Department of Education and Communities

Construction Pedestrian and Traffic Management Plan (CPTMP)

Greystanes Public School

Rev A | 30 November 2017

Job number 254846-00

Arup
Arup Pty Ltd ABN 18 000 966 165

Arup
Level 10 201 Kent Street
PO Box 76 Millers Point
Sydney 2000
Australia
www.arup.com

ARUP

Contents

1 Introduction

The details of the report are for the provision of a Construction Pedestrian and Traffic Management Plan (CPTMP) for the proposed works for Greystanes Public School. The plan is developed by Arup on behalf of the Department of Education.

The CPTMP was develop to assess the proposed demolition and site preparation works and operation of construction traffic associated to the proposed development, in respect to safety and capacity. The report provides details on the management required for construction traffic control, in conjunction with minimising the effects on the surrounding developments and appropriate access to be provided at all times.

The plan is to be submitted for commentary by relevant authorities. The appointed contractor is to prepare a CPTMP with detailed Traffic Control Plans detailing specific methods of safety managing construction vehicle traffic within the surrounding area.

2 Description of Proposed Works

2.1 Location

Greystanes Public School is located in Greystanes, with primarily surrounding residential land uses. Pedestrian accesses around the school, are located on Merrylands Road and Bradman Street. Staff and visitor vehicle access is via a separate access on Merrylands Road. The study area is shown in Figure 1.

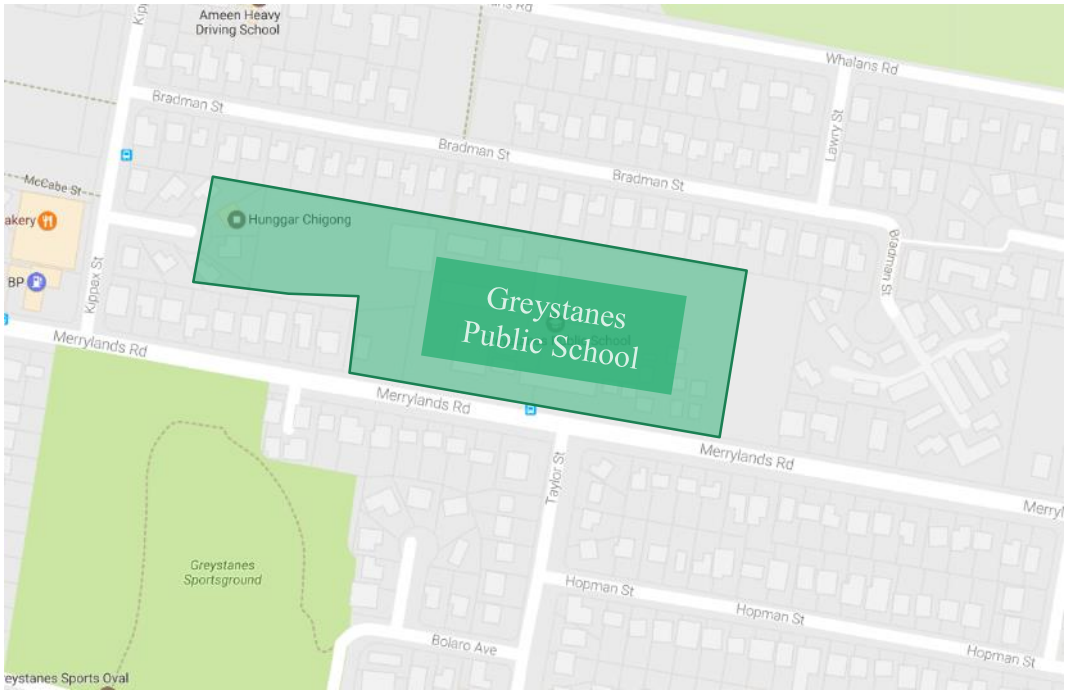


Figure 1: Greystanes Public School site location

2.2 Overview of proposed development

Greystanes Public School has an existing population of 713 students and 42 staff (including 36 teaching staff). The proposed redevelopment will cater for an additional 184 students and eight staff.

A series of upgrades are proposed for the school, including:

- A net increase of eight teaching spaces
- A new split 2/3 storey building
- Improved street presence
- Better school access for students and visitors
- Upgrading staff areas to core standards
- A new student entry along Merrylands Road
- New administration and staff building an new cola towards Merrylands Road (requires space from existing staff car park 2)

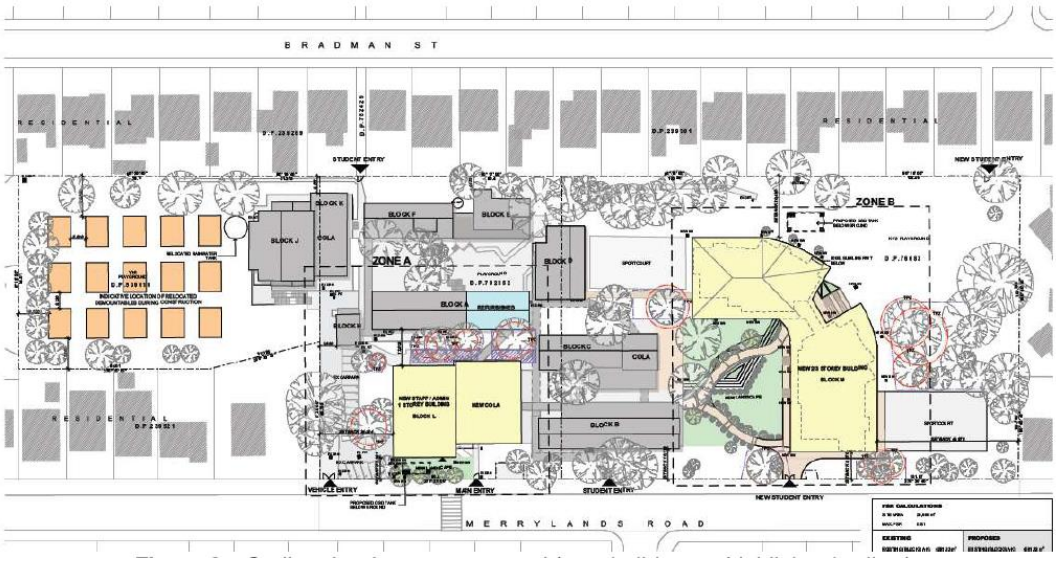


Figure 2: Proposed development (Source: JDH Architects)

2.3 Milestone stages

The DA seeks approval to facilitate the redevelopment of the site. This includes removal of demountable classrooms, demolition works, site establishment and access arrangements. Specifically the works include:

- Site establishment and protection of adjoining development;
- Protection, diversion and/or temporary establishment of services and infrastructure as required;
- Erection of perimeter fencing, hoarding, gantry, scaffolding and site accommodation;
- Demolition works
- Minor bulk excavation works

A more detailed and comprehensive description of the proposal is contained in the Construction Management Plan.

2.4 Programme

As the project is in its preliminary stages, this timeframe is an approximate only and may differ considerably once a contractor is appointed.

Milestones for Greystanes Public School	Target completion date
Planning Approval Submission	November 2017
Site Establishment	June 2018
Construction Period	June 2018 to February 2020
Commencement of Operations	Day 1, Term 1, 2020

3 Construction Pedestrian Traffic Management Plan

3.1 Truck routes and controls

Construction vehicles would be primarily restricted to NSW state and regional roads for access to the site. The site access is expected along Merrylands Road.

The key truck routes for the site are along the Cumberland Highway onto Merrylands Road, or along Greystanes Road onto Merrylands Road. The Cumberland Highway and Greystanes Road are both north-south movements that collect eastbound and westbound traffic from the Great Western Highway to the north. The Cumberland Highway will provide the major route from freight vehicles to and from the south of the site. The routes are illustrated in Figure 3

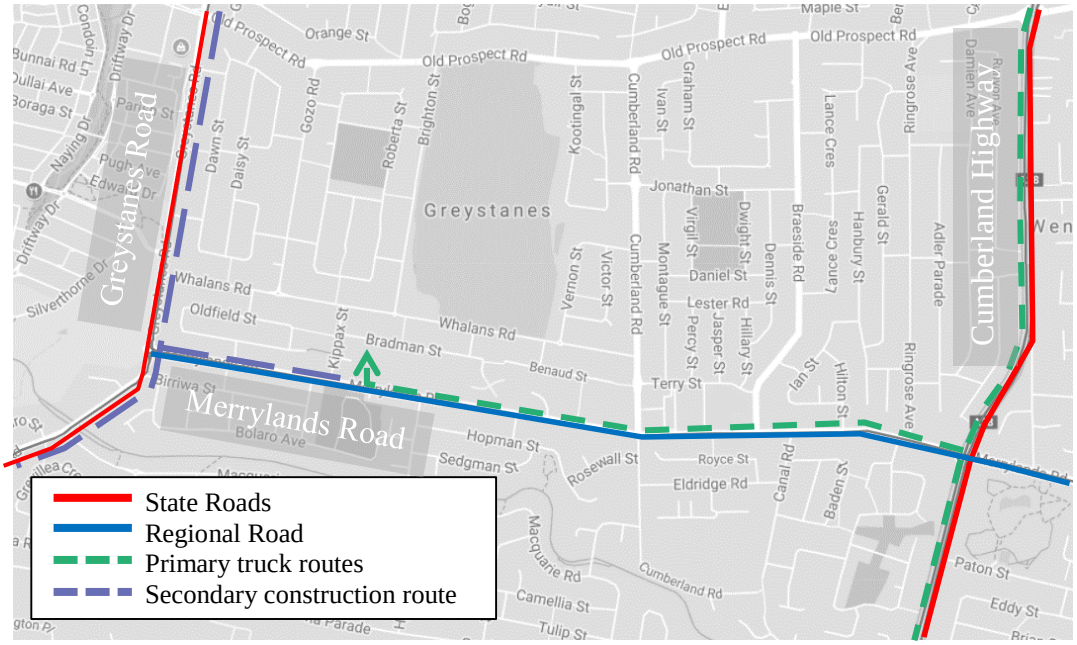


Figure 3: Construction Vehicle Routes

3.2 Construction vehicle access

3.2.1 Zone A

Construction Zone A consists of the western buildings, adjacent to Blocks B and C. Construction vehicular access to the site would be via Merrylands Road, adjacent to the existing vehicle entry. The proposed construction zone, vehicle entry locations and proposed fencing locations are shown in Figure 1. These plans are indicative only and would be subject to change by the appointed contractor.

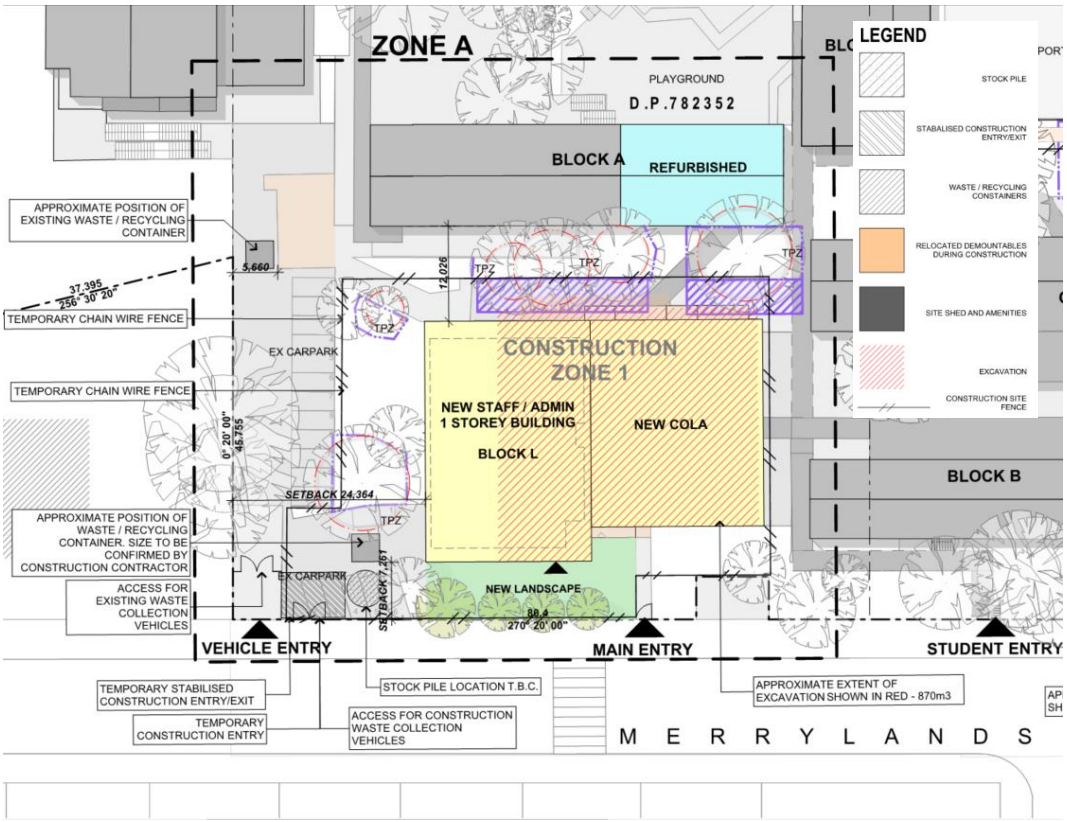
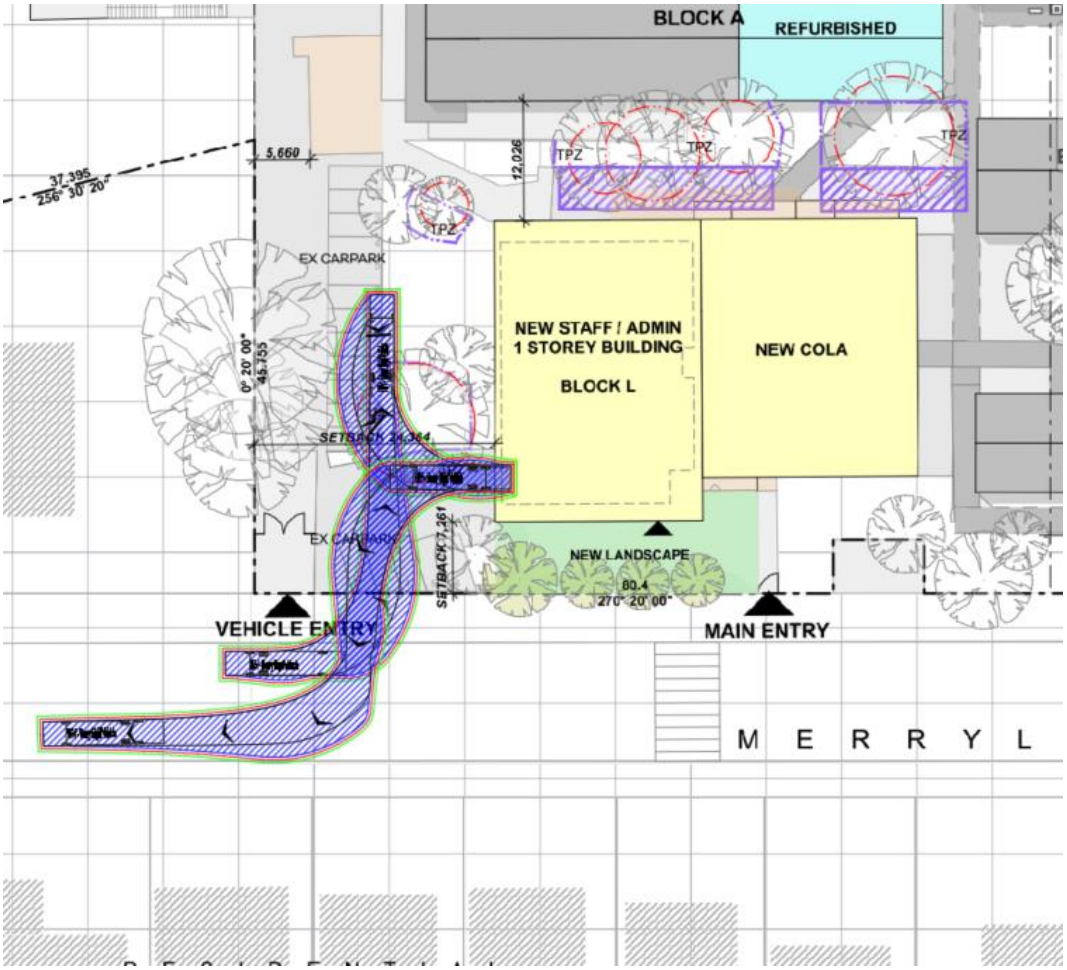
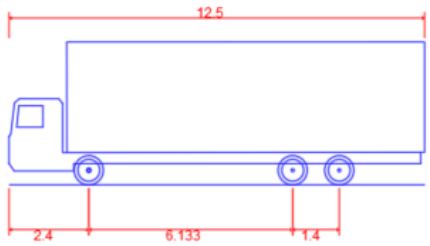


Figure 4: Zone A, preliminary vehicle access and construction plan

Source: Drawing No. SSD13 RevA

A swept path of a 12.5 metre truck (HRV) is shown entering and exiting the construction Zone A in a forwards direction, shown in Figure 6.





HRV - Heavy Rigid Vehicle	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

Figure 5: Swept path of HRV entering Zone A

3.2.2 Zone B

Construction Zone B would be located on the east, with the indicative layout shown in Figure 6. Construction vehicular access to the site would be via Merrylands Road, just south of block M. These plans are indicative only and would be subject to change by the appointed contractor.

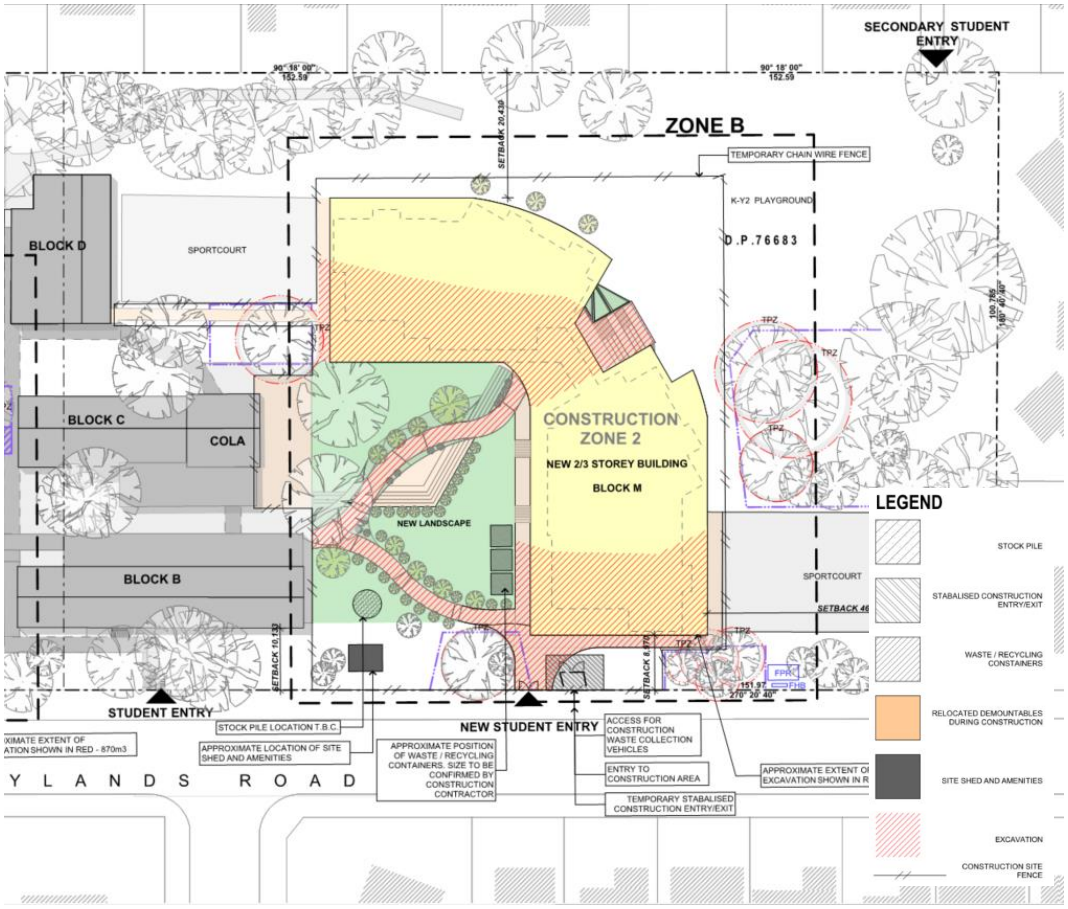


Figure 6: Zone B, preliminary vehicle access and construction plan

Source: Drawing No. SSD13 RevA

A swept path of a 19 metre single articulated vehicle is shown entering and exiting the construction Zone B in a forward direction, shown in Figure 7.

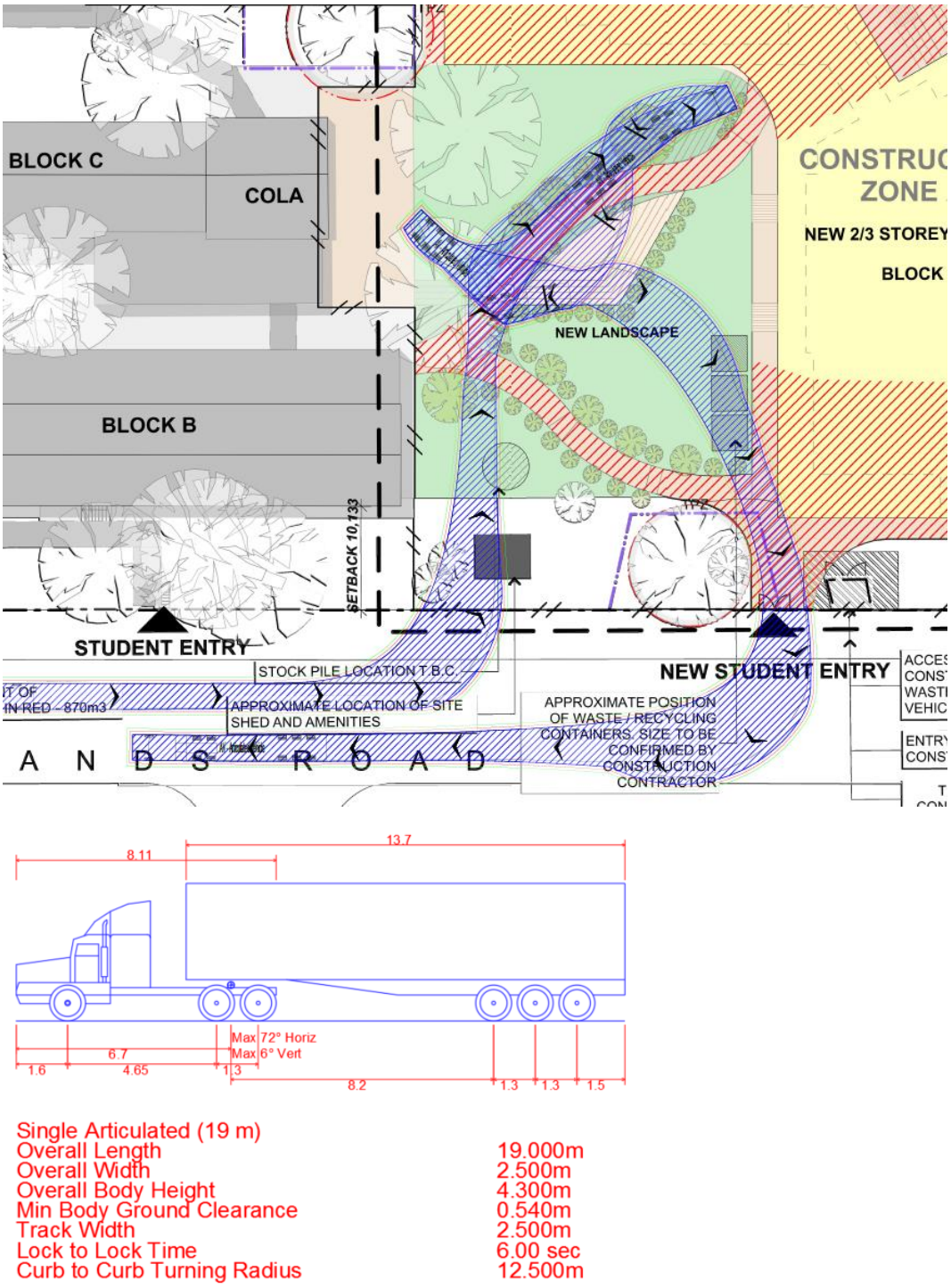


Figure 7: Swept path of an AV entering Zone B

3.3 Vehicle types

Vehicles that will access the site during demolition works will comprise of:

- Articulated Vehicles (AV) for delivery of site equipment.
- Heavy Rigid Vehicles (HRV) for demolition materials removal.
- Truck and Dogs for demolition materials removal.

All heavy goods such as machinery plants will need to be delivered outside of peak traffic hours and school peak hours.

3.4 Pedestrians and road safety

All heavy goods such as machinery plants will need to be delivered outside of peak traffic hours and school peak hours.

The majority of the works will be carried out within the compounds of the school, minimising disruption to the external roads and footpaths. Traffic controllers will be required for larger vehicles to ensure the safety and minimisation of pedestrian-vehicle conflicts along Merrylands Road. Pedestrians travelling to and from the school will be diverted from construction vehicle access, based on the nominated access arrangement. Pedestrians within the school are directed through appropriate fencing and hoarding.

Traffic controllers will also direct vehicles when necessary.

3.5 Hours of work

The hours of work for works occurring through the course of the project are to be detailed in the consent. Typical working hours are as follows:

- Monday to Friday 07:00am to 18:00pm
- Saturday, 07:00am to 15:00pm
- Sundays and public holidays – No works.

Applications for ‘out of hours’ works will be considered on a case-by-case basis. All out of hour’s application will need to be approved by the relevant authority. Reasons for out of hours work may include the following;

- If it is an emergency
- The works create hazardous environment
- Plant break down have delayed works
- Extended hours should not impact the surrounding community.
- Delivery of over-sized construction material warrants works to occur outside of morning or afternoon peaks, or on a weekend
- Construction works would result in an unacceptable disruption to students and therefore needs to be carried out on a weekend

3.6 Vehicle access

The existing general vehicle access will be retained and not affected during school peak times between:

- 8:00 – 9:30am
- 2:30 – 3:30pm

Drop-off, pick-up and bus areas along Merrylands Road will continue to serve the school and be retained.

Delivery of construction materials will occur outside of school hours and road network peak hours in order to reduce the impact on the surrounding road network. The contractor be required to coordinate deliveries with the school and ensure no pedestrian activity is occurring at delivery sites.

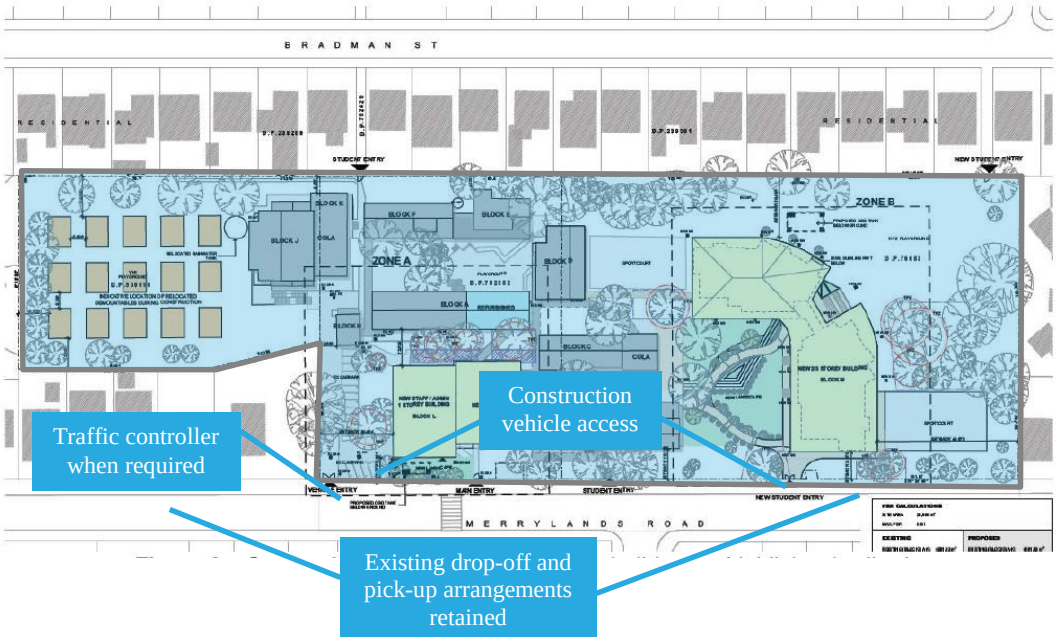


Figure 8: Vehicle access management

3.7 Construction traffic

Construction worker traffic is anticipated to generate additional trips to and from the site. Road network impacts are found to be mitigated as construction workers generally start earlier and finish prior to commuter peaks. Hence construction traffic would not likely coincide with school or road network peak periods.

The impact of construction traffic is to be discussed once specific construction details are provided. However, heavy vehicle volumes are expected to be low, in the order of 60 vehicles per day with approximately 6 vehicles in a typical peak hour. The traffic generation of this magnitude is minimal in the context of the Cumberland Highway state road, with bi-directional traffic flow of approximately

65,414 vehicles per day with 3,800 and 4,400[1] in a typical AM and PM peak hour respectively.

The traffic impact assessment for the site has modelled and assessed a higher order of traffic generated than the anticipated number of construction vehicles. There is no significant anticipated impact to the surrounding road network.

3.8 Site worker access

On-site parking will be limited for private construction vehicles. Construction workers will be encouraged to carpool to the site and store their larger tools on site.

Unrestricted on-street parking are spread on local streets surrounding the site. The Greystanes sportsground off-street car park could also be used as it was found to have a high availability of unoccupied spaces during school peak periods.

3.9 Measures to ameliorate impacts

Mitigation measures would be adopted during the construction phase to ensure traffic movements have minimal impact on surrounding land uses and the community in general, and would include the following:

- Truck loads would be covered during transportation off-site
- Neighbouring properties would be notified of construction works and timing. Any comments would be recorded and taken into consideration when planning construction activities.
- All activities, including the delivery of materials would not impede traffic flow along local roads
- Materials would be delivered and spoil removed during standard construction hours
- Avoid idling trucks alongside sensitive receivers
- Deliveries would be planned to ensure a consistent and minimal number of trucks arriving at site at any one time

[1] http://www.rms.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadt-map/index.html#/?z=17&yr=2016&lat=-33.84562616235375&lon=150.94238728308108&lg=0&q=Greystanes%20Public%20School,%20Merrylands%20Road,%20Greystanes,%20New%20South%20Wales,%20Australia

3.10 Driver code of conduct

To manage driver conduct the following measures are to be implemented:

- All truck movements will be scheduled
- Vehicles are to enter and exit the site in a forwards direction along the travel path shown on delivery maps
- Drivers are to give way to pedestrians and plant at all times.

Traffic Controllers will be required to stop and manage traffic along Merrylands Road, to allow construction vehicles to enter or leave the site. Where possible, vehicles are required to enter and exit the site in a forward direction.

The Roads Act does not provide any special treatment to trucks leaving a construction site - the vehicles already on the road have right-of-way. Vehicles entering, exiting and driving around the site will be required to give way to pedestrians at all times.

3.11 Public transport services affected

It is not expected that public transport services would be affected by the works. No bus services or bus stops along Merrylands Road will be impacted by construction traffic.

3.12 Emergency vehicles, heavy vehicles, cyclists and pedestrians

Construction works and vehicle storage would be mainly confined to the site, or in a dedicated works zone. As such, no additional specific provisions for emergency vehicles, heavy vehicles, cyclists or pedestrians have been identified on the surrounding road network.