

New High School in Bungendore

Preliminary Construction and Pedestrian Traffic Management Plan

Hindmarsh Construction Australia Pty Ltd

7 September 2021

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Printed date	7/09/2021 3:33:00 PM
Last saved date	7 September 2021 3:33 PM
File name	https://projectsportal.ghd.com/sites/pp15_04/bungendoreandjarrabo/ProjectDocs/CTMP/12548316/Bungendore CTMP Rev 2.docx
Author	Mark Lucas
Project manager	Mark Lucas
Client name	Hindmarsh Construction Australia Pty Ltd
Project name	New High School in Bungendore
Document title	New High School in Bungendore Preliminary Construction and Pedestrian Traffic Management Plan
Revision version	Rev 2
Project number	12548316

Document status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S3	A	M Lucas	S Clarke	On file	S Clarke	On file	20/7/2021
S3	0	M Lucas	S Clarke	On file	S Clarke	On file	21/07/2021
S3	1	M Lucas	S Clarke	On file	S Clarke	On file	04/08/2021
S4	2	M Lucas	S Clarke	On file	S Clarke	On file	07/09/2021

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1. Introduction

1.1 Overview

This Preliminary Construction and Pedestrian Traffic Management Plan (CTMP) accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) in support of an application for a State Significant Development (SSD No 14394209). The SSDA is for a new high school located at Bungendore.

This report addresses the Secretary's Environmental Assessment Requirements (SEARs), as detailed in Table 1.1.

Table 1.1 SEARs Comments

SEARs	GHD Response
<p>Analysis of the impacts of the traffic generated during construction of the proposed development, including:</p> <ul style="list-style-type: none">– construction vehicle routes, types and volumes.– construction program (duration and milestones).– on-site car parking and access arrangements for construction, emergency and construction worker vehicles.– cumulative impacts associated with other construction activities in the locality (if any).– road safety at identified intersections and level crossings near the site due to conflicts between construction vehicles and existing traffic in the locality.– measures to mitigate impacts, including to ensure the safety of pedestrian and cyclists during construction.	<p>The primary construction routes to and from the subject site are detailed in Section 4.2.</p> <p>The available construction program data is detailed in Section 3.</p> <p>The onsite car parking arrangements are detailed in Section 4.4.</p> <p>The emergency services vehicle arrangements are detailed in Section 4.19.</p> <p>Potential impacts to public transport during construction are detailed in Section 4.7.</p> <p>The measures to manage the potential impacts during construction on pedestrians and cyclists are detailed in Section 4.6.</p>
<p>Measures to mitigate impacts, including to ensure the safety of pedestrian and cyclists during construction.</p> <ul style="list-style-type: none">– analysis of the impacts of construction works on the adjoining rail corridor prepared in consultation with TfNSW and John Holland Rail (rail manager of the Country Regional Network).– a preliminary Construction Traffic and Pedestrian Management Plan.	<p>Potential impacts to public transport during construction are detailed in Section 4.7.</p> <p>At the time of writing this Preliminary CTMP there are ongoing discussions with TfNSW and John Holland about the expected operation of the level crossing in Bungendore in the context of the construction of the proposed high school.</p> <p>This report addresses the requirement for a Preliminary Construction Traffic and Pedestrian Management Plan.</p>

1.2 Proposal

The proposed development is for the construction of a new high school in Bungendore. The proposal has been designed as a stream 3 high school to initially provide for approximately 450 students with core 4 facilities aimed to future proof demand forecasted to 2036.

The site is located adjacent to the existing Bungendore Public School to the south enabling the creation of an education style precinct that will enable a cohesive connection between the two schools as well as the wider Bungendore community.

The proposal will include the demolition of the Bungendore Swimming Pool (to be relocated to Queanbeyan-Palerang Regional Council's proposed new Bungendore Sports Hub) and the Bungendore Community Centre; repurposing of existing council buildings; and the construction of new school buildings. New facilities for the high school will comprise of 24 general learning spaces; dedicated science and technology spaces; a gymnasium; library; canteen; outdoor learning and play areas that include two games courts.

A new agricultural plot is also proposed to the north of the main school site including a new agricultural building and scout storage shed, adjacent to the existing scout hall.

The proposal will also provide for shared administration and staff facilities between the high school and existing primary school and construction of a warm shell for community facilities including a community library, council shopfront and community health hub.

Additionally, miscellaneous off-site works, including upgrades to nearby road intersections and infrastructure, crossings, footpaths and the like will be provided to encourage active transport opportunities and respond to changing traffic conditions.

An image of the proposed school site plan is displayed in Figure 1.1.

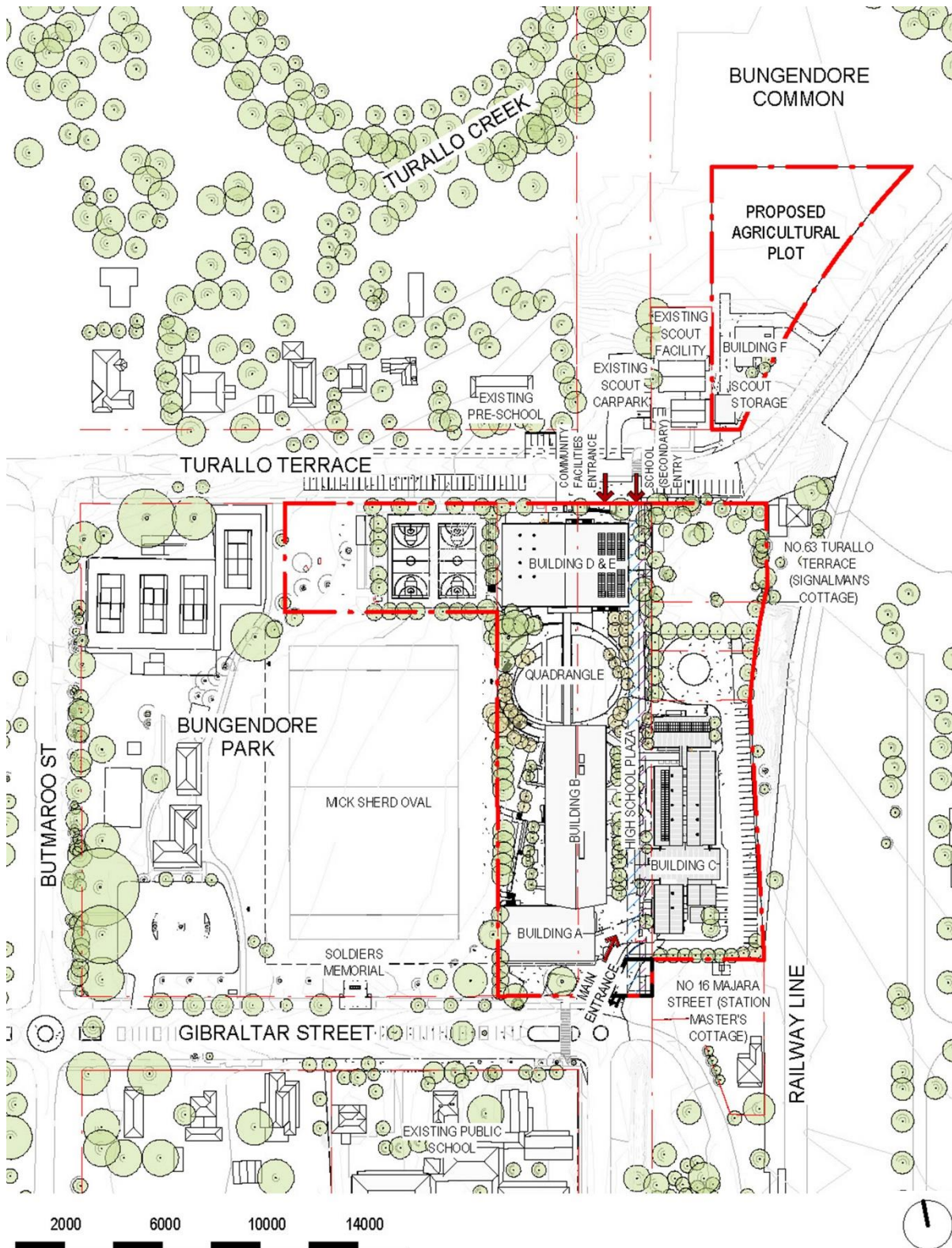


Figure 1.1 Proposed Site Plan

Source: TKD Architects

1.3 Site description

The proposed development is located within the Bungendore Town Centre within the local government area of Queanbeyan-Palerang Regional Council. The proposal involves the use of land which includes Bungendore Park bounded by Gibraltar Street, Majara Street, Turallo Terrace and Butmaroo Street, the existing former Palerang

Council site at 10 Majara Street, the Majara Street road reserve bounded by Turallo Terrace and Gibraltar Streets and Nos. 2, 4 and 6 Majara Street (Refer to Table 1.2 below).

The site is approximately 29,205 m² in area and consists of a relatively flat topography. It contains part of Bungendore Park, existing Council buildings and maintained public open space areas. The land is mostly cleared of vegetation with some mature trees intersperse throughout subject lots.

The surrounding area generally includes low density residential developments to the north and west, an existing rail line to the east and Bungendore Public School and the Bungendore train station to the south and south west respectively.

Table 1.2 Bungendore High School legal descriptions

Property Address	Lot Numbers
6-14 Butmaroo Street	Part Lot 701 DP1027107
2 Majara Street	Lot 12 DP1139067
4-6 Majara Street	Lot 13 DP1139067 Lot 14 DP1139067
10 Majara Street	Lot 3 DP830878
Butmaroo Street	Part Lot 701 DP96240
Portion of Majara Street (between Turallo Terrace and Gibraltar Street)	N/A

An aerial image of the school's subject site is displayed in Figure 1.2.



Figure 1.2 Site aerial depicting the land subject to the proposed High School

Source: TKD Architects

1.4 Purpose of the report

This CTMP has been prepared to address items contained within the Secretary's Environmental Assessment Requirements (SEARs). This report has been prepared to present the preliminary construction related traffic and pedestrian management arrangements associated with the construction of the development.

This report presents the considerations in relation to the construction traffic management plan, as follows:

- Section 1: Introduction and assumptions
- Section 2: A description of the existing conditions in proximity to the subject site
- Section 3: An outline of construction activities

- Section 4: Details of the Construction Traffic Management Plan outlining the management of construction vehicles, pedestrians and site contact details.

NOTE: A Detailed CTMP is to be developed by the engaged Contractor prior to construction commencement in consultation with governing authorities such as local council, state road and transport authorities (where required). Such Detailed CTMP encapsulates the principles outlined in this Preliminary CTMP and provides detail of the implementation and includes appropriately certified Traffic Guidance Scheme(s) to inform motorists of construction activities and management of vehicles, pedestrians, and cyclists around the areas impacted by the works.

1.5 Assumptions

This report is limited by the following:

- Construction information, including construction activities and staging of works have been provided by the Client.
- This CTMP is preliminary and does not include a detailed Traffic Guidance Scheme (TGS) for the construction works. A register of the TGSs should be maintained by the engaged contractors and with signs monitored on site and recorded on the register.
- Staff numbers and heavy vehicle volumes are preliminary, given the early nature of construction planning engagement.
- No intersection or mid-block capacity assessment of construction traffic impacts was undertaken, with likely traffic volumes being within typical road network operations and have lower traffic volumes when compared to the future land use scenarios outlined in the operational Traffic Impact Assessment (TIA) prepared by GHD.¹
- The assessment has been undertaken based on a desktop review and the use of aerial and google street view imagery.

¹ In April 2021 GHD prepared the Bungendore High School Traffic Impact Assessment (TIA). The TIA included traffic surveys and intersection modelling at Turallo Terrace/Butmaroo Street, Turallo Terrace/Majara Street, Gibraltar Street/Butmaroo Street, Gibraltar Street/Majara Street, Kings Highway/Butmaroo Street and Kings Highway/Majara Street. The analysis accounted for 500 students who are assessed to generate 330 trips (inbound and outbound) in the AM peak hour and 283 trips (inbound and outbound) in the PM peak hour. The analysis indicated that all of the intersections of interest are expected to operate with a good level of service, accounting for the expected school trips and the background traffic growth in the township of Bungendore.

2. Existing Conditions

2.1.1 Road network

2.1.1.1 Kings Highway

The Kings Highway (B52) is a sub-arterial road that connects Canberra to Batemans Bay.

Within Bungendore, the Kings Highway has a speed limit of 50 km/h, with a 40 km/h School Zone (8:00 am – 9:30 am and 2:30 pm – 4:00 pm School Days) to support the safe movement of students and their parents/guardians at Bungendore Public School. Additionally, concrete footpaths are provided on both sides of the Kings Highway.

Within Bungendore, the Kings Highway has a single travel lane in either direction (refer Figure 2.1). Within the Bungendore, on-street parking is typically available on the Kings Highway, to the west of Butmaroo Street, with No Stopping east of Butmaroo Street to the rail line level crossing.



Figure 2.1 Kings Highway looking east towards Majara Street

Source: Google streetview

TfNSW Restricted Access Vehicle Maps indicates that the Kings Highway is authorised to accommodate vehicles up to the size of a 26 metre B-double (refer to Figure 2.2).

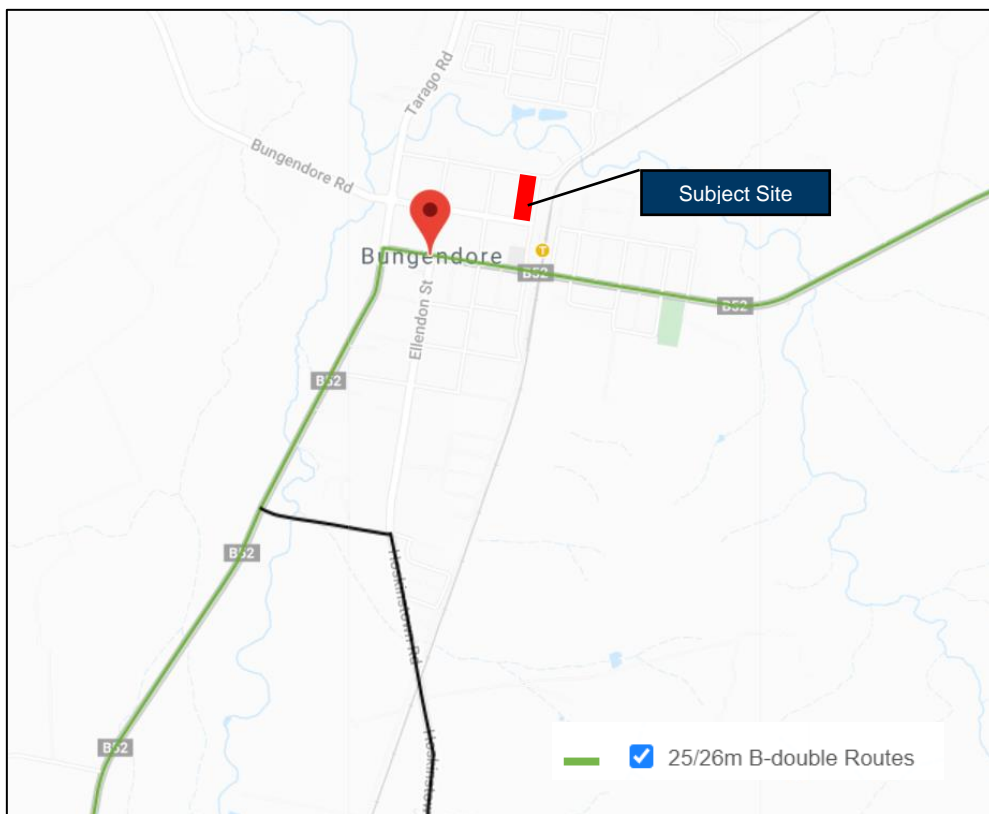


Figure 2.2 B-double Route

Source: <https://roads-waterways.transport.nsw.gov.au/business-industry/heavy-vehicles/maps/restricted-access-vehicles-map/map/index.html>

2.1.1.2 Turallo Terrace

Turallo Terrace is a local road with a single lane in either direction (refer to Figure 2.3). Parking lanes are not provided on Turallo Terrace. However, the unformed verge provides an opportunity for vehicles to park.

Kerbs, gutters and footpaths are not typically provided on Turallo Terrace.

Turallo Terrace has an urban default speed limit of 50 km/h.



Figure 2.3 Turallo Terrace looking west from Majara Street

Source: Google streetview

2.1.1.3 Gibraltar Street

Gibraltar Street is a local road that provides a single travel lane in either direction (refer to Figure 2.4). Concrete footpaths are typically provided on both sides of Gibraltar Street.



Figure 2.4 Gibraltar Street looking east from Butmaroo Street

Source: Google streetview

Ninety-degree centre-of-road parking is provided along Gibraltar Street. Typically, parallel on-street parking is provided on the northern and southern sides of Gibraltar Street.

A No Parking (8:00 am – 9:30 am and 2:30 pm – 4:00 pm School Days) zone is provided on the southern side of Gibraltar Street (west of Majara Street) to support pick-up/drop-off activity at Bungendore Primary School.

Gibraltar Street has a posted speed limit of 50 km/h, with a 40 km/h School Zone (8:00 am – 9:30 am and 2:30 pm – 4:00 pm School Days) located between Butmaroo Street and Majara Street.

2.1.1.4 Butmaroo Street

Butmaroo Street is a local road with a single lane in either direction (refer to Figure 2.5). Parking lanes are not provided on Butmaroo Street. However, the unformed verge provides an opportunity for vehicles to park.

Kerbs, gutters and footpaths are not provided on Butmaroo Street, and it has an urban default speed limit of 50 km/h.



Figure 2.5 Butmaroo Street looking south from Turallo Terrace

Source: Google streetview

2.1.1.5 Majara Street

Majara Street is a local road with a single travel lane in either direction (refer Figure 2.6).

A footpath is provided on the western side of Majara Street between Gibraltar Street and Kings Highway. A shared path is provided on the eastern side of Majara Street south of the Kings Highway.



Figure 2.6 Majara Street looking north from Gibraltar Street

Source: Google streetview

A Bus Zone (8:30 am – 9:30 am and 3:00 pm – 4:00 pm School Days), approximately 60 m in length, is located on the western side of Majara Street (south of Gibraltar Street) for the purpose of bus activity associated with Bungendore Primary School.

In proximity to the primary school, No Stopping (8:30 am – 9:30 am and 3:00 pm – 4:00 pm School Days) signage is provided on Majara Street, which prevents vehicles from parking during peak periods of school activity.

Majara Street has a posted speed limit of 50 km/h, with a 40 km/h School Zone (8:00 am – 9:30 am and 2:30 pm – 4:00 pm School Days) between Gibraltar Street and the Kings Highway.

The parking controls and school zones in proximity to the school site are displayed in Figure 2.7.



Figure 2.7 Parking Controls and School Zones

Source: Sixmaps, modified by GHD

The state and regional roads in proximity to the school subject site is displayed in Figure 2.8.

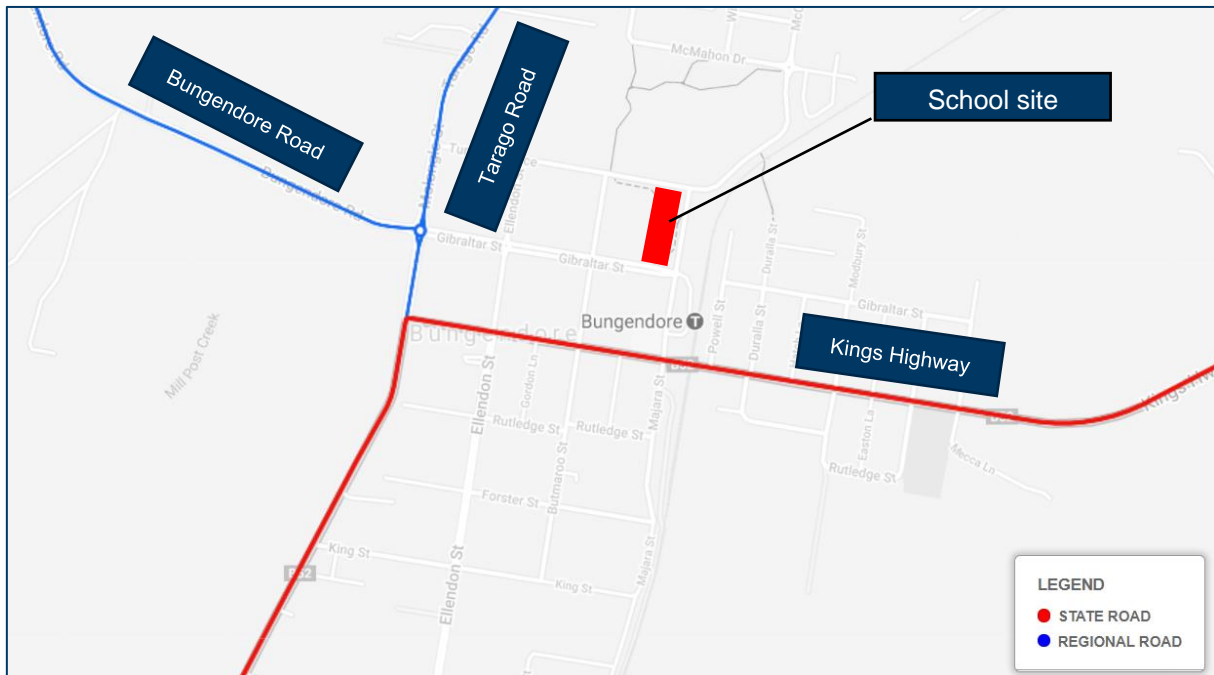


Figure 2.8 State and Regional Road Network

Source: TfNSW modified by GHD

2.1.2 Active and Public Transport

2.1.2.1 Active Transport

As described previously:

- Footpaths are provided on both sides of Gibraltar Street, both sides of the Kings Highway and on the western side of Majara Street between Gibraltar Street and Kings Highway.
- A shared path is provided on the eastern side of Majara Street, south of the Kings Highway.

In addition to the above, the following shared paths are provided in proximity to the school site (see Figure 2.9):

- Turallo Terrace to the south west of Turallo Creek linking into Majara Street.
- Turallo Terrace east of Butmaroo Street, linking into a north/south shared path adjacent to the east of Mick Sherd Oval and the school crossing on Gibraltar Street.

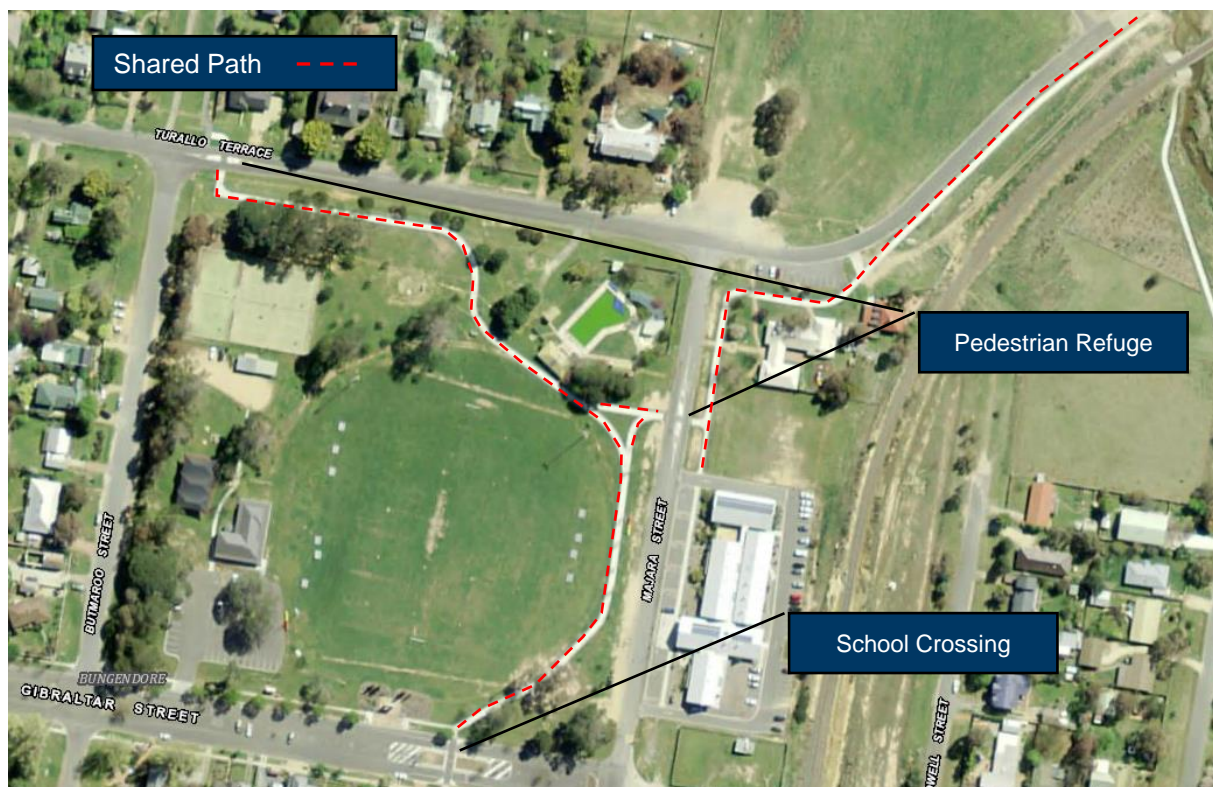


Figure 2.9 Current Shared Paths and Crossings

Source: Sixmaps modified by GHD

The following pedestrian crossing points are provided in proximity to the school site:

- A school crossing is provided on Majara Street at the frontage of the primary school.
- A pedestrian refuge/school crossing is provided on Gibraltar Street at the frontage of the primary school (refer to Figure 2.10).
- A pedestrian refuge is provided on the Kings Highway to the west of Majara Street (refer to Figure 2.11).
- A pedestrian refuge is provided on the Turallo Terrace east of Butmaroo Street.



Figure 2.10 Pedestrian Refuge on Gibraltar Street

Source: Google Maps



Figure 2.11 Pedestrian Refuge on Kings Highway

Source: Google Maps

Currently, there are no footpaths on Butmaroo Street or Turallo Terrace.

The Bungendore Bicycle and Pedestrian Facilities Plan propose new footpaths on Butmaroo Street and a new shared path on Majara Street.

The existing walking and cycling network within the township of Bungendore is displayed in Figure 2.12.



Figure 2.12 Bungendore Walking and Cycling Network

Source: Bungendore Bicycle and Pedestrian Facilities Plan

2.1.2.2 Public Transport

2.1.2.2.1 Public Buses

QCity Transit provides bus services in Bungendore. The 844/D841 bus services operate between Bungendore and Queanbeyan, with bus stops located on Gibraltar Street, between Mick Sherd Oval and the primary school.

Currently, there are:

- Three weekday services from Bungendore to Queanbeyan (depart from Gibraltar Street at 7:27 am, 9:30 am and 5:06 pm).
- Two weekday services from Queanbeyan to Bungendore (arrive at Gibraltar Street at 4:39 pm and 6:12 pm).

Again, due to the timing of these services, they will be of limited utility to students of the new high school in Bungendore.

A shelter is provided on the northern side of Gibraltar Street, and a bench is provided on its southern side. As displayed in Figure 2.13, the QCity Transit public and bus services operate adjacent to the primary school subject site on Majara Street, Gibraltar Street, and Mick Sherd Oval on Turallo Terrace and Butmaroo Street.

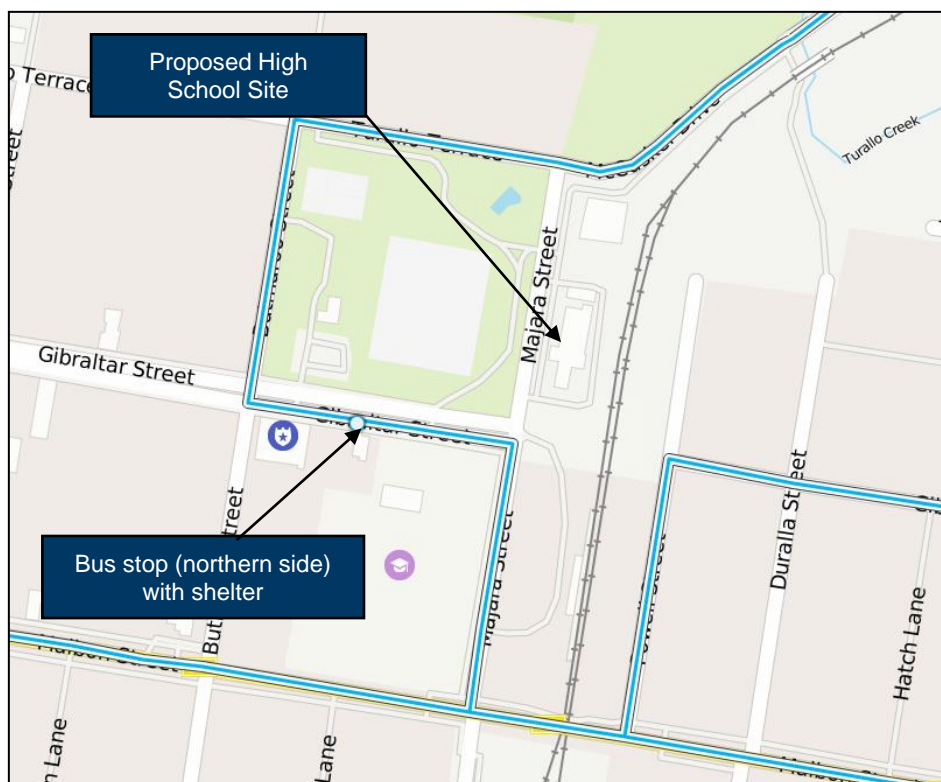


Figure 2.13 Public Bus Route

Source: TfNSW – modified by GHD

2.1.2.2.2 Trains

Bungendore Station is located on Majara Street opposite Bungendore Primary School. Train services operating between Sydney (Central Station) and Canberra. The time trains stop at Bungendore Station on weekdays is detailed in Table 2.1.

Table 2.1 Train Services at Bungendore Station (weekdays)

Number	Servicing	Arrival Time
631	Central to Canberra	10:36 am*
632	Canberra to Central	7:32 am
633	Central to Canberra	3:24 pm*
634	Canberra to Central	12:32 pm
635	Central to Canberra	9:21 pm*
636	Canberra to Central	5:45 pm

* Stops to pick up and set down booked customers only when required

A railway crossing with boom gates is located on the Kings Highway, approximately 60 metres to the east of Majara Street.



Figure 2.14 *Railway Crossing on Kings Highway*

Source: Google Maps

As detailed in Table 2.1, over the course of a day, only six trains pass through Bungendore Station.

3. Construction outline

The new high school in Bungendore is expected to commence operation on day one, term one in 2023.

3.1 Construction traffic

Traffic generated by construction activities for the project would include heavy vehicles associated with the construction plant, deliveries and removal of materials along with light vehicles from construction workers.

3.1.1 Heavy vehicles

Preliminary estimates of the heavy vehicle activity associated with the construction of the new High School in Bungendore is as follows:

- Cranes - likely to be required during the construction of the superstructure, approximately three cranes per week for a period of two months.
- Dog and truck trailer – likely to be required for the duration of the civil works, approximately four to six movements per day (inbound and outbound) for a period of two months.
- Material deliveries – likely to be multiple deliveries per day, in vehicles ranging from utes to pantechs
- Waste – likely to be one movement every second day.

3.1.2 Light vehicles

It is expected that there will be a maximum workforce of approximately 110 workers.

The majority of workers are expected to reside in the nearby population centres of Queanbeyan and Canberra, offering opportunities for carpooling. For the purpose of analysis, it is assumed that there will be an occupancy rate of 1.5 workers per vehicle.

Application of this car driver rate to the assumed workforce yields a typical traffic generation in the order of 75 light vehicles per day, which are anticipated to access the subject site in the morning and depart the subject site in the afternoon/evening.

3.1.3 Oversize vehicles

Section 3.1.1 outlines the proposed access routes for heavy vehicles, typically up to truck and dog trailer.

A review of the suitability of the use of the local road network for larger vehicles should be undertaken independently by the Contractor and may require specific traffic control (i.e. vehicle escort) if such larger vehicles are required.

At this stage of the project, details of the oversized vehicles required to transport equipment or plant to the site are not available. However, should oversized vehicles be required (i.e. lifts and pre-cast structures, crane erection), the Contractor will be required to apply for permits from Transport for NSW and Council, with the submission of suitable traffic management and transportation routes to be agreed, subject to the required size of the vehicle.

Oversize vehicle routes are to be carried out where possible on designated heavy vehicle routes or routes approved by Transport for NSW. Additionally, oversized traffic movements should be carried out, where possible, outside peak road network periods, thereby minimising the impacts on the road network.

3.1.4 Construction traffic impacts

The number of construction vehicles to access the site will need to be confirmed by the Contractor during the detailed construction planning stage. However, it is assumed that construction traffic volumes will be within typical daily traffic fluctuations and will not adversely alter the operation of the existing road network condition.

Furthermore, it is estimated construction activity will be less than the future operational activity of the developed

site. Traffic assessment of road network in the future development scenario (as outline in TIA prepared by GHD) indicates the road network will continue to operate within an acceptable level of service.

Notwithstanding the above, the Contractor should encourage carpooling for workers and maintain deliveries at staggered intervals and outside road network periods and incorporated them in the Construction Traffic Management Plan.

3.2 Construction compound

Information provided by Hindmarsh for the construction compound indicates that:

- A chain mesh fence will be constructed around the compound with shade clothes providing a visual, physical and dust control barrier.
- The site gates at the construction compound will be provided:
 - Gate 1 on Turallo Terrace will be allocated for large deliveries and pedestrian access for workers and visitors.
 - Gate 2 on Gibraltar Street will be for the egress of construction vehicles
 - Gate 3 on Turallo Terrace will provide an additional access and egress for construction vehicle
- Site gates will be managed by authorised traffic controllers to assist in the safe access and egress of vehicles associated with the construction activity and other vehicles, pedestrians and cyclist on the adjoining public road network.
- Site signage installed adjacent to all site gates providing site information to the general public.
- The current on-site car park, adjacent to the Queanbeyan-Palerang Regional Council (QPRC), will be maintained for the parking of workers associated with the construction.

4. Preliminary Construction Management Plan

4.1 Objectives

The CTMP aims to facilitate the safety of all workers and road users within the vicinity of the construction site. The following outlines the primary objectives:

- To minimise the impact of the construction vehicle traffic on the operation of the adjoining road network.
- To facilitate the continuous, safe and efficient movement of traffic for both the general public and construction workers.
- Identify appropriate advance warning signs to inform users of the changed traffic conditions.
- To facilitate the establishment of a safe pedestrian environment in the vicinity of the site.
- To provide a description of the types of vehicles and estimated vehicle volumes during each stage of construction.
- To provide information regarding the access arrangement and a description of the routes for vehicles accessing and egressing the construction site.

4.2 Construction vehicle access route

It is expected that the majority of heavy vehicles and workers will access/egress the subject site to and from the nearby population/commercial centres of Queanbeyan and Canberra.

Access to the construction compound, including delivery and worker vehicles, will be provided via the site access points on Turallo Terrace.

Egress from the construction compound will be provided via Gibraltar Street / Majara Street) and Turallo Terrace.

In determining haulage routes:

- Vehicles will utilise the Kings Highway and Molonglo Street as the primary access/egress route aligning with the road state/regional road hierarchy amend authorised B-double route
- Vehicle activity on the township's collector and local road network will be minimised, with site vehicles travelling on Gibraltar Street and Turallo Terrace local road network to directly access/egress the site.
- During school peak pick up and drop off periods, heavy vehicle movements will be restricted to Turallo Terrace only, to provide improved safety to Bungendore Primary School students on Gibraltar Street and Majara Street.

The primary designated haulage routes to and from the construction compound are detailed in Figure 4.1.

As part of an induction (refer to Section 4.18) truck drivers will be informed of the designated haulage routes to and from the construction compound.

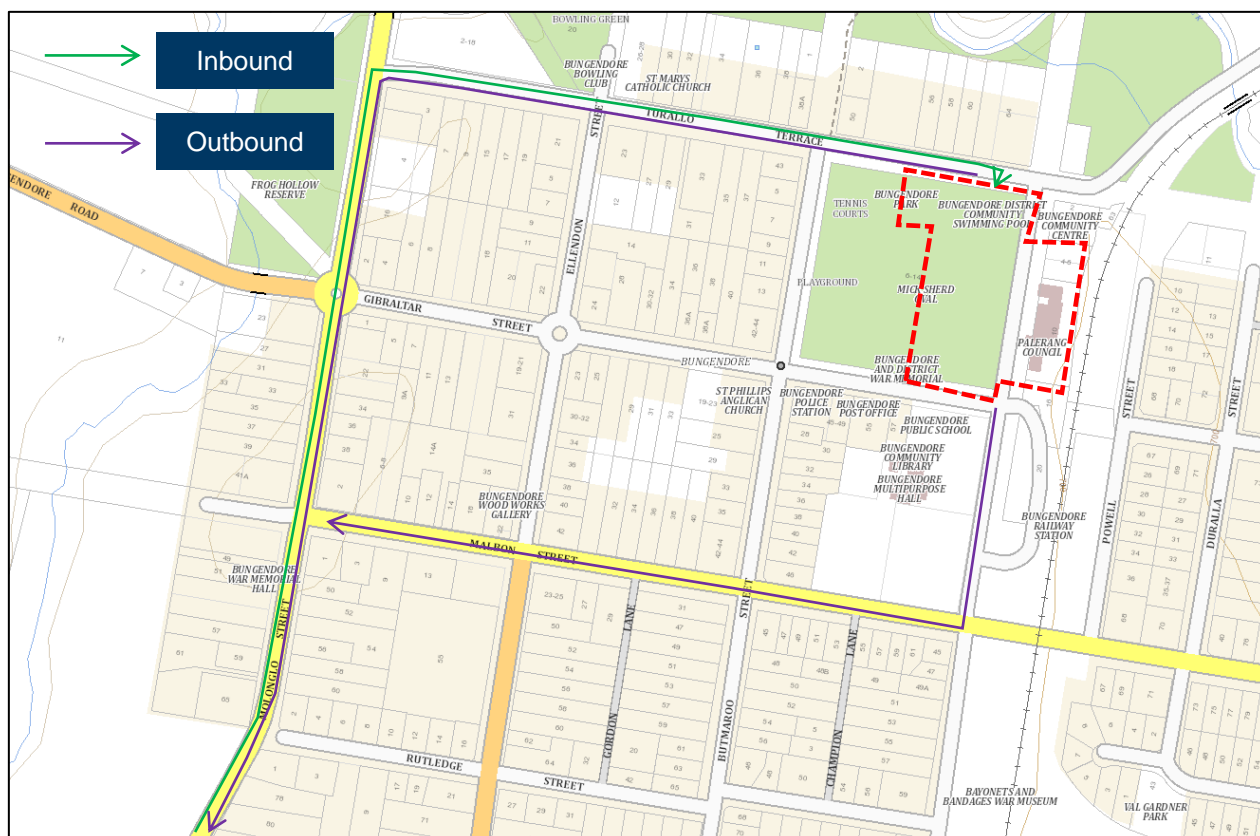


Figure 4.1 Primary Designated Haulage Routes

4.3 Construction works timing

The NSW Environmental Protection Authority, Draft Construction Noise Guidelines, details the recommended standard hours for construction works:

- Weekdays 7:00 am – 6:00 pm
- Saturdays 8:00 am – 1:00 pm
- Sundays and public holidays, no work.

The construction works at the new high school in Bungendore will be scheduled to occur during these standard hours.

Additionally, where possible, deliveries will be scheduled to occur outside of the periods of 8:00 am – 9:30 am and 2:30 pm – 4:00 pm to minimise potential impacts with vehicle activity at the adjoining Bungendore Primary School.

4.4 Construction parking

4.4.1 Heavy vehicles

Heavy vehicle activity, i.e. deliveries and waste collection, will occur within the construction compound.

Heavy vehicle arrivals will be coordinated to avoid queuing of vehicles outside the site as queuing of vehicles is not permitted on the public road network or in a position that will cause obstruction or safety issues to vehicles (or occupants), pedestrians or cyclists.

Vehicles are not to double park or queue to impact traffic and pedestrian thoroughfare and property access.

During school peak pick up and drop off periods, heavy vehicle movements will be restricted to Turrallo Terrace only, to provide improved safety to Bungendore Primary School students on Gibraltar Street and Majara Street.

4.4.2 Light vehicles

As stated previously, up to 75 light vehicles are expected to access the construction compound.

The existing QPRC building parking will be available to workers. It is recommended that the majority of these parking spaces be allocated to individuals who car pool, in order to reduce single occupancy vehicle trips.

Up to approximately 25 vehicles may be required to find alternative parking arrangements.

Informal parking (i.e. on grass verges and gravel hardstands, without kerb and guttering) is provided on Turallo Terrace and Butmaroo Street, adjacent to the site. It is expected that some workers will park in these locations in proximity to the construction compound.

4.5 Traffic Management

Public access to the site is expected to be maintained on the surrounding road network. Vehicles will be permitted to travel past the worksite on Turallo Terrace, Butmaroo Street and Gibraltar Street, with traffic signage in accordance with a TGS to be developed in accordance with Transport for NSW *Traffic Control at Works Sites Technical Manual* (Version 6, 2020) and AS1742.3 – *Traffic Control for Works on Roads*. This will advise motorists of changes in the road network or vehicle movements to/from the site, including any “truck turning” activity.

The TGS will need to be developed by the construction contractor as part of the detailed CTMP prior to commencing construction activity on the site. The Contractor will ensure all signage is erected in accordance with the TGS and clearly visible. Each evening, upon completion of work, the Contractor will ensure signage is either covered or removed should such be required.

4.6 Pedestrian and Bicycle Management

Site access will be restricted to authorised personnel only.

It is anticipated that the pedestrian, and to a lesser extent, cyclist activity, within the public areas surrounding the site will be moderate due to the site’s vicinity to sports grounds and local primary school.

Potential interactions between construction traffic and pedestrians and bicycle riders include:

- Impact to pedestrian and bicycle rider movements due to the movement of material, traffic diversions and the location of crane/s during construction.
- Pedestrian and bicycle desire lines may be obstructed between the sports oval and the school due to the location of the site and the currently shared path.
- Increased vehicle movements may reduce safety.
- Site access and egress location crossing pedestrian footpath areas.

Traffic controllers will monitor the site during construction deliveries entering and exiting from the site at each of the access/egress gates to ensure that people in the vicinity of the site are protected from heavy vehicles movements into and out of the construction compound.

The detailed CTMP incorporating the TGS will need to be developed by the construction contractor will need to consider the safe access for pedestrians and cyclists, which may include minor local diversion to alternate pedestrian and cycle facilities to avoid the construction works areas. Pedestrian and cyclists path of travel is to be free of trip hazards and debris to minimise the risk of injuries and will be monitored throughout the works

4.7 Impacts on Public Transport

No changes to existing bus operations are required to facilitate construction works. The bus stop located on Gibraltar Street will remain operational at all times. Pedestrian access to this bus stop will also be maintained.

The bus zone adjacent to the primary school on Gibraltar Street will also remain operational at all times.

As detailed in Section 2.1.2.2.2, a railway crossing with boom gates is located on the Kings Highway, approximately 60 metres to the east of Majara Street.

Within the construction hours detailed in Section 4.3, up to five trains will access Bungendore Station, requiring the closure of the boom gates for short periods of time.

As stated previously, the majority of light and heavy construction vehicles are expected to access/egress the construction compound via Queanbeyan and Canberra and therefore will not be required to traverse the level crossing.

Additionally, as detailed in Section 4.3, workers are expected to access the construction compound prior to 7:00 am and depart it subsequent to 6:00 pm. Trains are not expected to travel through Bungendore at these times.

Accordingly, the construction of the high school is expected to have a negligible impact on the operation of the level crossing in Bungendore, which will principally continue to operate at its current level of service.

At the time of writing this Preliminary CTMP there are ongoing discussions with TfNSW and John Holland about the expected operation of the level crossing in Bungendore in the context of the construction of the proposed high school.

4.8 Access to adjoining properties

Access to all adjoining properties and lots will be maintained for the duration of works.

4.9 Road closures

During construction, Majara Street between Turallo Terrace and Gibraltar Street will be closed to general traffic.

This closure forms part of the overall design of the high school, as described in Section 1.1.

4.10 Works zones

Works zones will not be implemented on the road network for the duration of works.

4.11 Roadwork speed zone

Temporary roadwork speed limits are one of many traffic controls that can be implemented to manage the speed of traffic approaching and passing through a work site. However, they can, over long distances, have a significant impact on road user delay.

As the proposed works are anticipated to be contained within the boundary of the site with vehicle access from the local road (Turallo Terrace, Gibraltar Street and Majara Street) where vehicle speeds are relatively low due to the existing environment and posted speed limit of 50 km/h and 40 km/h School Zone, no Roadwork Speed Zones are proposed adjacent to the site access. Should the proposed works include road work activities, the Roadwork Speed Zone may be reviewed in accordance with the Transport for NSW Traffic Control at Worksite Technical Manual to assist in the safety in proximity to the road work activities.

Should a Roadwork Speed Zone be required, an application is to be submitted to Transport for NSW for approval, with notifications given to Council and the local police.

The Roadwork Speed Zone is not to be implemented without prior approvals. Inspections and records of implementation of the Roadwork Speed Zone is to be maintained in accordance with Transport for NSW Traffic Control at Worksite Technical Manual and Australian Standards (AS 1742.3 – Traffic Control Devices for Works on Roads).

Roadwork Speed Zone signs (R4-212 and T4-216) are to be covered during periods of non-work activities.

4.12 Site cranes

It is anticipated that a site crane will need to be erected on site as part of the construction of the new high school in Bungendore. The crane is to be erected within the site and outside road network and adjoining primary school peak periods. The Contractor is responsible for obtaining necessary approvals for the delivery and erection of the site crane.

4.13 Storage of materials

All construction storage containment will occur within the construction compound located within the site.

4.14 Method of Communicating Traffic Changes

4.14.1 Advance notification of works

Prior to the commencement of works on site, the Contractor is to inform neighbouring properties of construction works, impacts and site contact information as per the Community Liaison Plan (to be developed prior to construction). Notification can be provided by various means including, but not limited to:

- Letterbox distribution
- Local newspaper
- Council website.

The Contractor will engage with the primary school leadership, so they can keep parents informed of the and impacts associated with the construction of the high school, i.e. the compound access gates on Turallo Terrace.

4.14.2 On road communication

TCPs are to be developed in accordance with Australian Standards (AS 1742.3 – Traffic Control Devices for Works on Roads) and Transport for NSW Traffic Control at Worksites Technical Manual to identify appropriate signage (and location) to advise motorists of upcoming changes in the road network.

Such plans are being provided by other engaged services or are to be developed by the approved Contractor prior to construction.

Sign size should be a minimum size “A” which is suitable for traffic speeds up to 90 km/h (sign location up to 8 m offset from the traffic lane) or 110 km/h (sign location up to 4.5 m offset from the traffic lane).

The use of Variable Message Signs (VMS) provides benefits to the local community and visitors to convey messages of upcoming impacts to the road network as the result of construction activity. VMS (if required) should be installed in locations and used in accordance with relevant guidelines with the necessary approvals from governing authorities.

4.15 Environmental controls

Notwithstanding the environmental requirements specified in other project documents, the following environmental requirements are to be adhered to:

- All vehicles transporting loose materials will have the entire load covered and/or secured to prevent any large items, excess dust or debris depositing onto the roadway during travel to and from the site, including but not limited to construction rumble strips/wheels wash at the site egress locations (Gate 2 and Gate 3).
- 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, to maintain the safety of all road users.
- 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 on paved roads.
- Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.
- All subcontractors must be inducted by the lead Contractor to encourage that all the relevant procedures are met.

4.16 Occupational Health and Safety

Any workers required to undertake works or traffic control shall be suitably trained and hold the required accreditation to carry out works on site and will also be site inducted. All traffic control personnel will be required to hold TfNSW accreditation in accordance with the TfNSW Traffic Control at Worksites Technical Manual.

4.17 Certificates and approvals

Approval is to be obtained from Transport for NSW, QPRC and other relevant authorities as required. Approvals that may need to be obtained for items such as but not limited to:

- Council Road opening permits
- Road occupancy approvals/licences
- Hoarding / fencing approvals
- Crane and barricades
- Oversize Vehicle use on local and state roads

4.18 Staff induction

All staff and subcontractors engaged on site will be required to undergo a site induction. The induction will outline the requirements on the CTMP, including site access routes, environmental and occupational health and safety responsibilities, emergency procedures, potential carpooling opportunities, etc. Additionally, the Site Manager will discuss CTMP requirements regularly as a part of toolbox talks.

4.19 Contact of Emergency Services

In the event of an emergency related construction traffic incident on the public road network, it will be the responsibility of the Site Manager to ensure that emergency services are notified. The emergency services include but are not limited to:

- Fire
- Ambulance
- Police.

Phone “000” in cases of emergency.

If required, emergency services vehicles will access the car park or park on the roads adjacent to the subject site.

Furthermore, it is the responsibility of the Site Manager to advise the emergency services of any restriction of vehicular access to the public and private areas (1) one week prior to its implementation.

5. Conclusion

This Preliminary Construction Traffic Management Plan has been prepared for the new high school in Bungendore outlining the management of construction vehicles, pedestrians and site contact details to assist in guiding future contractors in the overarching principles for the construction traffic management for the project.

A Detailed CTMP is to be developed by the engaged Contractor prior to construction commencement in consultation with governing authorities such as the local council, state road and transport authorities (where required).

It is expected that construction works will occur in a safe and efficient manner in accordance with the criteria identified in this report.

The following list summarises the measures that will be in place prior to the commencement of and during the execution of the construction period.

1. Key stakeholders, including operators of adjacent land uses (including the primary school), will be notified of any changed traffic management arrangements prior to the commencement of works and be provided updates throughout the construction period.
2. Construction works will typically occur within the standard hours detailed by the NSW EPA.
3. Deliveries will be during work hours and staged so as no delivery vehicles are causing large traffic disruption around the site or at the primary school.
4. Truck drivers will be directed to follow the predetermined haulage routes (via Kings Highway and Turallo Terrace, Gibraltar Street and Majara Street) to provide direct access to the site and minimise the impact on the local road network.
5. Construction heavy vehicles are not to utilise Gibraltar Street and Majara Street during school pick up and drop off periods to provide safety to students.
6. Traffic controllers will be located at the construction compound's three access/egress gates to assist in the safety of the site and public vehicles, pedestrians and cyclists.
7. TGS will be developed in accordance with Australian Standards (AS 1742.3 – Traffic Control Devices for Works on Roads) and TfNSW Traffic Control at Worksites Technical Manual. It will identify appropriate signage (and location) to advise motorists of upcoming changes in the road network.
8. Pedestrian access will be maintained for the bus stop on Gibraltar Street.
9. Suitable staff induction methods and environmental controls will be implemented prior to the commencement of construction works.

