



Concept

Construction Traffic

Management Plan ;

**The Scots College, Bellevue Hill
Stevenson Library**

For The Scots College
4th April 2018

**parking;
traffic;
civil design;
communication;
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Document Control

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1. Introduction

1.1 Project Summary

ptc. has been engaged by The Scots College to prepare a Concept Construction Traffic Management Plan (CCTMP) for submission to the Department of Planning, associated with the proposed development of the Stevenson Library at The Scots College, Bellevue Hill.

This report has been prepared as required by the Secretary's Environmental Assessment Requirements (SEARs).

The location of the site is shown in Figure 1



Figure 1 – The Scots College Location Plan

In summary, the proposed redevelopment of the existing Stevenson Library involves the following:

- The demolition of non structural elements of the existing building,
- Re-construction of the internal and external walls and ceilings,
- Construction of an additional level within the roof void, and
- The refurbishment of the internal building facilities.

1.2 Purpose of this Report

This report has been prepared to present the concept traffic and pedestrian management arrangements associated with the construction of the data centre facility development.;

- Section 2 - Background
- Section 3 - A description of the proposed development
- Section 4 - A description of the road network and transport facilities serving the development
- Section 5 - A description of the proposed management of construction vehicles and non-site traffic; and
- Section 6 - Conclusion.

2. Background

2.1 Site Context

The Scots College is located in the suburb of Bellevue Hill, approximately 6 kilometres east of Sydney CBD. The school is split into two campuses, The main Campus and the Ginahgulla Campus, located to the east and west of Victoria Road.

The current site layout is shown in Figure 2.

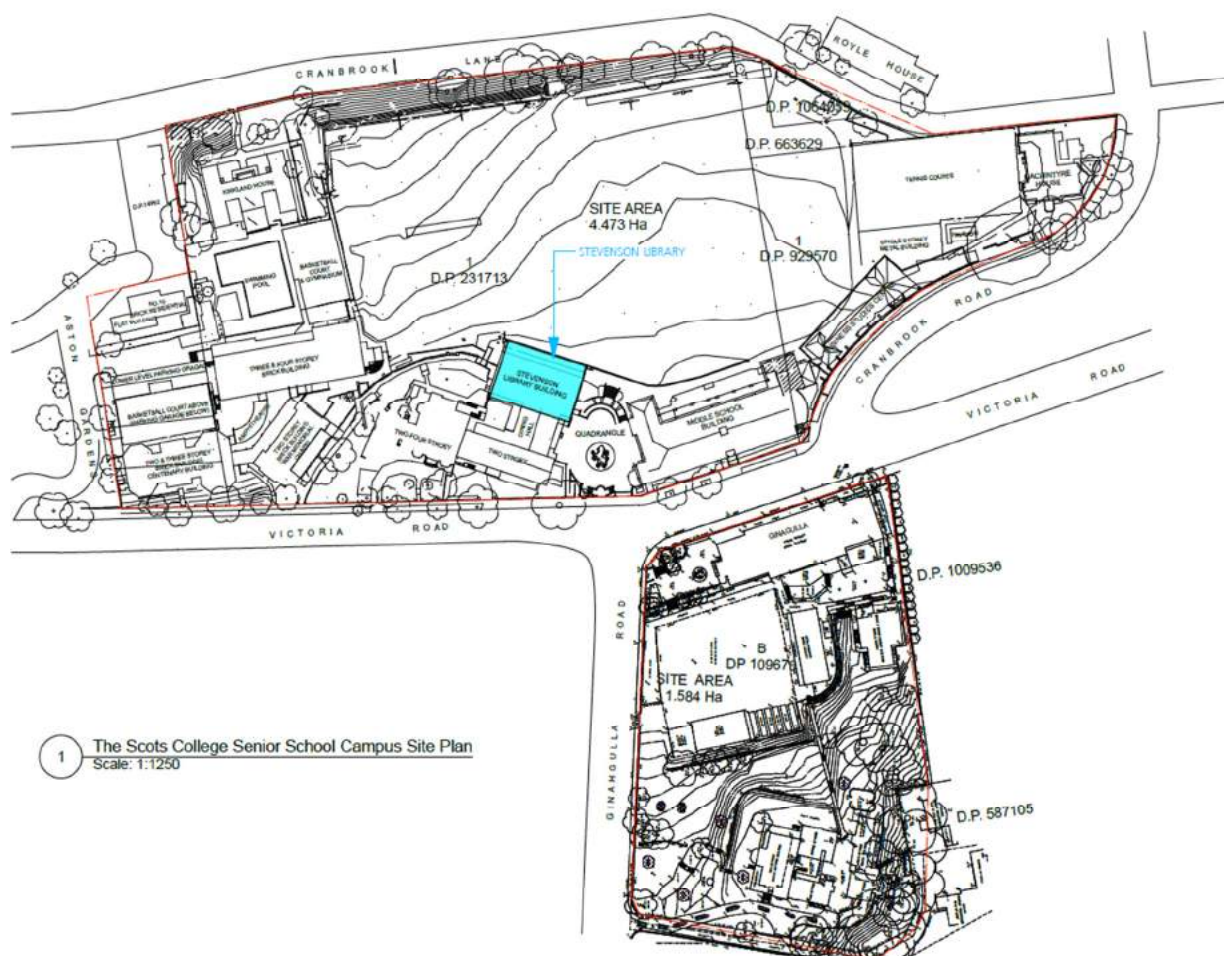


Figure 2 – Existing The Scots College Campus

2.2 School Start and Finish Times

The core school start and finish times are; 8.15am to 3.15pm, with out of school activities running from 6.30am before school and up to 6.30pm after school.

4. Transport Environment

4.1 Road Network

The site is located on the south west side of New South Head Road, in the suburb of Bellevue Hill and in this regard, has a good connection to the eastern Sydney arterial road network and the wider Sydney area.



Figure 4 – 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, Part funded by the State)
- Local Roads - Collector and local access roads (Council Managed)

The road network servicing the site includes:

Table 1 – New South Head Road

New South Head Road	
Road Classification	State Road
Alignment	East / West
Number of Lanes	2/3 lanes in each direction
Carriageway Type	Un-divided
Carriageway Width	18 metres
Speed Limit	60 kph (outside School Zone times)
School Zone	Yes
Parking Controls	Eastbound - ½P 9am to 4pm Mon to Friday, No parking 4pm to 6pm Westbound – un-restricted
Site Frontage	Yes



Figure 5 – New South Head Road – Westbound towards Victoria Road

Table 2 – Victoria Road

Victoria Road	
Road Classification	Local Road
Alignment	East / West
Number of Lanes	1 lanes in each direction
Carriageway Type	Un-divided
Carriageway Width	12 metres
Speed Limit	50 kph (outside School Zone times)
School Zone	Yes
Parking Controls	Generally un-restricted, with mixed restriction along other sections
Site Frontage	Yes



Figure 6 – Victoria Road – Southbound towards Cranbrook Road

Table 3 – Cranbrook Road

Cranbrook Road	
Road Classification	Local Road
Alignment	East / West
Number of Lanes	1 lane in each direction
Carriageway Type	Un divided
Carriageway Width	12 metres
Speed Limit	50 kph (outside School Zone times)
School Zone	Yes
Parking Controls	Un-restricted
Site Frontage	Yes



Figure 7 – Cranbrook Road - toward Cranbrook Lane

Table 4 – Cranbrook Lane

Cranbrook Lane	
Road Classification	Local Road
Alignment	North / South
Number of Lanes	1 lane in each direction
Carriageway Type	Un-divided
Carriageway Width	8 metres
Speed Limit	50 kph
School Zone	No
Parking Controls	Un-restricted and No-Parking
Site Frontage	Yes



Figure 8 – Cranbrook Lane – toward site access

4.2 Key Intersections

The key intersections within the vicinity of the site and their configurations are listed below and shown in Figure 9.

- New South Head Road and Victoria Road – three arm signalised intersection
- Victoria Road and Cranbrook Road- three arm priority intersection
- Cranbrook Road and Cranbrook Lane – four arm priority intersection

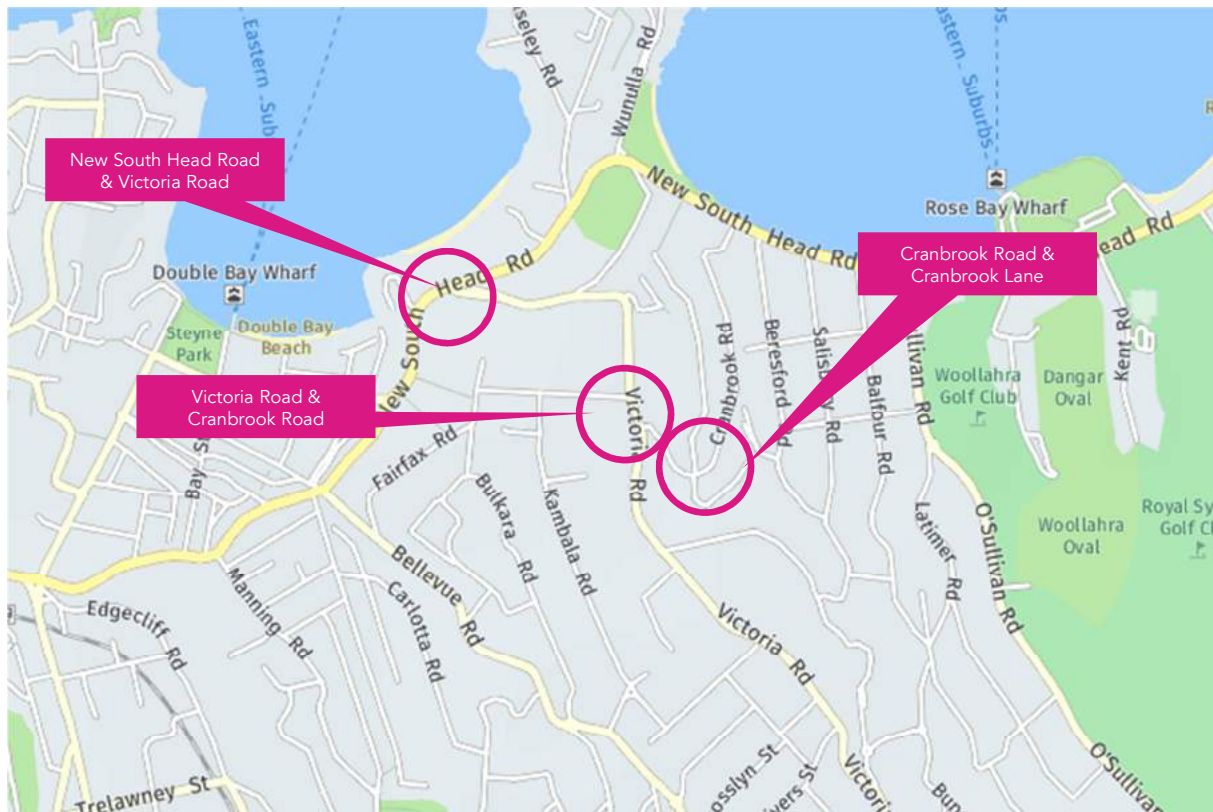


Figure 9 – Key Intersections

4.3 Pedestrian Facilities

Facilities are available to the public within the vicinity of the site.

These facilities are summarised in Table 5 and shown in Figure 10.

Table 5 – Pedestrian Facilities

Road	Pedestrian Facilities
Victoria Road	East Side – 4.0m wide footway
	West Side – 4.0m wide footway
	Signal controlled crossings on all arms of the Victoria Road / Ginahgulla Road intersection



Figure 10 – Pedestrian Facilities

4.4 Bicycle Network

Woollahra Municipal Council has developed the Woollahra Bicycle Strategy 2009, which reviewed the 'Woollahra Waverly Bike Plan 2000' and set out to develop a bicycle strategy for future implementation.

The key elements of the bicycle strategy are;

- Completing major (regional) routes that provide regional connectivity;
- Every Street a Cycling Street – promoting and facilitating cycling on all local roads with minimum new construction;
- Recreational routes for safe and family-friendly cycling in the vicinity of parks and reserves;
- Developing cycle facilities at/to public transport Interchanges and urban villages;
- Integrated policies and planning instruments – inclusion of cycle facilities and considerations within road construction and maintenance programs as well as in development planning; and
- Targets to provide a balance between civil works and encouraged programs, including a ride-to-school strategy to develop sustainable travel habits and cycling confidence from a young age.



Figure 11 – Local Bicycle Network (Source:Woollahra Municipal Council)

As shown in Figure 11, the school is served by an existing on-road cycle route along Victoria Road and a proposed off-road route along New South Head Road. These routes provide access to the local cycle network and links to the greater Sydney cycle network.

4.5 Bus Services

The site is well serviced by buses on Route 326 – Edgecliffe to Bondi Junction (via Bellevue Hill), which operate from 5 bus stops in close proximity to the site, as shown in Figure 12:

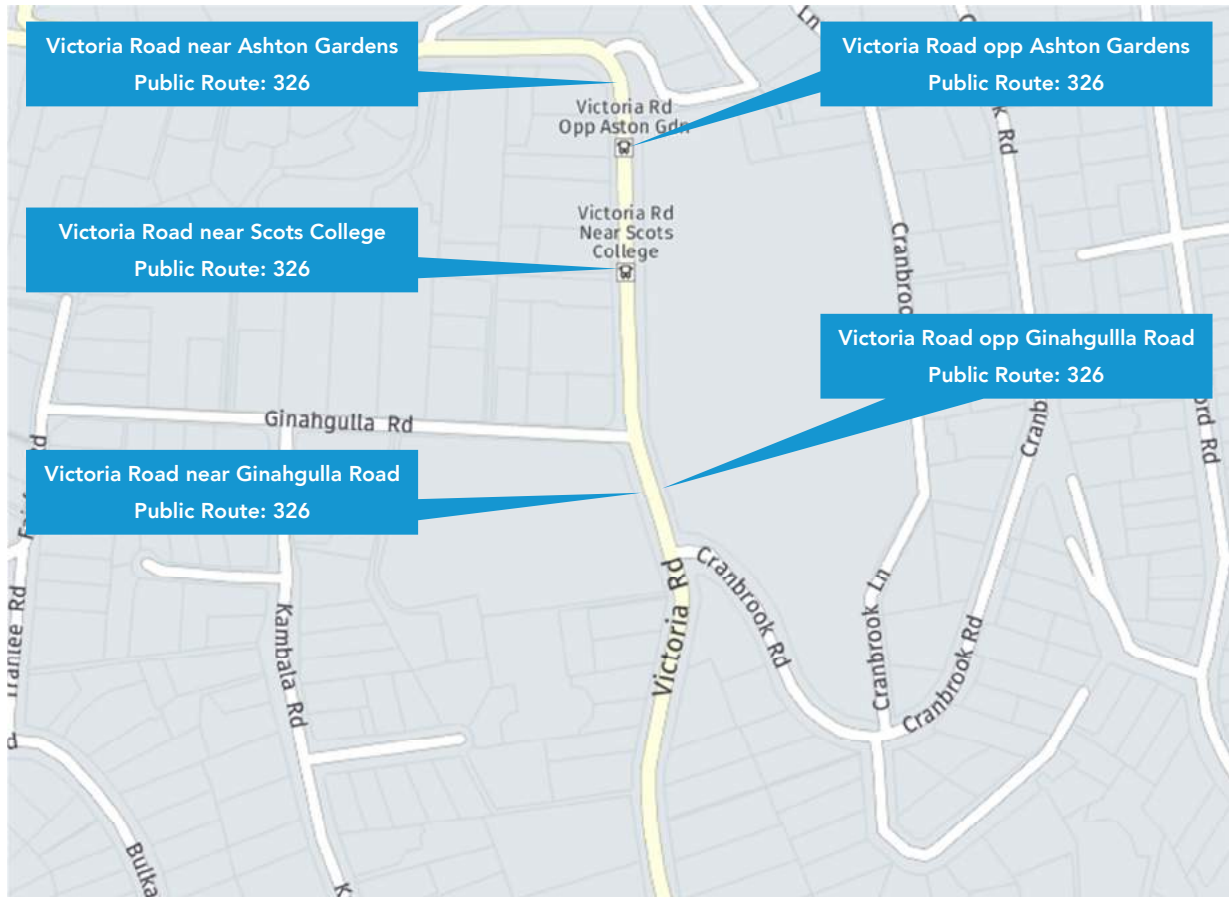


Figure 12 – STA Bus Services

This service are operated by Sydney buses run between 06:30 and 00:15 and provide access from the local area to the City at approximately 60 minute intervals, with additional services at peak times.

5. Traffic Management Plan

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 the following are the primary objectives:

- To minimise the impact of the construction vehicle traffic on the overall operation of the road network;
- Establishment of a safe pedestrian environment in the vicinity of the site.
- 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

5.2 Hours of Work

The hours of work will be determined through the conditions of consent as advised by the consenting authority. However, it is anticipated that the working hours will be as follows:

- | | |
|-----------------------------|--|
| • Monday to Friday | 7:00am to 5.00pm; |
| • Saturdays | 7:00am to 1.00pm; |
| • Sunday or public holidays | No works to be undertaken without prior approval |
| • Demolition works | 8.00am to 3.00pm (with breaks every hour) |

5.3 General Requirements

In accordance with Road and Maritime Services (RMS) requirements, all vehicles transporting loose materials will 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 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, vehicles, refuse skips or the like, under any circumstances.

The applicant/contractor is required to follow and abide by the any specific standard requirements for construction management as set out by the Woollahra Municipal Council.

5.4 Construction Vehicle Types

The maximum construction vehicle size likely to be utilised during the construction is a 19m Truck and Dog.

During the peak construction periods, it is estimated that the construction activity is likely to generate up to 20 vehicle movements per day (approximately 2 vehicles per hour). Construction vehicle activity will be programmed (wherever possible) to occur outside network peak times and the school drop off and pick up periods.

A management system will be put in place to:

- Stagger all contractors' deliveries to ensure that back logs do not occur with multiple deliveries arriving at the same time. This is common practice and involves radio contact with approaching truck drivers.
- The provision of internal lay over areas for vehicles to stand and wait to be loaded/unloaded.
- Traffic control measures to be in place at all entry and exit points to the site outlined in Section 5.7.
- Works to be sequenced so that activities that require multiple deliveries (i.e. concrete pours and removal of spoil) do not occur on the same day.
- Prefabrication (wherever possible) of materials off site.

5.5 Construction Vehicle Access Routes

The site is located in the suburb of Bellevue Hill and the proposed vehicle construction routes have regard for the surrounding traffic arrangements within the vicinity of the site and the access location/arrangements within the campus, as illustrated in Figure 13

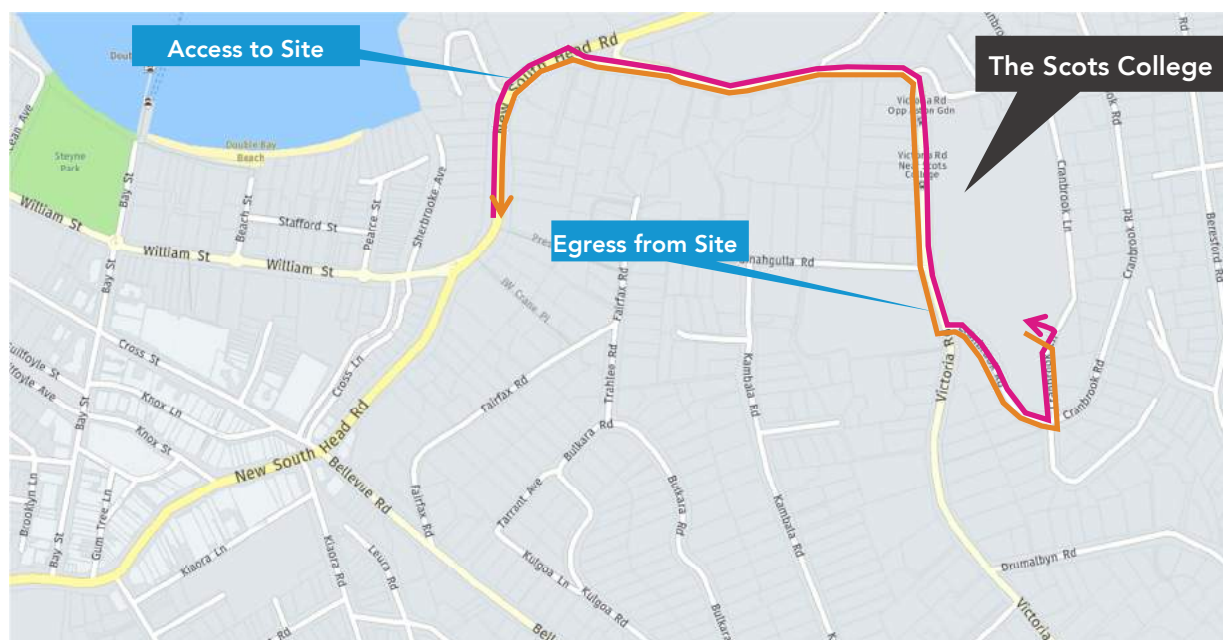


Figure 13 – Construction Vehicle Access and Egress Routes

The library is located centrally within the campus, with no proximate road frontage. Therefore it is proposed that access will be provided around the edge of the oval via the existing gate on Cranbrook Lane. This also has the benefit of separating the construction activity and the primary student activity on Victoria Road.

All vehicles will access the site from the west via New South Head Road and turn right into Victoria Road. Vehicles will then proceed southbound along Victoria Road, turn left into Cranbrook Road, left into Cranbrook Lane and access the site via the existing site access adjacent to the tennis courts.

Vehicles exiting the site will do so via the site access off Cranbrook Lane, turning right into Cranbrook Lane, right into Cranbrook Road, right into Victoria Road and then proceed northbound to re-join New South Head Road.

To assess their suitability for the proposed construction vehicle swept path analysis has been undertaken on the three key intersections:

- New South Head Road and Victoria Road
- Victoria Road and Cranbrook Road
- Cranbrook Road and Cranbrook Lane

The swept path analysis has been undertaken using the largest vehicle expected (19m Truck and Dog) and is shown in Figure 14, Figure 15 and Figure 16.

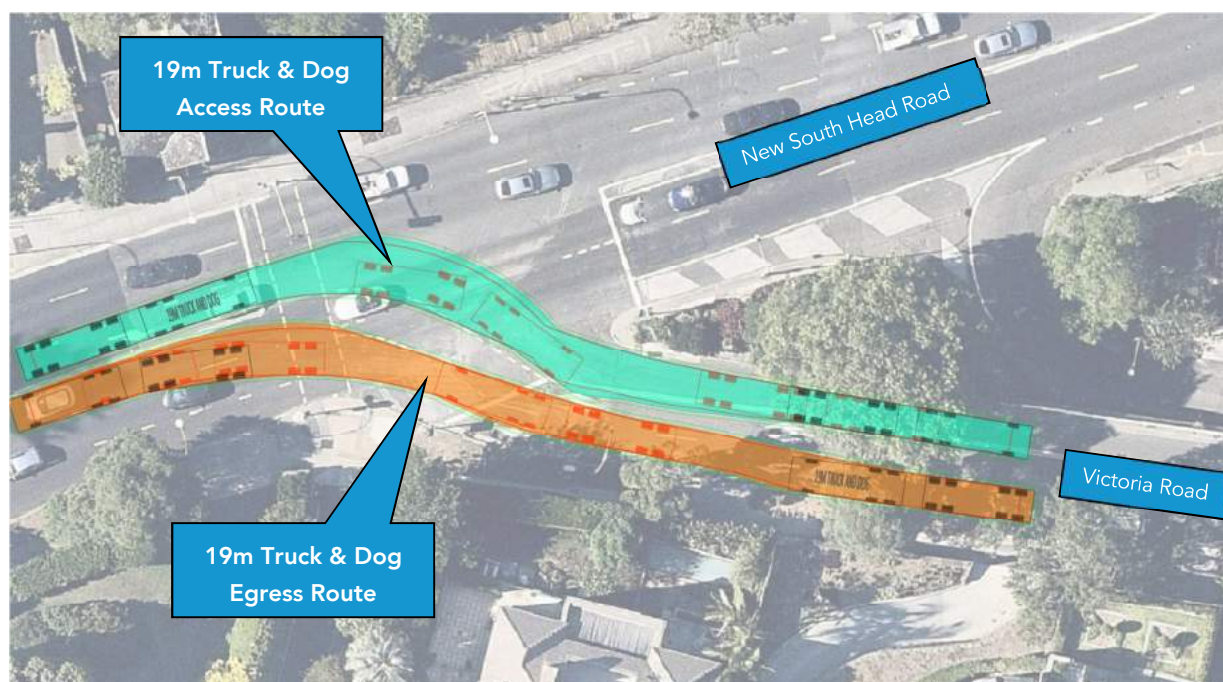


Figure 14 – New South Head Road and Victoria Road

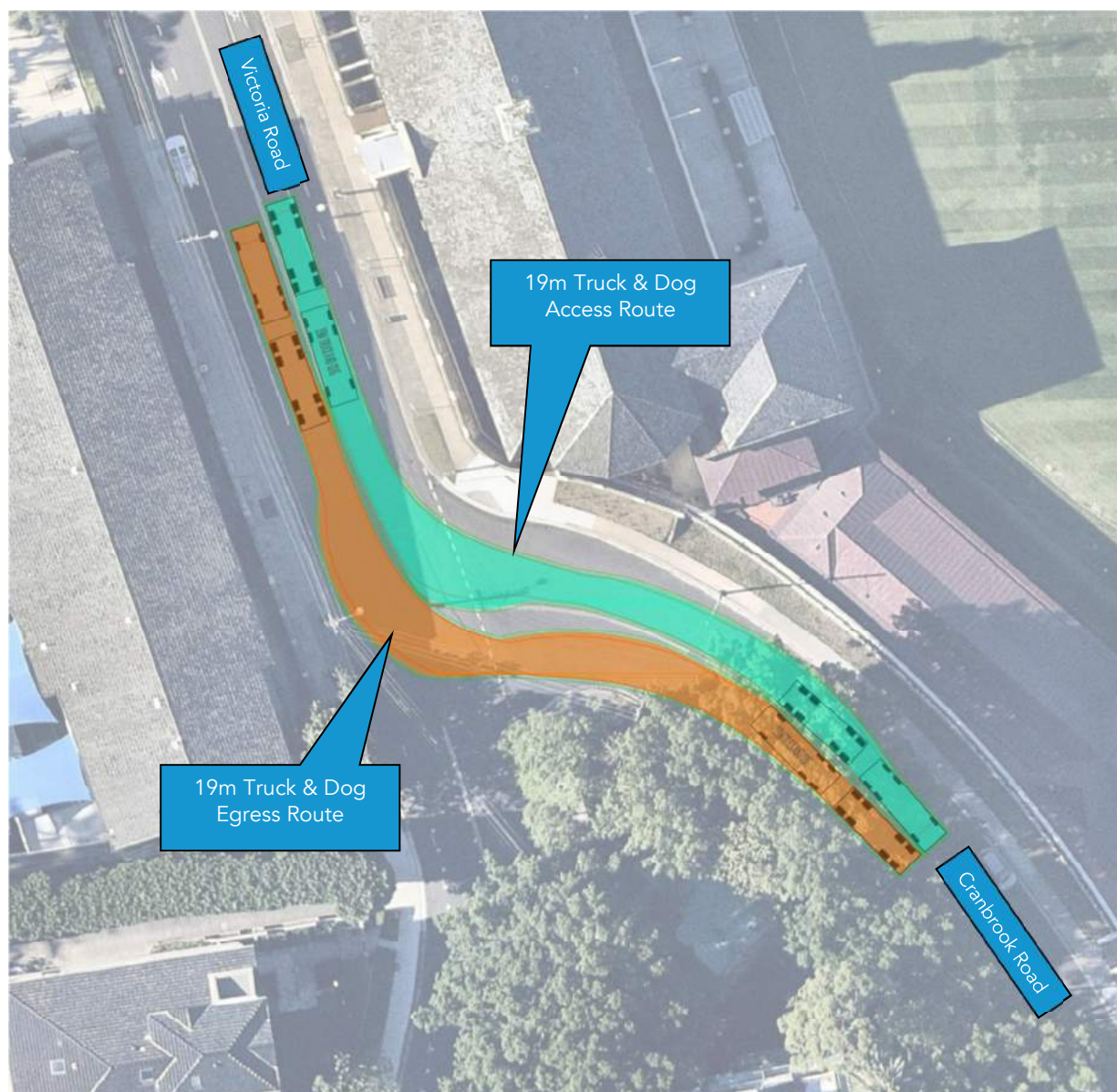


Figure 15 – Victoria Road and Cranbrook Road

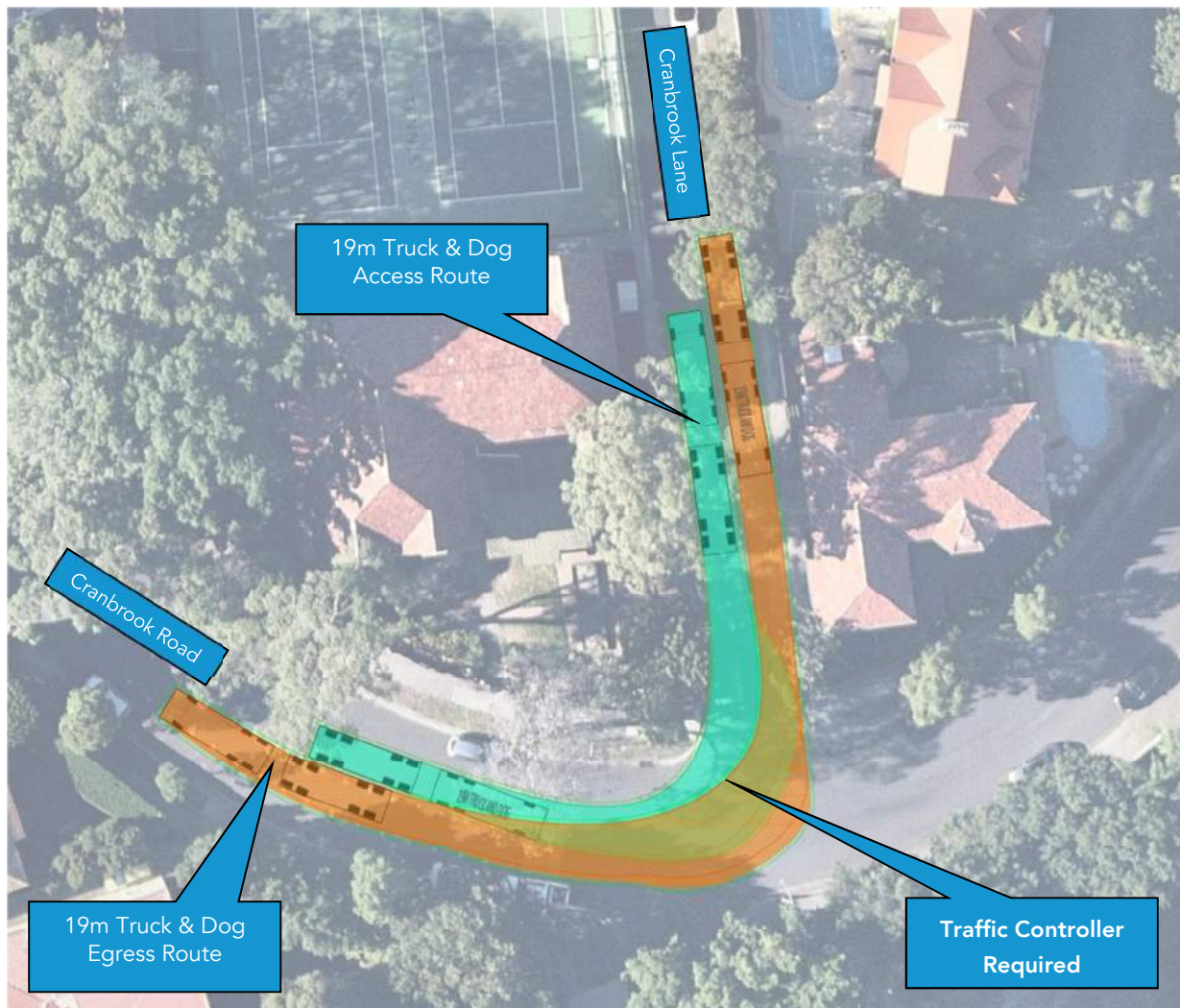


Figure 16 – Cranbrook Road and Cranbrook Lane

As previously discussed, vehicles will enter and exit the site via the existing 8m access off Cranbrook lane and then will access the construction area by circumnavigating the oval in an anti-clockwise direction, shown in Figure 17 and Figure 18.

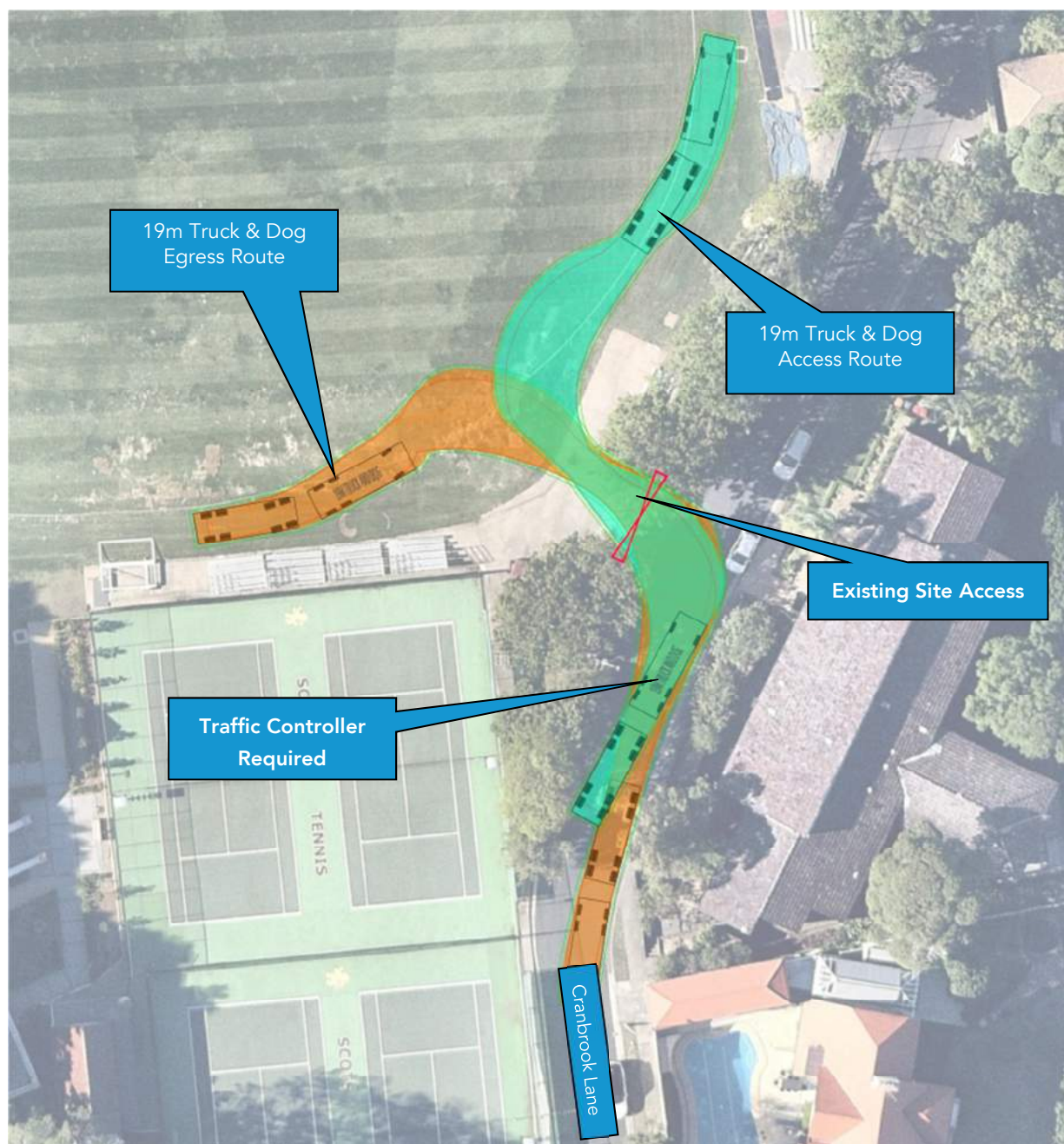


Figure 17 – Site Access

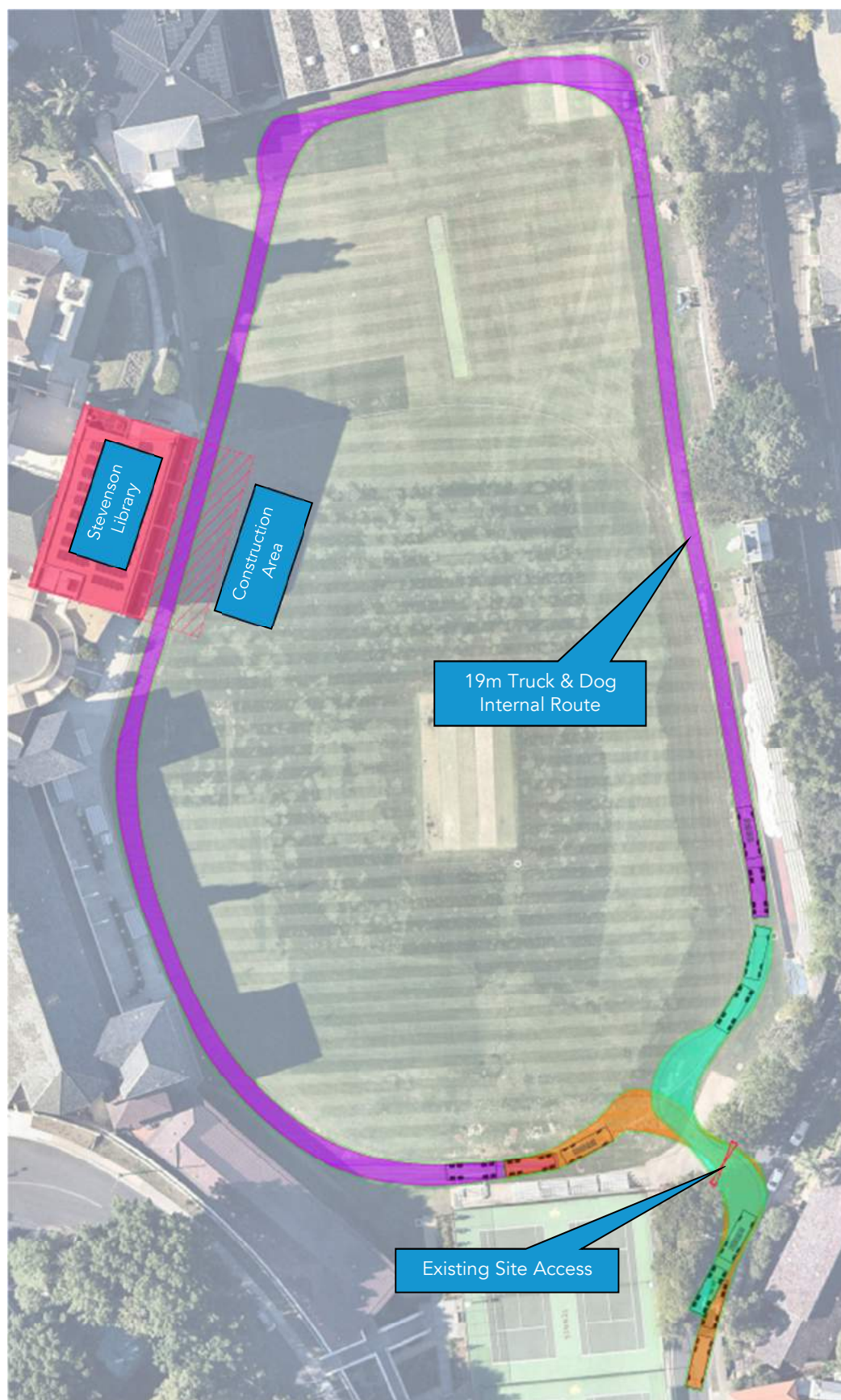


Figure 18 – Internal Vehicle Movements

It should be noted that traffic controllers will be required to manage vehicle movements at the Cranbrook Road / Cranbrook Lane intersection and the Cranbrook Lane Access Gate. Traffic control plans will be provided prior to construction for approval by Council.

Material handling and storage area will be situated to the front of existing building, with platforms installed at every level as the development progresses. Exact details of the on site areas will be provided prior to commencement of construction.

5.6 Construction Program and Process

The project is intended to be undertaken in over a 24 month period and during the pre-construction process, the construction program will be established to provide the most effective construction process.

5.7 Traffic Control Measures

Traffic control will be provided for access and egress to all gates and will be in accordance with the RMS Guide to Traffic Control at Work Sites. Traffic controllers will be required to manage vehicle movements at the Cranbrook Road / Cranbrook Lane intersection and the Cranbrook Lane Access Gate.

Traffic control plans will be provided prior to construction for approval by Council and these traffic controls plans will include any required changes to the on street parking provisions.

Traffic controllers will be used to ensure that all trucks exit the site right towards Cranbrook Road and do not exit left and drive down Cranbrook Lane.

5.8 Work Zone

No Work Zones are proposed as part of this development.

5.9 Pedestrian Access

Pedestrian access to the school and the surrounding pedestrian network is to be maintained at all times.

The site extent is to be bounded by security fencing and this is discussed further in Section 5.12.

All access points to the site are to be securely locked when construction activities are in place.

5.10 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 Council prior to any delivery. Requests shall be submitted 28 days prior to the scheduled date of use of an oversized vehicle.

5.11 Construction Staff Parking

Due to site constraint, there will be limited parking available to site personnel on site. All site personnel are to be advised that they are not to park in the on street parking in the vicinity of the development site. To minimise the required parking, the contractor will be encouraged to assist in the transportation of workers to the site. Also, site personnel will be advised to car pool (where ever practicable) and site personnel will be informed of the public transport options available in the vicinity of the site (refer to Section 4) and advised to utilise these facilities (where ever practicable).

5.12 Work Site Security

To provide security to the works site and protection to the construction staff, students and the general public, the site will be bounded by security fencing with shade cloth, which will be installed and maintained by the principle contractor.

This fence will define the extent of the works site.

All access points to the site are to be securely locked when construction activities are in place.

The exact location of this fencing will be confirmed prior to the commencement of construction and is subject to approval by Council.

5.13 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.

5.14 Emergency Vehicles

The proposed traffic control arrangements do not propose closure of any local roads. Any emergency vehicles requiring access to the project site will do so via the relevant site access along Cranbrook Road.

5.15 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.

5.16 Method of Communicating Traffic Changes

Traffic control plans in accordance with Australian Standards (AS 1742.3 – Traffic Control Devices for Works on Roads) and RMS Traffic Control at Worksites manual will advise motorists of upcoming changes in the road network.

During construction the contractor shall, 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. Sign size is to be size "A".

No deviation from the approved TCP shall be permitted, unless otherwise approved by Council and certified by an RMS accredited personnel.

The associated TCP road signage will inform drivers of works activities in the area including truck movements in operation.

Prior to commencement of works on site the contractor is to inform neighbouring properties of proposed works and provide site contact information by means of a letter box distribution.

5.17 Contact Details for On-Site Enquiries and Site Access

The principal contractor is as of yet unknown and details will be provided prior to commencement of construction.

5.18 Maintenance of Roads and Footways

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. Conclusion

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

With the measures described in the CCTMP 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 continually reviewed and amended if required, due to changes in design, RMS, Councils or any other authority requirements.