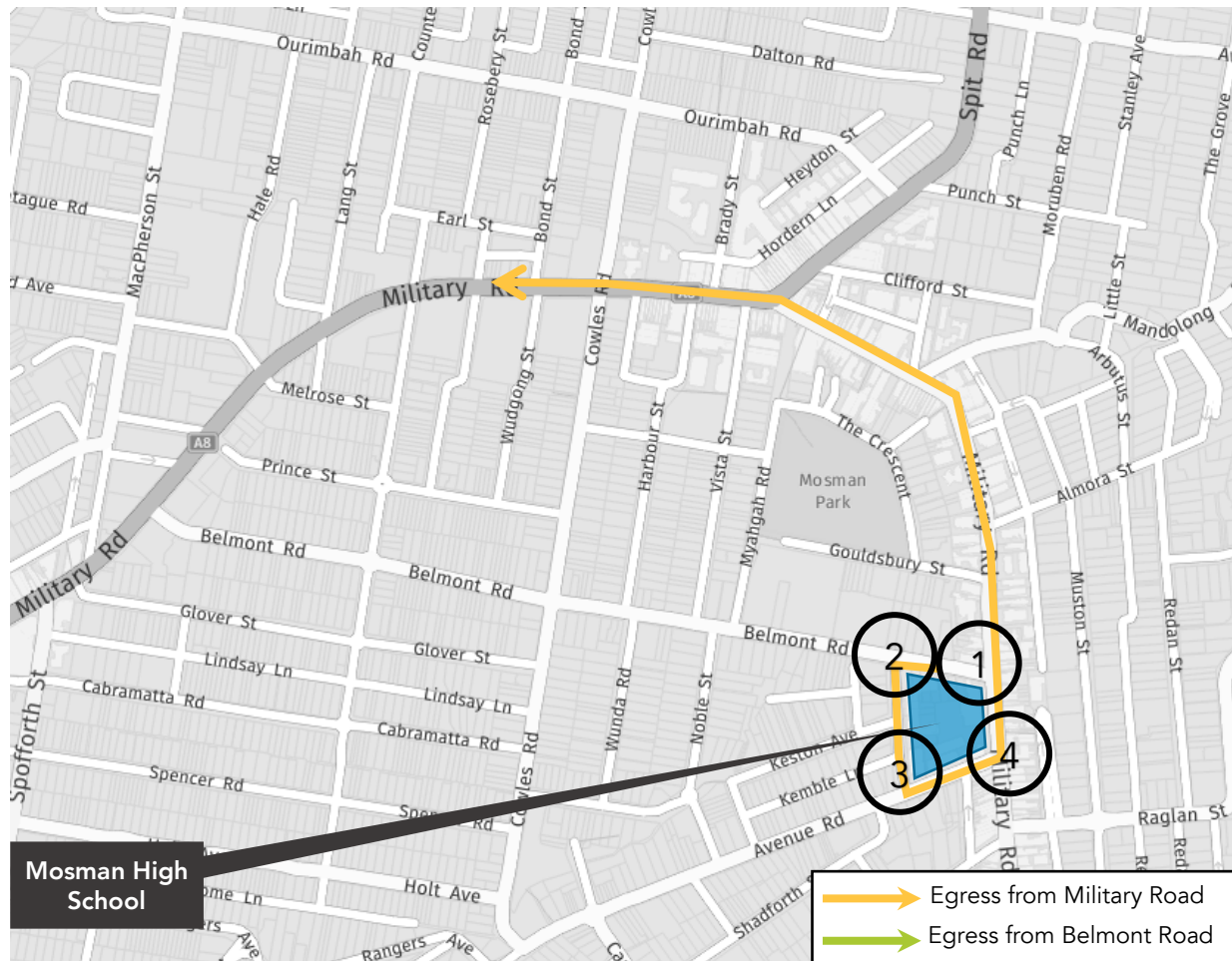
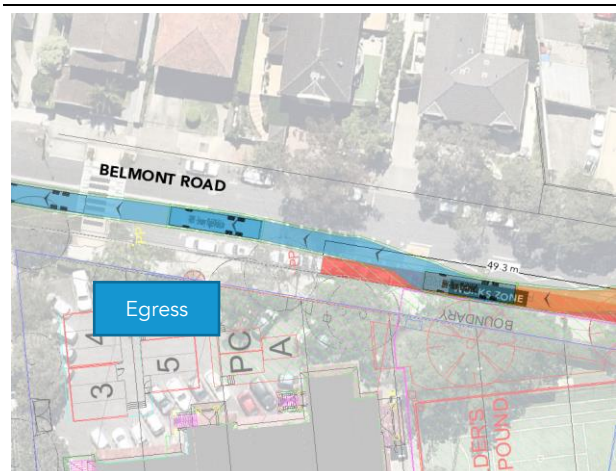


Figure 7 – HRV Exit Route via Military Road

### Exit Route via Military Road

#### 1 – Belmont Road near Gladstone Avenue



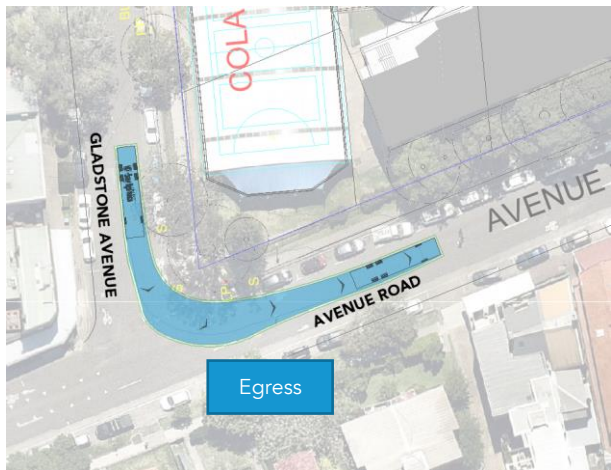
- No traffic control measures required.
- It is to be confirmed that the existing power lines do not encroach the minimum height clearance requirement of 4.5m as per AS2890.2.

## 2 – Belmont Road / Gladstone Avenue



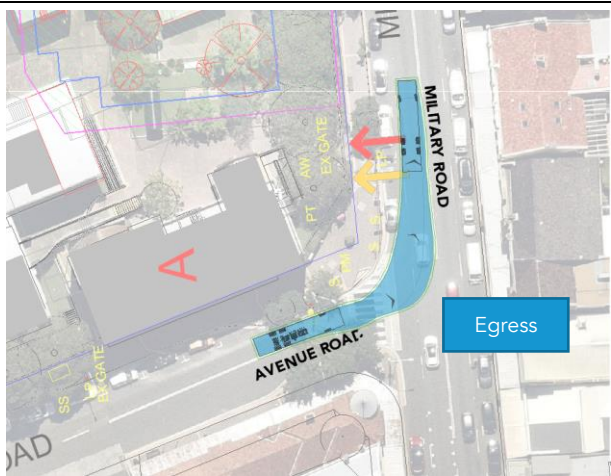
- No traffic control measures required.

## 3 – Gladstone Avenue / Avenue Road



- No traffic control measures required.

## 4 – Avenue Road / Military Road



- No traffic control measures required.

### 1.2.3 Entry and Exit Route via Belmont Road

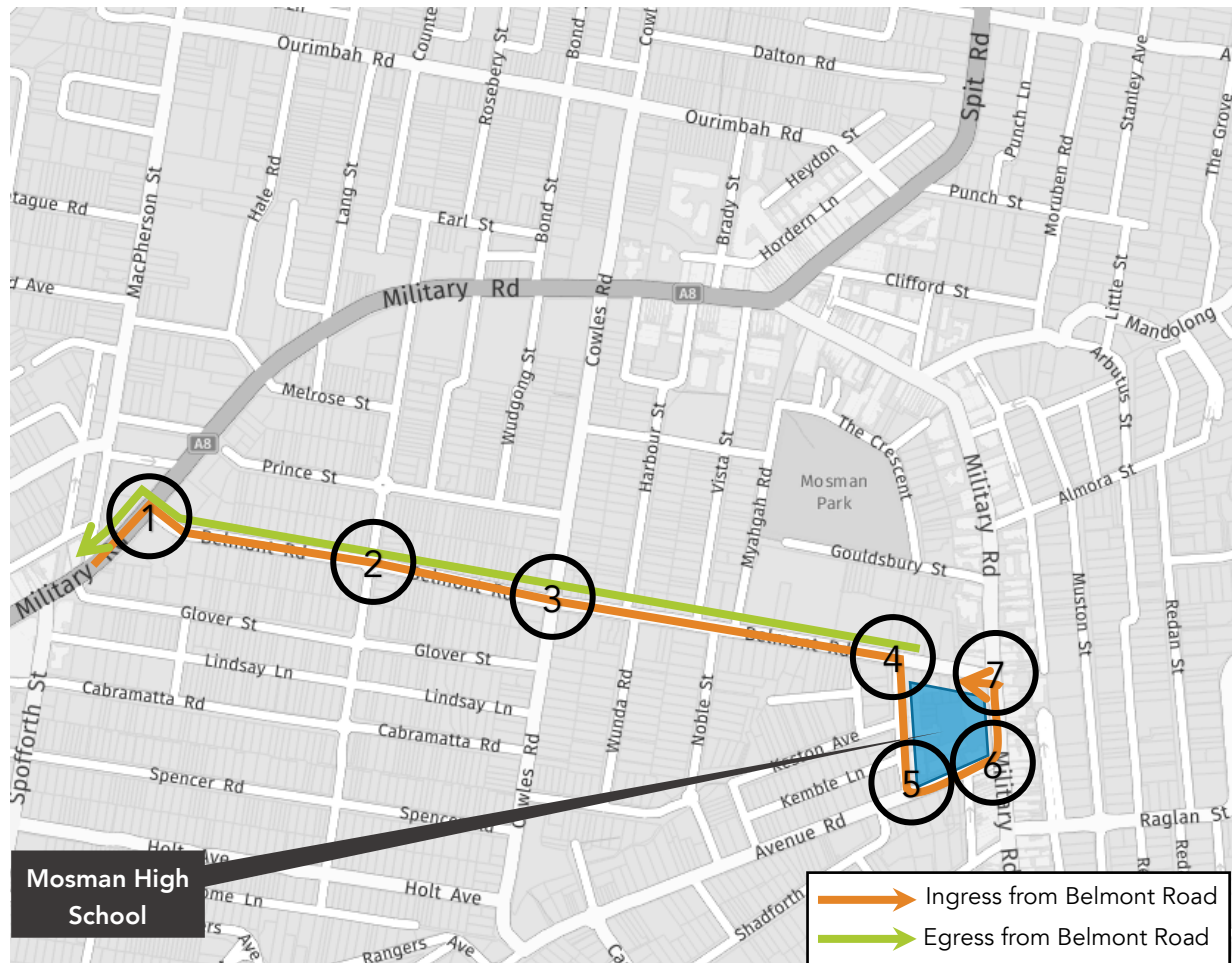
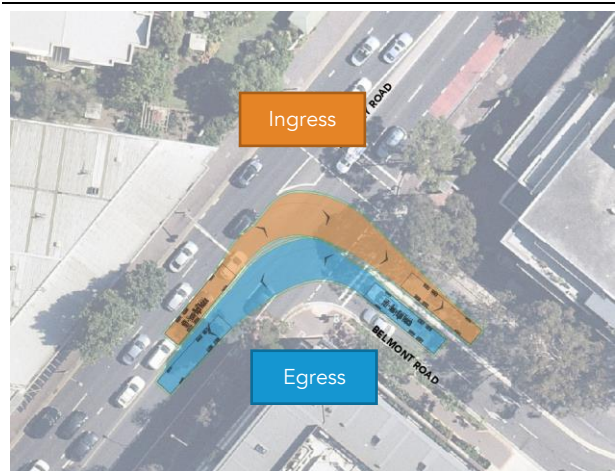


Figure 8 – HRV Entry and Exit Route via Belmont Road

#### Entry and Exit Route via Belmont Road

##### 1 – Military Road / Belmont Road

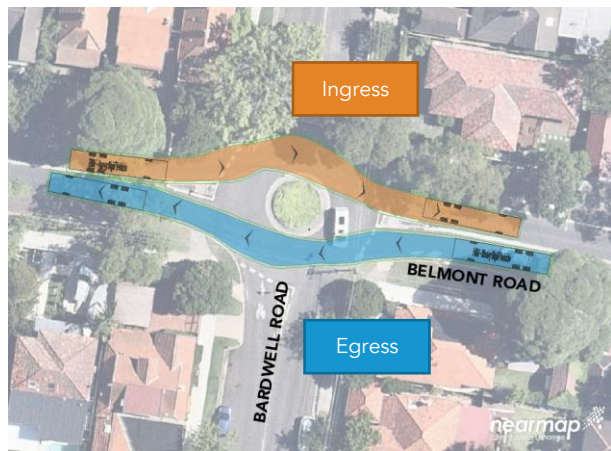


- No traffic control measures required.



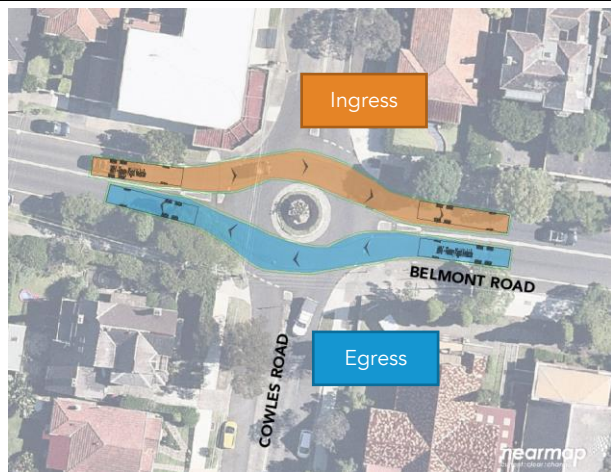
## Entry and Exit Route via Belmont Road

### 2 – Belmont Road / Bardwell Road



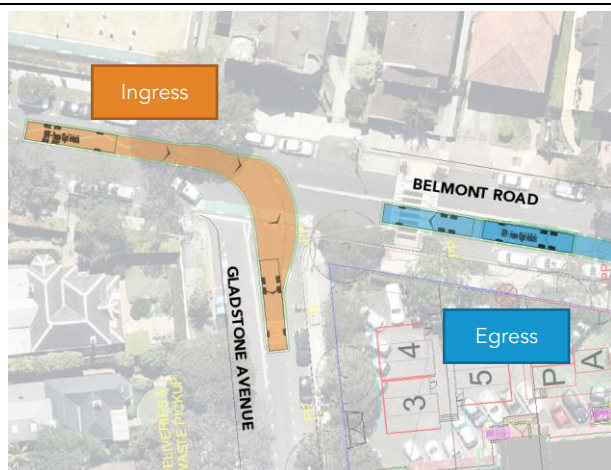
- No traffic control measures required.

### 3 – Belmont Road / Cowles Road



- No traffic control measures required.

### 4 – Belmont Road / Gladstone Avenue

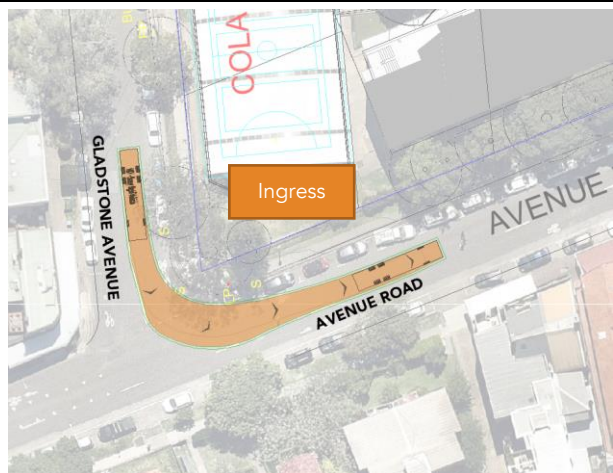


- No traffic control measures required.



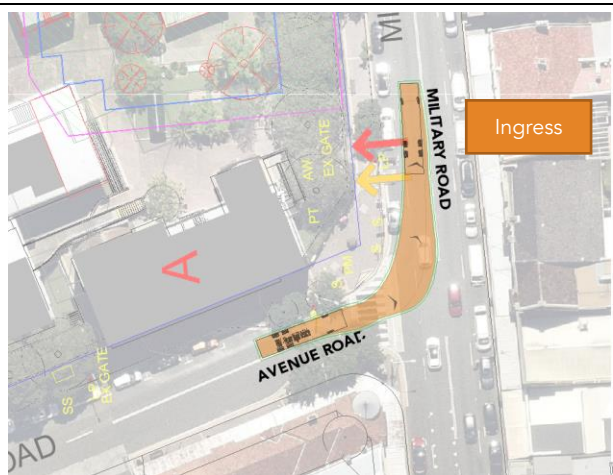
## Entry and Exit Route via Belmont Road

### 5 – Gladstone Avenue / Avenue Road



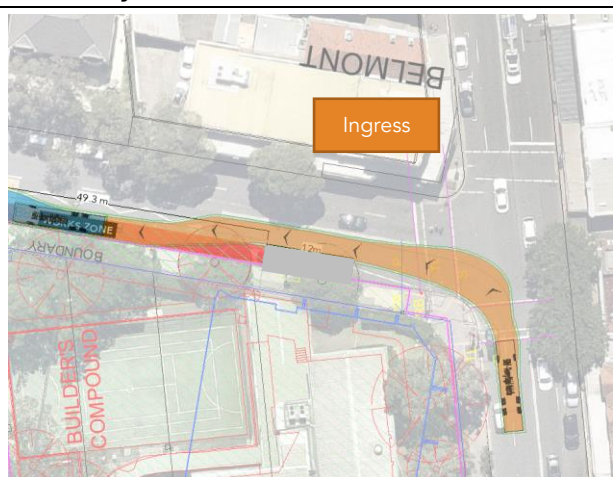
- No traffic control measures required.

### 6 – Avenue Road / Military Road



- No traffic control measures required.

### 7 – Military Road / Belmont Road



- No traffic control measures required.

## Attachment 2 Construction Program

[illegible]