ARUP

NSW Department of Education

New High School for Googong

Preliminary Construction Transport Management Plan

Reference:

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Job number 296592

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Issue Document Verification with Document ✓

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1. Introduction

This Preliminary Construction Transport Management Plan has been prepared by Arup on behalf of the NSW Department of Education (DoE) to inform a Review of Environment Factors (REF) for the proposed construction of a new high school for Googong (the activity) located at 200 Wellsvale Drive, Googong, NSW (the site).

The activity relates to the construction and operation of a new educational establishment to serve the needs of the growing Googong township by accommodating up to 700 students from years 7 – 12.

The REF describes the activity, documents the examination and consideration of all matters affecting, or are likely to affect, the environment, and details safeguards to be implemented to mitigate impacts.
The Department of Education is the determining authority for the project under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 Traffic management objectives

The key aim of the Preliminary Construction Transport Management Plan (PCTMP) is to ensure safe access to the school, and to minimise impacts to the surrounding transport network during construction. This report is subject to contractor development prior to construction.

The following objectives have been developed in order to support the overarching aim of the PCTMP:

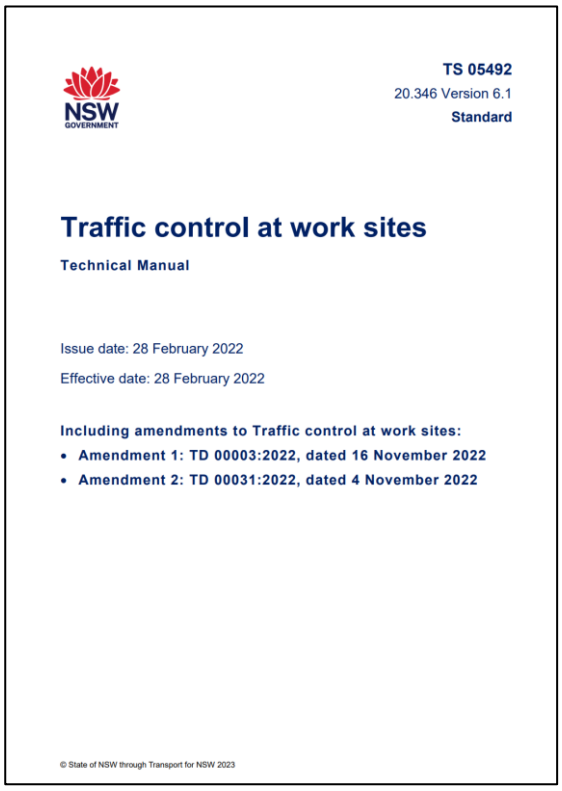
- Separation of construction activities and the public use of the road
- Ensure safety of pedestrians, cyclists, construction workers, road users and the local community
- Minimise the overall impacts to all road users and conflict with construction vehicles. Assessment of traffic control plans
- Ensure minimal disruptions to public transport operations, including schedules, stop location and routes
- Minimise vehicle movements and arrange parking of work vehicles
- Minimise disruption to existing road furniture and kerbside provisions including existing bus stops, cycleways and on-street parking
- Maintain access for existing road users, including the local community, public transport operators, pedestrians and cyclists
- Ensure disruption to residents are minimised including appropriate consultation. Community notification process indicating development impact
- Comply with all relevant legislation and other requirements specified by relevant authorities

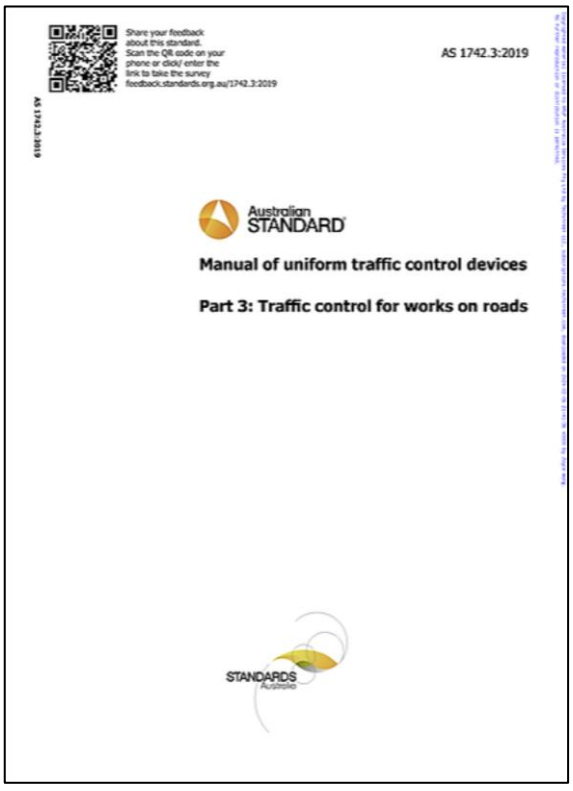
1.2 Policies

The following policies apply to this activity:

- Traffic Control at Work Sites Manual (Transport for NSW, 2022)
- Australian Standard AS 1742.3 Manual of uniform traffic control devices Traffic control for works on roads (Standards Australia, 2019)

It is noted that Queanbeyan-Palerang Regional Council does not nominate a standard for hoarding or tower cranes.





2. Existing site conditions

2.1 Site Description

Googong is a new release area within the Queanbeyan-Palerang Local Government Area (LGA), located approximately eight kilometres south of Queanbeyan and 17 kilometres southeast of the Canberra Central Business District (CBD). Googong Reservoir, a significant waterbody, is located approximately 3 kilometres east of the subject site. Canberra Airport is located approximately 12 kilometres north of the subject site.

The site is legally described as Lot 829 in Deposited Plan 1277372. The proposed new high school site within this Lot has an area of approximately 5.84 hectares.

The site is currently zoned as R1 General Residential in the Queanbeyan Palerang Local Environmental Plan (LEP) 2022 and is located within Neighbourhood 2 of the Googong Masterplan, within the Googong DCP 2010.

The site is surrounded by low-density residential development, recreational areas and a future local centre adjoining the site to the north.

Figure 1. Site location plan

2.2 Site operations

The below site operations refer to school operations post-opening.

- School hours: 9:00 am – 3:00 pm
- 700 students (years 7 – 12)
- 55 staff

3. Proposed activity description

3.1 Proposed activity

The proposed activity involves the construction of a new high school for Googong which as seen in Figure 2, includes the following:

- Building A, a three to four-storey building in the northern portion of the site, fronting Glenrock Drive, which will accommodate learning spaces and administrative functions of the school.
- Building B, a three-storey building in the north-west portion of the site, fronting Observer Street, which will accommodate learning spaces and administrative functions of the school.
- Building C, fronting Glenrock Drive, which will accommodate a school hall / gymnasium and canteen.
- Outdoor recreation areas, cricket nets, playing court and playing field.
- Main pedestrian entry established from Glenrock Drive.
- Car park and accessible pedestrian entry from Wellsvale Drive.
- Service entry from Observer Street.
- Associated civil works, earthworks, servicing and landscaping.
- Associated off-site works such as the construction of pedestrian crossings, drop off and pick up bays and a bus stop.
- School identification and wayfinding signage.

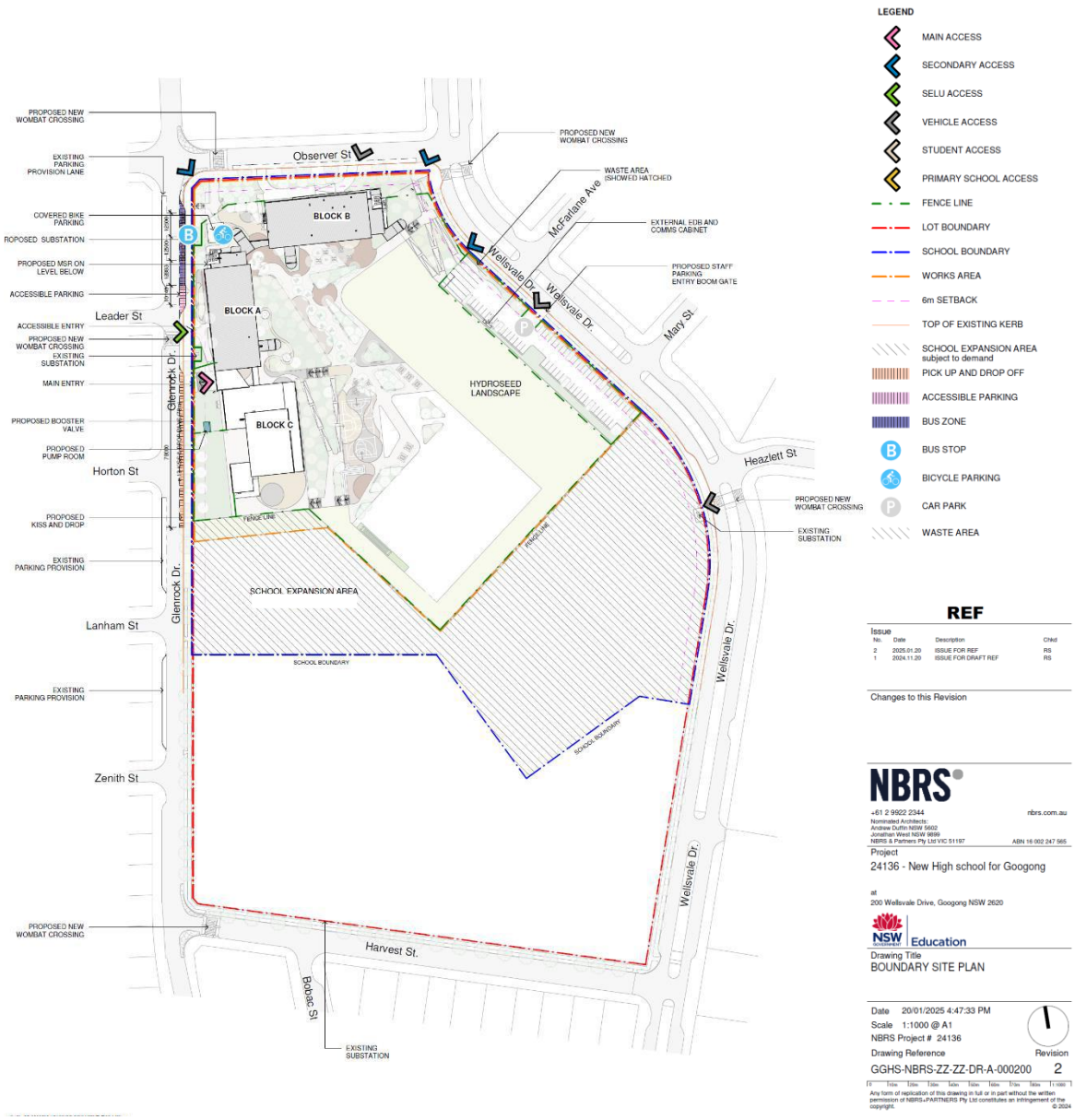


Figure 2. Proposed Site Plan (Source: NBRS & Partners, 20/01/2025)

3.2 Peak construction movements

It is assumed that the average volume of construction vehicle traffic to and from the site would be consistent with other similar SINSW projects during construction. The average peak of 34 vehicles per day, will be adopted for the purposes of this plan as the expected construction traffic volume for the site.

The maximum size of vehicle expected during peak construction is a 19m semi-trailer. Larger vehicles may be subject to separate approval.

More accurate data would be provided by an appointed contractor in a detailed Preliminary Construction Transport Management Plan prior to commencement of construction.

Table 1. Construction vehicle volumes at similar construction sites

Project	Peak vehicles per day	Maximum vehicle size
Pendle Hill High School	32	19m
John Palmer Public School	20	19m
Fort Street Public School	50	13.6m
Average	34	12m
Maximum	50	19m

3.3 Construction programme

The programme has not yet been determined and a detailed Preliminary Construction Transport Management Plan would be prepared by the appointed contractor prior to construction.

3.4 Work hours and vehicle types

3.4.1 Work hours

Demolition, excavation, and construction works, including the delivery of materials, will be undertaken in accordance with the conditions of approval for the REF and will generally be undertaken during the work hours below with Queanbeyan-Palerang Council requirements[1]:

- Monday to Friday: 7:00 AM to 6:00 PM
- Saturday: 7:00 AM to 1:00 PM
- Sunday and Public Holidays: No construction work permitted without prior approval of Queanbeyan City Council

3.4.2 Vehicle types

The construction vehicles accessing the site will mainly comprise of Medium and Heavy Rigid vehicles (MRVs and HRVs). It is expected that mobile cranes may be required to have access to the site. The specific model of crane, access points and swept paths will be determined in the detailed Preliminary Construction Transport Management Plan.

During certain stages of construction, articulated vehicles may also be used onsite.

[1] Queanbeyan Palerang Regional Council Development Construction Specification C101 General

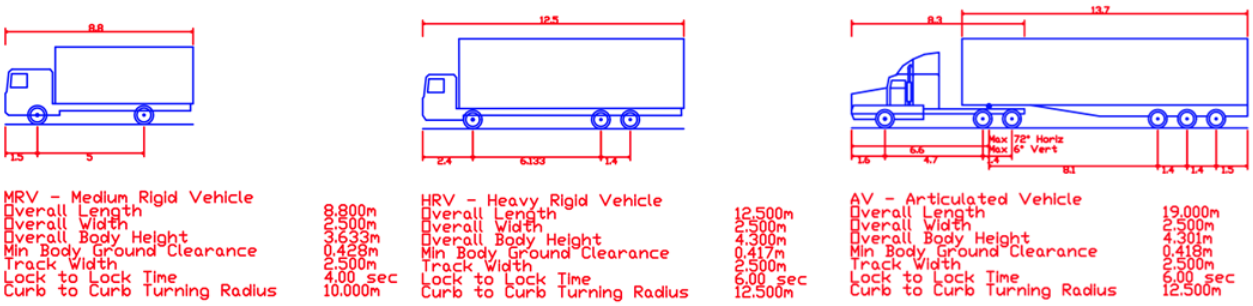


Figure 3. Typical characteristics of vehicle types accessing the site

3.5 Modern construction methods

3.5.1 Construction methods

The new high school for Googong will be built using methods of modern construction[2] including a kit-of-parts where elements are made off site and installed in tranches using a crane.

3.5.2 Hoarding and fencing

During site establishment and construction of the new high school for Googong, the project is expected to use Type A hoarding in order to secure the boundary of the site. Type A hoarding refers to a site fence which encloses or isolates a development site from public areas primarily to restrict access from the public.

The extents of the hoarding and fences will be within the project site and so, no impact is expected on Council roads.

Hoarding and fencing will be provided according to Queanbeyan-Palerang Regional Council standards[1] which specify chain wire mesh fencing with shade cloth. Hoardings will be used to secure the perimeter of the site from access. In places within one metre of the verge, hoarding must be used to protect the site. Required hoarding and fences must be erected before commencement of construction work.

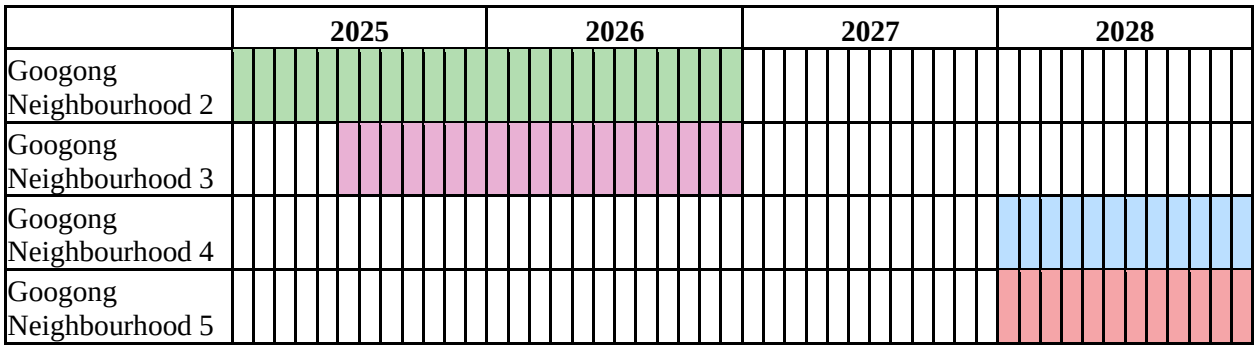
[2] https://www.schoolinfrastructure.nsw.gov.au/what-we-do/we-build-schools/modern-construction-methods.html#content_3

4. Project conditions and access

4.1 Surrounding developments

The build out of Googong is still underway. While Neighbourhood 1 is complete, Neighbourhood 2 (where the site of the new high school is located) and Neighbourhood 3 (south of the site) are scheduled for completion by 2027. Construction activities for these neighbourhoods will be occurring at the same time as for the new high school. Construction vehicles for residential and Town Centre development are anticipated to use Wellsvale Drive.

Development timelines for Neighbourhood 4 and Neighbourhood 5 in the eastern part of Googong are not yet confirmed and will depend on market take-up of completed housing. At this stage we do not anticipate that construction activities will overlap with construction of the new high school for Googong.



4.2 Approved heavy mass limit routes

To guide the appointed construction contractor(s), the National Network Map indicate appropriate haulage routes for articulated vehicles including articulated vehicles up to a length of 26m. The route consists of arterial roads that connect Googong to major industrial hubs in Canberra and Sydney via the B52 Kings Highway and A23 Monaro Highway.

Two possible construction routes to the new high school for Googong are shown in Figure 4. Neither Ellerton Drive nor Old Cooma Road are listed as an approved Short Combination route. The appointed contractor will need to submit permits to National Heavy Vehicle Regulator for approval.

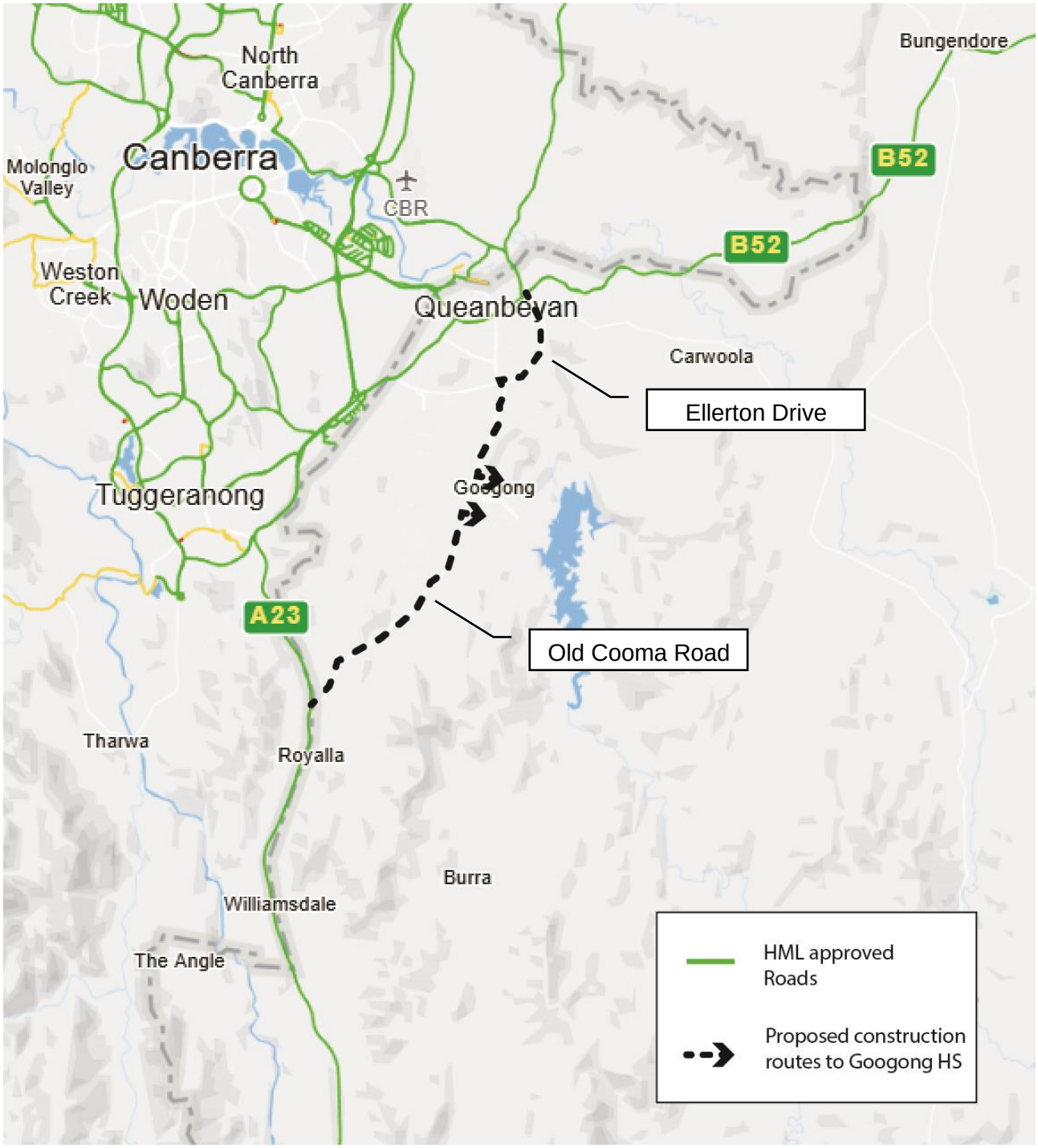


Figure 4. Heavy good vehicles routes surrounding the site. Source: HML Approved Network (National Network Map, 2024)

4.3 Googong Road hierarchy and route options to site

This section relates to the proposed access route during construction. The functional classification of surrounding roads is shown below in Figure 5. Two potential access routes have been considered. These are:

- Option 1: Site access via Observer Street
- Option 2: Site access via Wellsvale Drive opposite McFarlane Avenue.

Both options use Old Cooma Road and Wellsvale Drive. These are both classified as arterial roads.

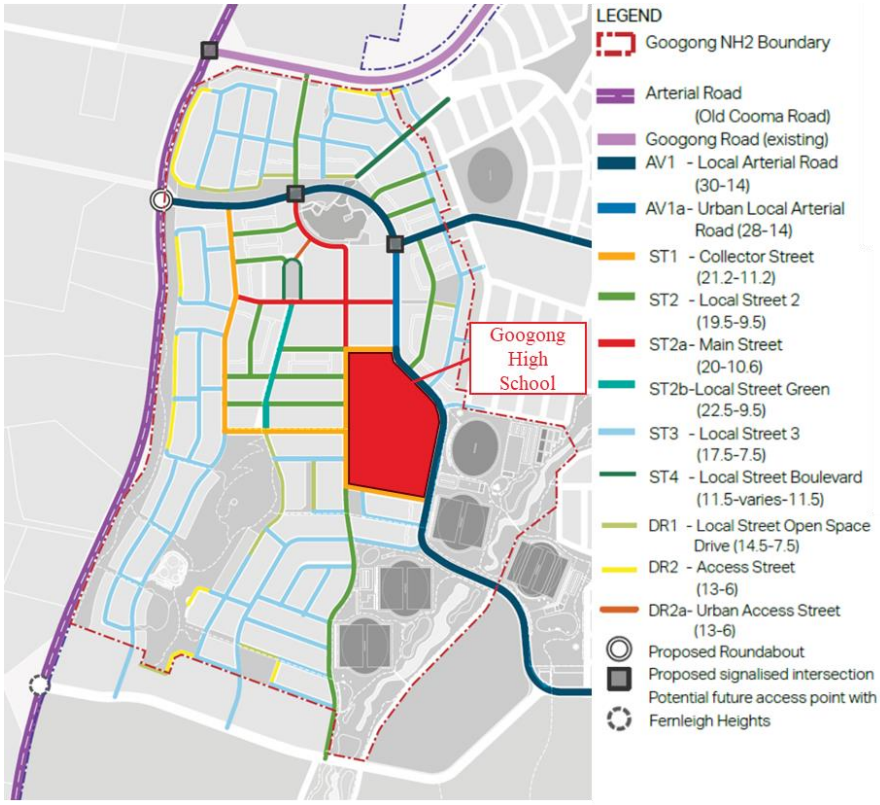


Figure 5. Map 15, NH2 Structure Plan – Street Hierarchy (Source: Googong DCP Appendix 8, 2020)

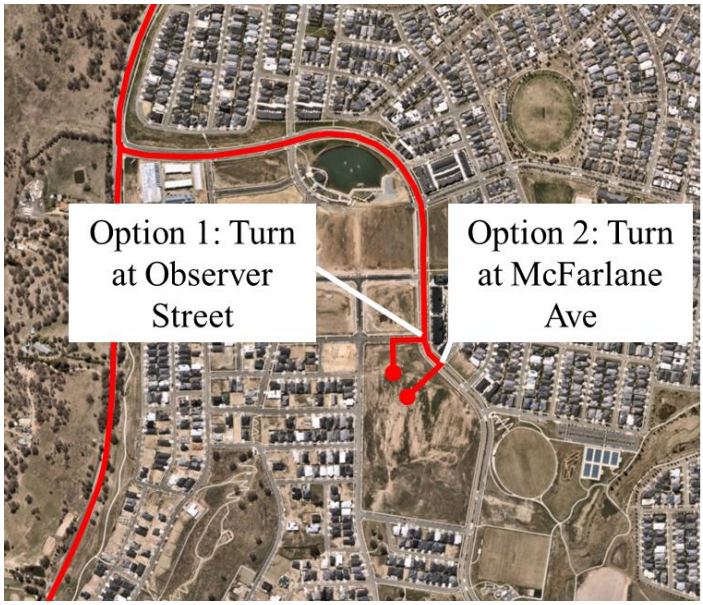


Figure 6. Construction route options 1 and 2

The swept paths presented below demonstrate that:

- Articulated vehicles can complete a right turn from Wellsvale Drive into Observer Street without issues.
- A right turn from Wellsvale Drive into Site from the median opening adjacent to McFarlane Street is feasible for a heavy rigid vehicle (HRV, 12.5m) but not for articulated vehicles (19m) without mounting the median.

As such, to accommodate articulated vehicles, it is recommended that the construction site entry be located on Observer Street (Option 1).

Option 1: Site access via Observer Street

Heavy rigid vehicles and articulated vehicles are able to easily navigate the right turn from Wellsvale Drive onto Observer Street. Entry into site is made through a left turn from Observer Street.

Figure 7. Construction vehicle entry - Option 1 HRV

Figure 8. Construction vehicle entry - Option 1 AV

Option 2: Site access via Wellsvale Drive opposite McFarlane Avenue

The size limit of vehicles that can be accommodated by the road network for Option 2 is the 12.5m long heavy rigid vehicle. Articulated vehicles are unable to perform the right turn from Wellsvale Drive onto Site without mounting the median. Entry into site is made through a right turn from Wellsvale Drive.

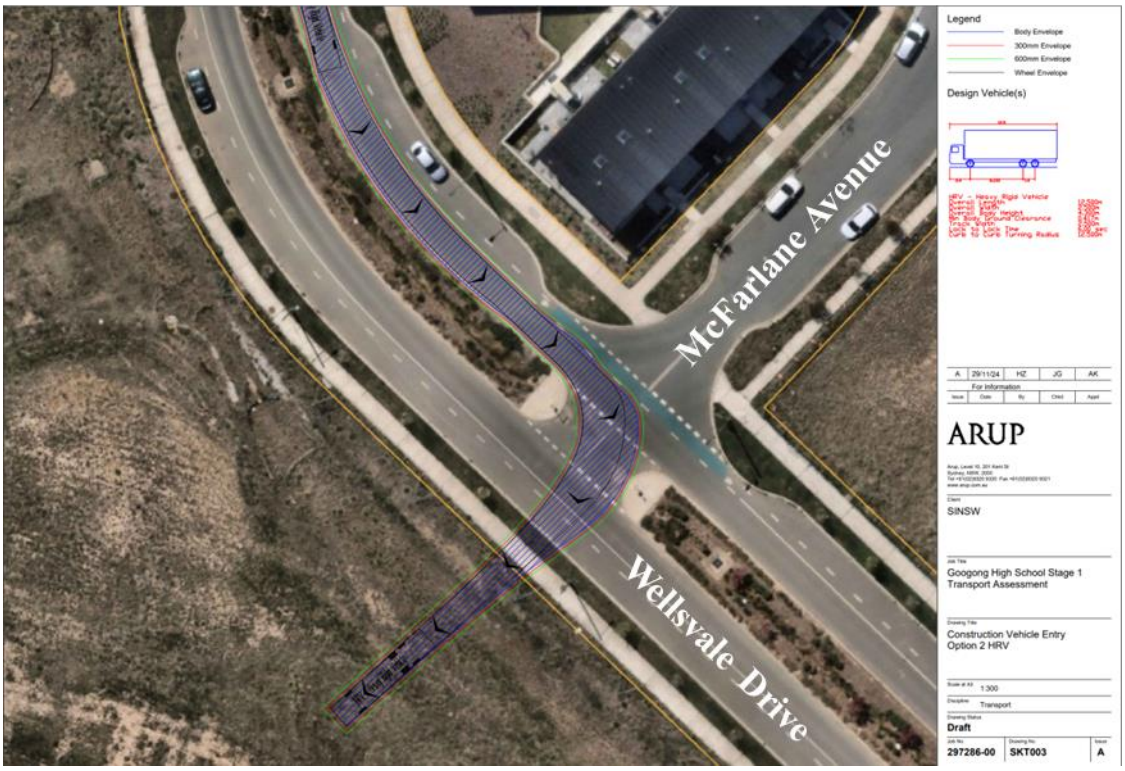


Figure 9. Construction vehicle entry - Option 2 HRV

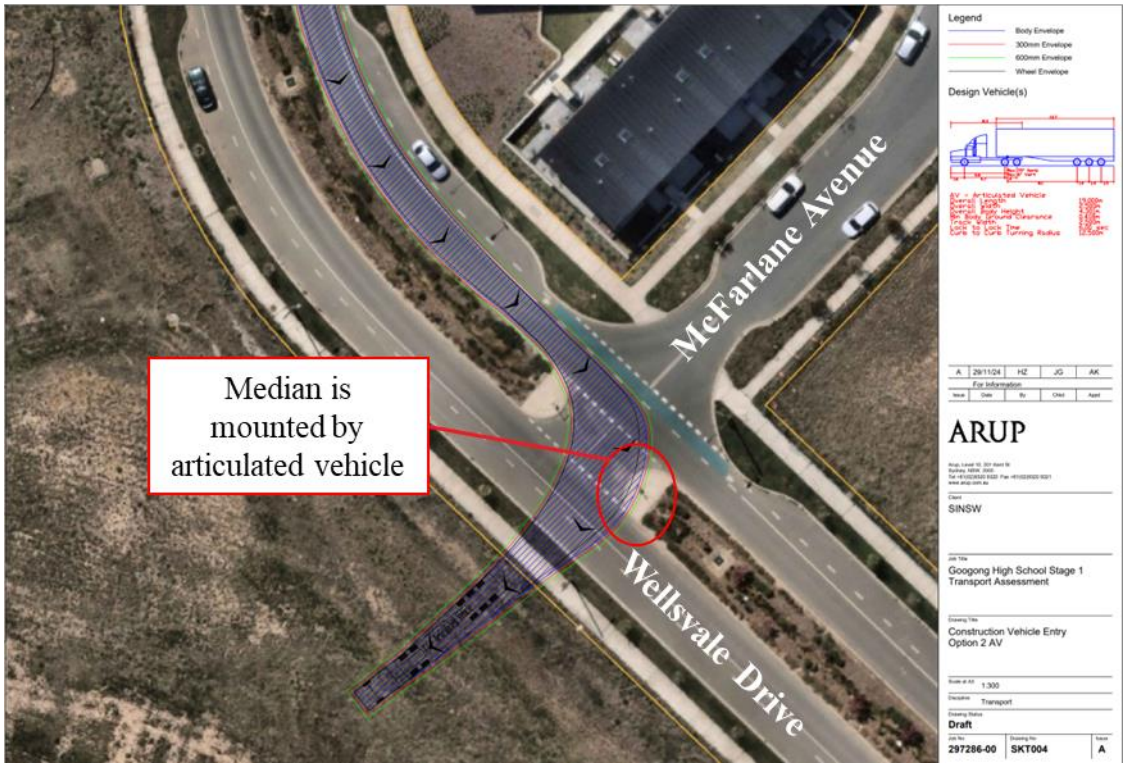


Figure 10. Construction vehicle entry - Option 2 AV

4.4 Project conditions and access

- **Traffic controllers will be required** for directing the movement of Medium Rigid Vehicles and larger, to ensure safety and minimise pedestrian-vehicle conflicts with improved sightlines.
- Provide **dust monitoring** to minimise dust exposure to nearby residents and people using Brooks Oval on the eastern side of Wellsvale Drive.
- All heavy goods such as machinery plants should be delivered to Site via Observer Street or Wellsvale Drive (see Section 4.3 for details).
- The appointed contractor will be required to coordinate deliveries to ensure no queuing occurs to disrupt normal road operation, particularly on Wellsvale Drive.
- Dedicated turning area must be provided on-site to enable vehicles to enter and exit in a forward direction, to minimise delay and manoeuvring on public roads.
- For each site compound that is expected to generate heavy vehicle movements, a designated area for unloading and pickup should be made available. The contractor will implement traffic and pedestrian management at the site access via a designated operator.

4.5 Worker access

The number of construction staff is yet to be agreed by the contractor as part of their detailed Preliminary Construction Transport Management Plan, as well as outlining avoiding interference with neighbours.

No parking on-site will be provided for workers, subject to confirmation during following planning phase. The surrounding roads avenue unrestricted on-street parking capacity which could be used by construction workers. Workers choosing to travel by car shall be responsible for finding their own parking and are to park in accordance with all signposted parking restrictions.

During construction, workers will be encouraged to use public transport to travel to and from the site. The site is within 500 metres or 5 minutes to 10 minutes walking distance of public bus stops on Gorman Drive which are serviced by the 830 and 840X bus routes, providing public transport connection to Canberra.

5. Construction management principles

A set of principles have been developed to guide all construction management measures across the project. The key principles are as follows:

Clear and timely communication in relation to any changes, to affected areas and the expected duration of works via various TfNSW platforms through the project website, radio, newspapers, social media or direct community engagement.

Implement appropriate Traffic Control Plans in accordance with Traffic Control at Work Sites (TCaWS) including signage, line marking and stop lights to direct private vehicles, transport operators, pedestrians and cyclists past work sites. Alternative routes may be provided where existing infrastructure is impacted by the works.

Manage site compounds and work areas to ensure construction traffic and works are primarily contained within these areas and road occupancy is minimised.

Manage pedestrians and other vulnerable road users to ensure safe and continuous movement past the work sites. Consideration of the land uses and key pedestrian desire lines in the surrounds of the work sites will be the key drivers for the type of traffic management strategies implemented.

Where practical, consideration of scheduling construction traffic movements to avoid peak and school times and smoothing of peaks in construction traffic activity to minimise impacts to the transport network.

Contractors will be required to coordinate with construction of other development to minimise cumulative local impact.

Encourage construction workers, where possible, to use modes other than private vehicle.

5.1 Measures to minimise pedestrian and cyclists impact

Mitigation measures to minimise impact on pedestrians and cyclists are set out below.

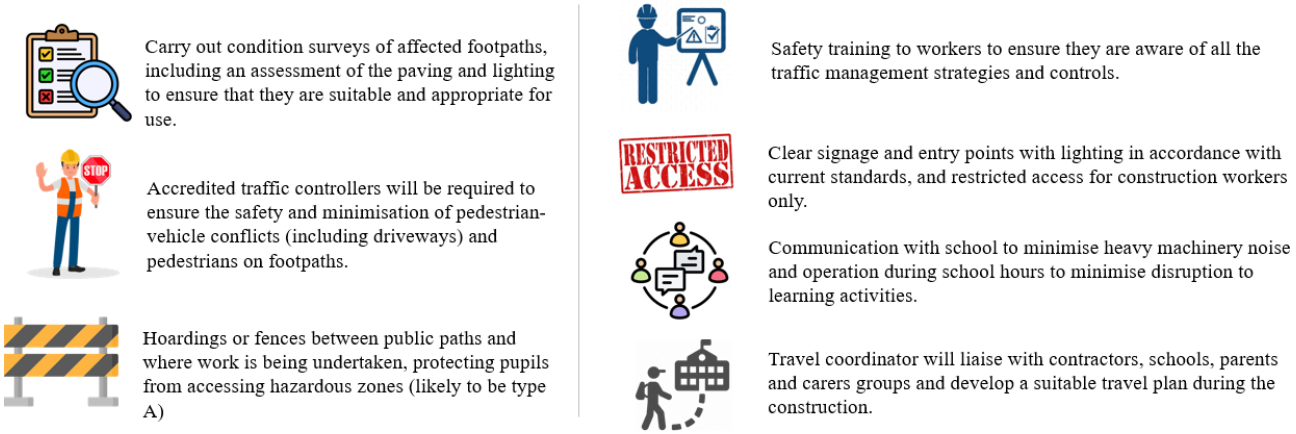


Figure 11. Mitigation measures to minimise impact to pedestrians and cyclists

5.2 Management measures for drivers

Mitigation measures to minimise impact on people driving are set out below.

Technology	Training	Information
•Heavy vehicles equipped with safety technology and equipment to improve vehicle safety, visibility and the detection of vulnerable road users. Safety, Productivity and Environment Construction Transport provides further information on appropriate safety devices.	•Mandatory completion of heavy vehicle driver introduction training prior to accessing any work sites to ensure they are aware of all the traffic management strategies and controls. This may include haulage routes, potential changes, common road users and hazards / risks along the routes, entry and exit points, turning restrictions, unloading / pick up locations and any other onsite heavy vehicle requirements.	•The construction contractor(s) is to ensure that drivers are informed of any changes which may impact their route or access to a work site.

5.3 Traffic controllers and temporary traffic signals

- The use of traffic controllers to control traffic at worksites may be required at the school to manage vehicles and pedestrian access points and should be in accordance with the Traffic Control at Work Sites Manual (TfNSW). Traffic controllers are accredited through Safe Work NSW.
- Variable message signs (VMS) and or signage may be used to inform drivers, where necessary, to avoid particular roads or areas where activities associated with the project would cause disruption. Where these are used, it is to be in accordance with documented Austroads Guidelines, TfNSW supplements, procedures, guidance and approval of the road authority. The placement of temporary VMS must consider pedestrian safety and disabled access needs when placed on footpaths VMS placement should conform to Austroads Guidelines, TfNSW supplementary material and approval processes of the road authority.
- Signage may be required is extended closure or timing is required.

6. Cumulative Impact Assessment

The site and surrounding areas are undergoing significant growth and development as part of the Queanbeyan-Palerang LGA. The town centre is being developed through the staged implementation of the Googong Masterplan, with established neighbourhoods and infrastructure supporting a growing community.

This section outlines the cumulative impact of construction works associate with the proposed activity. Impacts listed in this assessment which are addressed by this activity are listed in Table 3.

Table 2. Description of anticipated impacts of the school project.

Impact	Description
Additional traffic	• Road and intersection delays and queuing from construction vehicle movements. • Workers traveling by passenger vehicle will present as additional strain on the local road network. • With an estimated 35 peak construction vehicles arriving per day, this equates to an average of approximately 4 vehicles per hour (assuming a 9-hour delivery window to schedule deliveries outside morning and evening peak hours).
Overflow parking onto surrounding streets	• No parking will be provided on site for construction workers. Vehicle parking demand from construction workers will reduce available street parking.
Obstruction of footpath and cycleways	• Hoarding may reduce the effective width of footpaths. Temporary traffic controls such as boom gates and traffic management to accommodate construction vehicle movements may also restrict pedestrian and cyclist movement.
Increased patronage on public transport	• Workers using public transport will present as additional strain on the public transport network.
Construction waste removal requires additional vehicle navigating local roads	• Waste from construction work will accumulate on site and overflow without management strategy.
High levels of noise produced by construction activity	• Noise pollution will disrupt student learning and the neighbourhood.

7. Mitigation measures

As part of this project, SINSW and the appointed contractor shall commit to the mitigation measures outlined in this section. This Preliminary Construction Transport Management Plan determines that the construction associated with the proposed activity will not have a significant effect on the environment. All impacts assessed can be adequately mitigated through recommended measures.

7.1 Mitigation Measures

Mitigation	Aspect	Mitigation measure	Reason for mitigation measure
Construction traffic management strategy Materials booking system	General measures to be determined prior to commencement of construction work	A set of required construction vehicles along with anticipated schedule and volume would inform a construction traffic management strategy and materials booking system which outlines vehicle paths, arrival and departure times to minimise impact on the performance of intersections used by these vehicles. Where possible, vehicle movements will be organised to avoid morning and afternoon peak hours. Communication between site managers will be used to manage daily construction vehicle traffic, using site booking systems and scheduling site activities to minimise coincident deliveries. It's estimated that on average 4 construction vehicles per hour would come and go to the site. This estimate will be confirmed by the contractor as part of the detailed Preliminary Construction Transport Management Plan.	To reduce impact of construction vehicles on the road network.
On-street parking designation	Prior to commencement of construction	Designate specific areas for workers' personal vehicle parking in locations where no residential development exists, minimising impact on nearby residents. For instance, parking could be allocated on the west side of Wellsvale Avenue or the east side of Glenrock Drive (site block perimeter).	To prevent workers' vehicles from occupying residential parking spaces, minimal disruption to local residents.
Public transport guide	Prior to commencement of construction	Workers arriving by car will be encouraged to use public transport options and be provided information on various accessibility options available including the public transport options that connect to the site.	Encourage public transport use to reduce strain on on-street parking and road network.
Footpath condition surveys	During Construction	Carry out and monitor the changes to footpath condition surveys to ensure footpaths continue to meet required standards.	Observe the condition of footpaths to correct damages caused by construction work.
Traffic management and engineering controls	Prior to and during construction	Training provided so all workers are familiar with traffic management strategies and controls. Accredited traffic controllers will be required to ensure the function all pedestrian and construction interfaces. Hoarding, fences, boom gates and appropriate signage to be employed.	Control obstructions and minimise interference to paths, pedestrians and cyclists.

Mitigation	Aspect	Mitigation measure	Reason for mitigation measure
Construction and demolition waste management notifications	Prior to commencement of construction	Waste and contamination to be managed by the contractor, consolidated on site and notified to the RMS Traffic Management Centre so that waste vehicle transportation route from the site is planned prior to the commencement of waste and contaminated material removal.	Allows for the cataloguing, preparation and transportation of waste with appropriate materials handling.
Scheduling of heavy machinery and construction noise	Prior to commencement of construction	Communication with QPRC to minimise heavy machinery noise. Scheduling of activities which produce disruptive noise to within hours specified by QPRC – 7:00am to 6:00pm Monday to Friday and 7:00am to 1:00pm on Saturday.	Reduce noise generated by construction activity.