



Grey House Precinct

Preliminary Construction Traffic & Pedestrian Management Plan

PREPARED FOR PYMBLE LADIES' COLLEGE | AUGUST 2021

We design with community in mind



Revision Schedule

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1.0 INTRODUCTION

1.1 BACKGROUND

Stantec has been engaged by Pymble Ladies' College (PLC), herein referred to as 'the College', to prepare a Preliminary Construction Traffic & Pedestrian Management Plan (CTPMP), which will support the State Significant Development Application (SSDA), for a proposed development of new learning spaces as part of the Grey House Precinct (GHP) within the College grounds.

The location of the GHP in relation to the overall College is shown in Figure 1.



Figure 1: GHP location (Source: BVN 2021)

It is noted that this is a Preliminary CTPMP and is subject to change. A detailed CTPMP will need to be provided as part of the SSDA Conditions of Consent and prior to the commencement of construction.

1.2 LOCAL CONTEXT

The site is located in the Ku-ring-gai Local Government Area (LGA) and the surrounding land uses are predominantly low density residential, as shown in Figure 2.

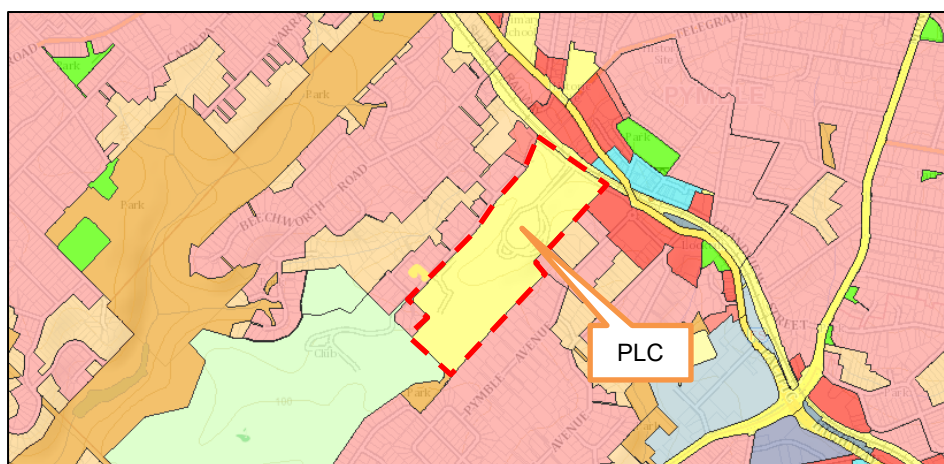


Figure 2: Local Context (Source: ePlanning Spatial Viewer)

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The key features of the surrounds are as follows:

- Pymble Train Station is located approximately 350 metre walking distance to the south-east;
- Pymble Town Centre is located approximately 400 metre walking distance to the east; and
- Avondale Golf Course is located approximately 500 metre walking distance to the south-west.

This is shown in Figure 3.

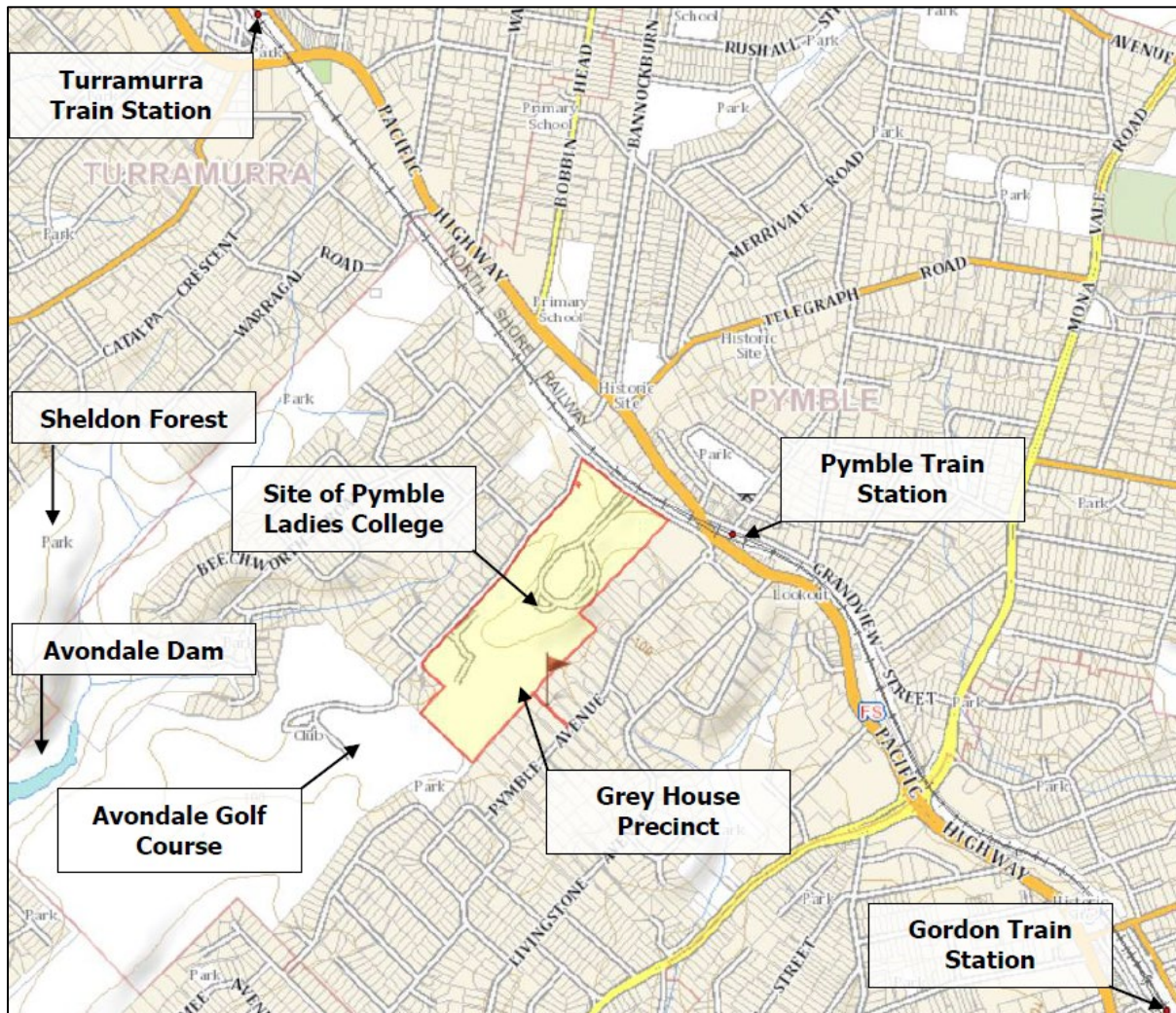


Figure 3: Surrounding features (Source: SIX Maps 2021)

1.3 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEAR)

This Preliminary CTPMP has been prepared in response to the Secretary's Environmental Assessment Requirements (SEARs) issued for this State Significant Development Application (SSDA-17424905), dated 17 May 2021. The requirements pertaining to this Preliminary CTPMP is repeated below:

- *Analysis of the impacts of the traffic generated during construction of the proposed development, including:*
 - *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 the 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*
- *Analysis of the impacts of construction works on the adjoining rail corridor prepared in consultation with the relevant rail infrastructure authority*
- *A preliminary Construction Traffic and Pedestrian Management Plan*

1.4 AIM OF THIS PRELIMINARY CTPMP

The purpose of this report is to assess the impacts that the construction works will have on the existing traffic and transport conditions and describe how these impacts will be managed.

The primary objective of this report is to ensure that the construction impacts on the existing traffic and transport network is minimised. To achieve this objective, this Preliminary CTPMP will:

- Provide a summary of the size of construction vehicles to be used during the different stages of construction and estimate the volume of construction vehicle trips during the construction period;
- Identify the safest and most efficient construction vehicle routes; and
- Identify and outline appropriate controls to minimise construction impact to the existing conditions of the road network and overall safety of all road users.



2.0 PYMBLE LADIES' COLLEGE

2.1 EXISTING USE AND POPULATION

The College is a non-selective, independent school for girls from Kindergarten to Year 12, with Boarding available from Year 7.

The College currently accommodates a population of 2,259 students, 120 boarders and 400 staff.

The standard operating hours of the College are 7:30am to 4:30pm Monday to Friday, and standard teaching hours are 8:15am to 3:20pm Monday to Friday.

Co-curricular activities within the College grounds take place between 6:30am to 8:00am and 3:00pm to 6:30pm Monday to Friday and 7:00am – 12:00pm Saturdays, with no activities on Sundays. Examples of co-curricular activities include band, instrument lessons, choir, drama, art, robotics, dance, rowing, tennis, athletics, swimming, diving, gymnastics, and over 50 choices of activities in addition to seasonal sports including hockey, netball, basketball, rugby and soccer.

Boarding occurs on a 24/7 basis.

2.2 EXISTING ACCESSSES

General vehicle, bus, service vehicle and emergency vehicle access is via Gates 1 (Marden Gates), 2 and 3, as shown in Figure 4 and the street view imagery shown in Figure 5 to Figure 7.

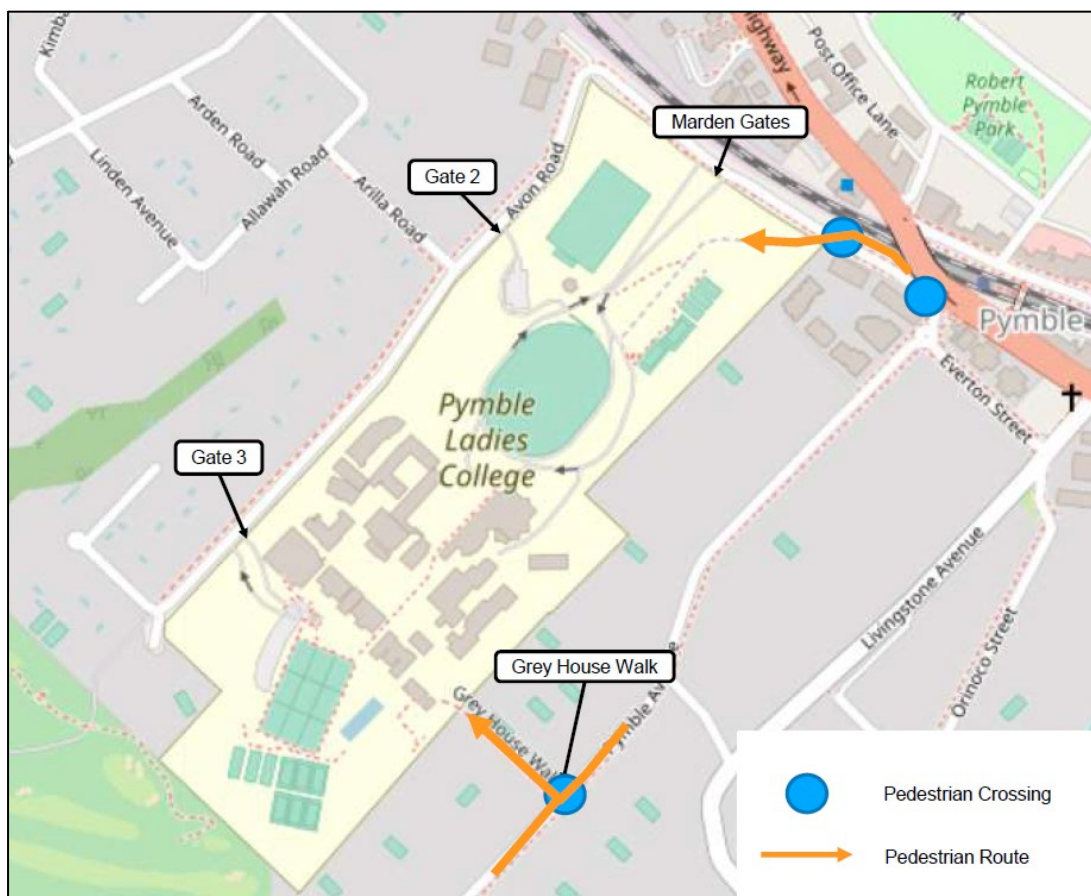


Figure 4: Existing College Access

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PRELIMINARY CONSTRUCTION TRAFFIC & PEDESTRIAN MANAGEMENT PLAN**



Figure 5: Gate 1 (Source: Google Maps)

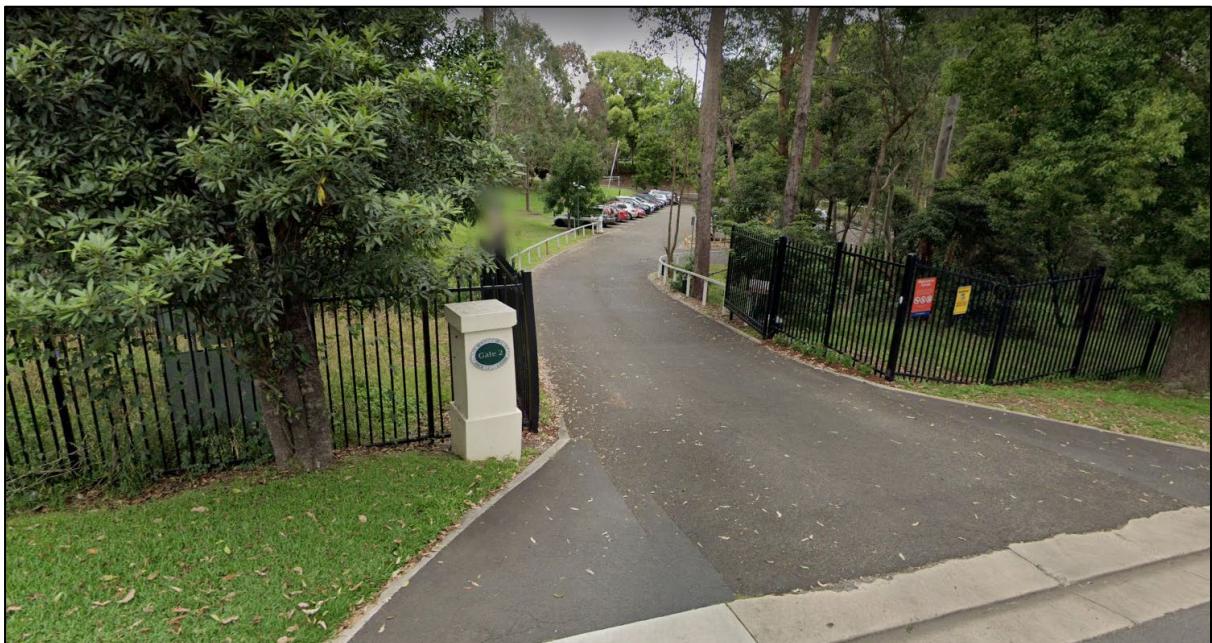


Figure 6: Gate 2 (Source: Google Maps)



Figure 7: Gate 3 (Source: Google Maps)

Pedestrian access is through the main pedestrian entry along Avon Road, adjacent to Gate 1 (Marden Gates). This access is directly off the raised pedestrian crossing along Avon Road, as shown in Figure 8, and provides connection between the College and the pedestrian tunnel leading to Pymble Train Station.



Figure 8: Main pedestrian access (Source: Google Maps)

A pedestrian access, called the Grey House Walk, is also provided along Pymble Avenue which is located between 57 and 59 Pymble Avenue. This pathway is also directly off a raised pedestrian crossing.



**PYMBLE LADIES' COLLEGE – GREY HOUSE PRECINCT
PRELIMINARY CONSTRUCTION TRAFFIC & PEDESTRIAN MANAGEMENT PLAN**



Figure 9: Grey House Walk (Source: Google Maps)

3.0 PROPOSED DEVELOPMENT

The proposal includes the redevelopment of the GHP within the grounds of the established College. The Grey House Precinct is proposed to incorporate the following:

- Junior School classrooms (Years 5 and 6)
- Science, Technology Engineering and Mathematics (STEM) labs;
- Health and wellbeing facilities (consulting rooms and wards);
- Dance academy;
- Out of School Hours Care (OSHC) facilities;
- Early Learning Centre (ELC); and
- Outdoor learning spaces.

The proposed development would replace existing temporary (dismountable) teaching spaces, providing a better environment for both students and teachers.

The facilities within the GHP will be provided to support the *existing* student population of the College and this SSDA does not seek to increase the existing enrolment or staff capacity for Kindergarten to Year 12.

The proposed ELC would however accommodate a new pre-Kindergarten stream, with capacity for 90 children. The OSHC size will also increase by a further 30 places (from 120 to 150 places), but these new places would be used during the school holiday period and will not increase enrolments.



4.0 INDICATIVE CONSTRUCTION PROGRAM

This section discusses an indicative construction program for the development of the GHP within the College.

4.1 CONSTRUCTION WORKS DETAILS

4.1.1 HOURS OF WORK

The hours of work for the construction of the GHP will be finalised as part of the Conditions of Consent through the development application. At a preliminary level, it is expected that the hours of work will be between 7am to 5pm on Monday to Friday, and 7am to 3pm on Saturdays.

4.1.2 PROPOSED STAGING AND DURATION

The construction of the GHP will occur in three stages:

1. Demolition and enabling works
2. Main construction works
3. External works and landscaping

The construction works will last approximately 18 months with start and completion dates planned to be the start of April 2022 and November 2023 respectively. Early works is expected to commence towards the end of 2021 or start of 2022 to allow for services diversion. The proposed duration for each of these stages is summarized in Table 1.

Table 1: Construction staging and duration

Stage	Duration
Demolition and enabling works	2.5 months
Main construction	13 months (overlap with external works and landscaping of approx. 2.5 months)
External works and landscaping	5 months (overlap with main construction works of approx. 2.5 months)

4.1.3 CONSTRUCTION SITE PLANS

The construction site for the GHP is expected to be wholly contained within the south-east section of the grounds of the College. Entry and exit for construction and contractor vehicles are expected to be via Gate 3 along Avon Road, with three temporary internal gates (Gate A, B and C) proposed to control access to the site. The gates will be located on the internal circulation road within the College.

The preliminary site plans indicate that the worksite will be located away from the site office and on-site parking, with all vehicle movements contained wholly within the grounds of the College. This is shown in Figure 10 overleaf.



**PYMBLE LADIES' COLLEGE – GREY HOUSE PRECINCT
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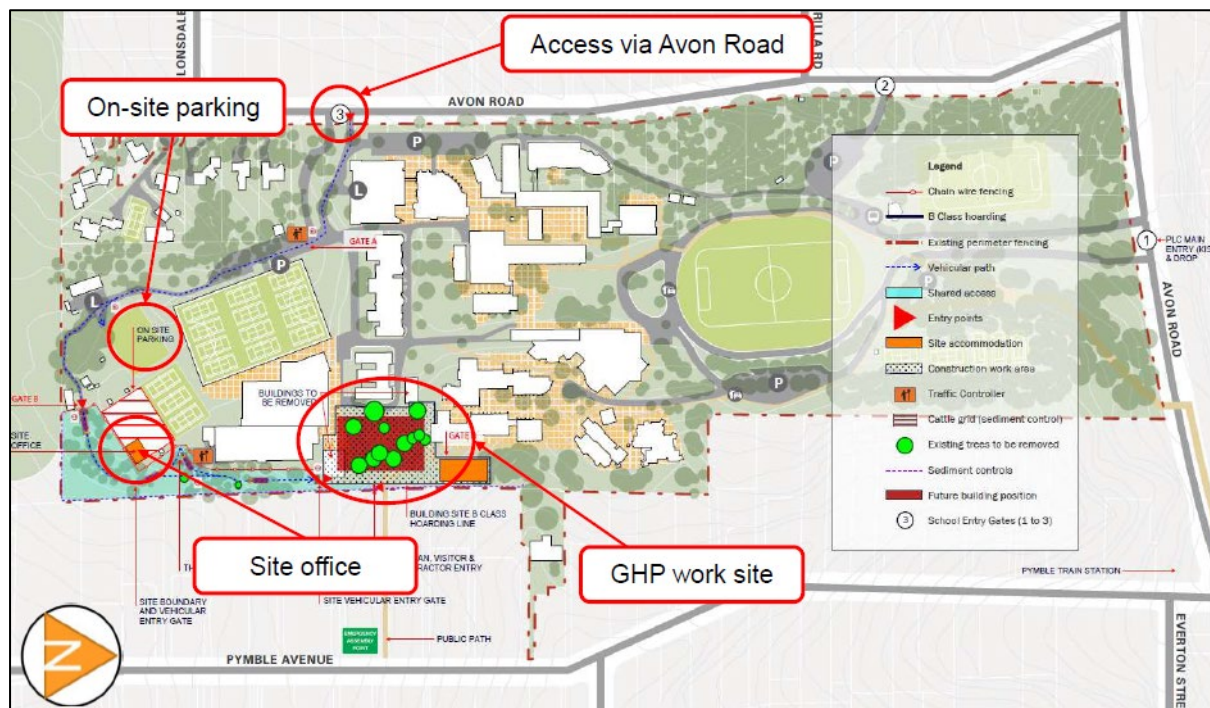


Figure 10 Construction site details for GHP (source: Taylor Construction)

Indicative construction site plans for all construction stages can be found in Appendix A.

4.2 CONSTRUCTION WORK PERMITS

4.2.1 Works Zone

Work zones are not expected to be required for the construction of the GHP. However, should a work zone be required then an application will be submitted to Ku-ring-gai Council for prior approval before commencing any works. This would be a separate application to the Construction Traffic and Pedestrian Management Plan.

Work zone applications can be found on the Australian Business Licence and Information Service ([Approval to Undertake Works on or Near Roads - Ku-ring-gai Council - NSW - Australian Business Licence and Information Service](https://www.abl.gov.au/ku-ring-gai-council-nsw-australian-business-licence-and-information-service)) with applications to be filled and emailed to Ku-ring-gai Council (kmc@kmc.nsw.gov.au).

4.2.2 Road Occupancy License

Based on the existing access along Avon Road being suitable for vehicle ingress and egress as well as all works to be located on-site, it is not expected that a road occupancy license (ROL) will be required. However, should a ROL be required a Notice of Intention to Commence (NOITC) submission will be made when works are within the road carriageway. Appropriate Traffic Management Plan (TMP) as supplemented by relevant Traffic Control Plans (TCP) shall be submitted to Council (who is the Roads Authority) for comment with the NOITC. During the NOITC assessment, Council will consider the TMP with TCPs and determine on its merits whether to issue a Road Occupancy License (ROL).

5.0 PEDESTRIAN MANAGEMENT PLAN

During the construction works, pedestrian movements around the site will be maintained as much as possible.

During busy and peak school times, an accredited TfNSW Traffic Controller will be on-site and will assist in the safety of pedestrians crossing the driveway accesses at Gate 3, along Avon Road, to avoid conflicts with entering/exiting trucks.

It is anticipated that Grey House Walk will be closed to students, visitors and staff for the duration of the construction period. This is to ensure safety and divert pedestrian activity away from the construction site as much as possible. As such, all students, visitors and staff will be required to enter the College via Gate 1 along Avon Road. The Grey House Walk will be provided as site access for contractors which will allow the College to separate student/visitor/staff pedestrian movements and contractor movements.



6.0 TRAFFIC MANAGEMENT PLAN

6.1 SITE ACCESS

As shown in Figure 10, access to the site will occur via Avon Road and subsequently Everton Street and Livingstone Avenue prior to accessing Pacific Highway (which provide arterial connections to the north and south).

6.2 PROPOSED HAULAGE ROUTES

The haulage of spoil and materials to and from the site will be dependent on the source and final destination, noting that quarries for spoil are located towards the north, and a number of concrete batching plants and other construction material sources are located south. Regardless, haulage routes will access the site via Pacific Highway for regional travel. The proposed haulage routes are shown in Figure 11 and described in Table 2.

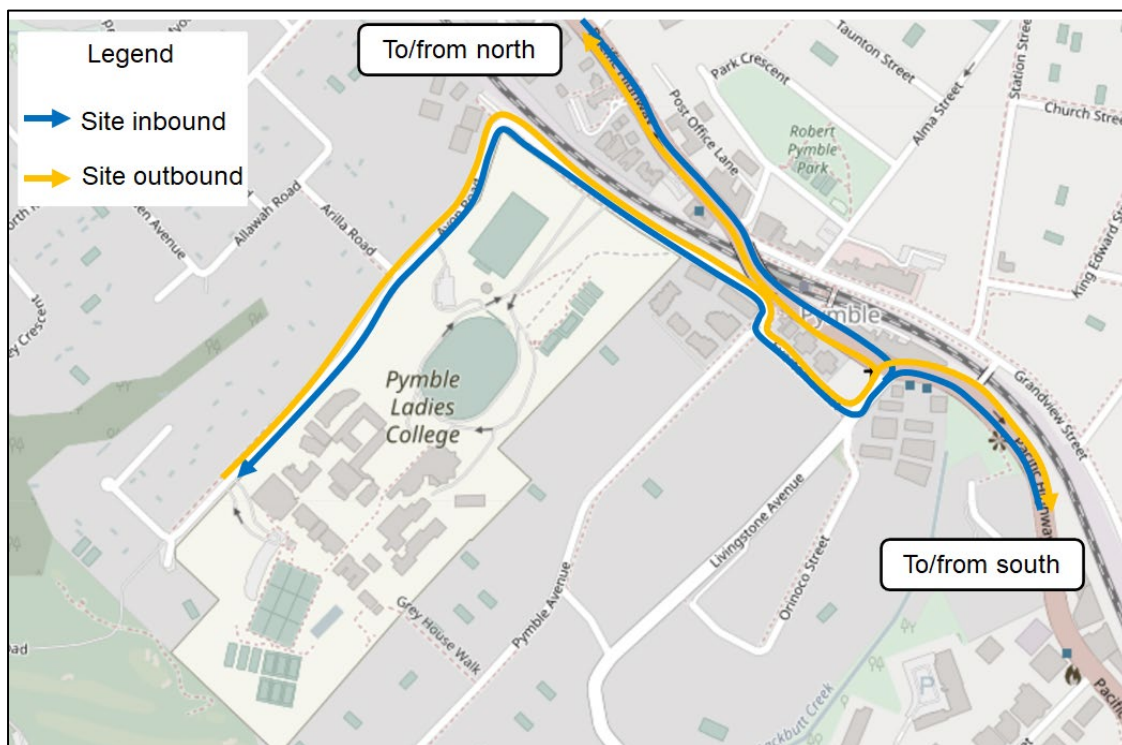


Figure 11 Proposed haulage routes

Table 2: Haulage route description

Direction	Route Description
Inbound	Pacific Highway Livingstone Avenue Everton Street Avon Road PLC Access Gate 3

Direction	Route Description
Outbound	PLC Access Gate 3 Avon Road Everton Street Livingstone Avenue Pacific Highway

It is acknowledged that there is a potential alternative route via Beechworth Road, Mayfield Road and Arilla Road, however the load rating of the rail bridge is unclear in the context of haulage vehicles. As such, only the Livingstone Avenue / Everton Street / Avon Road route has been considered for this Preliminary CTPMP.

Swept path assessments will need to be undertaken during the preparation of the detailed CTPMP to ensure that construction vehicles are able to turn at key intersections and enter/exit via Gate 3.

6.3 VEHICLE TYPES TO BE USED

The following vehicle types are the largest construction vehicles expected to be used for each construction stage:

Table 3: Construction Vehicle Types

Stage	Construction Vehicle Type
Demolition and enabling works	12.5m long heavy rigid vehicles (bogeys, concrete trucks)
Main construction	Mainly 12.5m long heavy rigid vehicles (bogeys, concrete trucks) Infrequent use of 19m long articulated vehicles
External works and landscaping	12.5m long heavy rigid vehicles (bogeys, concrete trucks)

6.4 ESTIMATED TRAFFIC MOVEMENTS

The contractor's estimated maximum number of heavy vehicle movement per day, for each construction stage, is summarised in Table 4.

Table 4: Heavy vehicle movements by stage

Stage	Estimated Construction Vehicle Movements (in & out)
Demolition and enabling works	16-24 movements
Main construction	Excavation: 32 movements Concrete pours: 30 movements Delivers/ waste removal: 8-12 movements



Stage	Estimated Construction Vehicle Movements (in & out)
External works and landscaping	Concrete pours: 10 movements Deliveries: 8 movements

It is recommended that the movement of heavy vehicles be limited during drop-off and pick-up times (generally 8am to 9am and 3pm to 4pm weekdays) to limit adding more traffic to an already peak-heavy land use. Truck movements will be minimized outside of peak school periods and during peak commuter periods.

As aforementioned, all loading and unloading is proposed to occur within the site compound, with no road and traffic lane closures required at this stage.

It is estimated that up to 20 contractors will be on-site for the demolition and enabling works, 100 contractors for the main construction works and 60 contractors for the external and landscaping stage.

It should be noted that contractors start and finish at different times of the day, depending on the construction works that are required at the time. As such, not all contractors will on-site at the same time and movements will likely be spread over several hours in the morning and evening periods.

Workers will be encouraged to use public transport where possible, noting that a number of bus services run along Pacific Highway as well as Pymble Train Station which are located within a walking distance of 10 to 15 minutes. Additionally, workers will also be encouraged to carpool where possible to reduce the number of vehicle movements.

Storage areas will be provided on-site for contractors to store their tools and equipment, which will encourage the use of public transport.

It is noted that outside of school terms (i.e. during school holidays), the College will be able to accommodate more on-site parking for contractors and truck movements throughout the day.

Nevertheless, the following assumptions have been made to estimate the total contractor vehicle movements during each stage of construction:

- 30% of contractors will utilize public transport
- Many of the contractors will carpool. A vehicle occupancy of 1.8 people per car has been adopted.

The estimated total contractor vehicle movements, per day, is shown in Table 5.

Table 5: Estimated contractor vehicle movements

Stage	Daily morning movements	Daily evening movements
Demolition and enabling works	8	8
Main construction	39	39
External works and landscaping	23	23

Traffic controllers will ensure pedestrian, cyclist and pedestrian safety along the site frontage whilst construction vehicles are entering and exiting the site.

6.5 CUMULATIVE CONSTRUCTION IMPACTS

Coordination with Ku-ring-gai Council will need to occur during the preparation of the detailed CTPMP to incorporate any construction traffic impacts generated by approved/ planned developments, within the vicinity of the College.



6.6 PARKING IMPACTS

On-site parking will be provided for contractor and worker vehicles near the site office. As such, the construction works is not expected to have a significant impact on the on-street parking conditions.

Contractors who do not require their vehicle on site for operational reasons will also be encouraged to use the available public transport options. The College is located within 10-15 minutes walking distance to Pymble Train Station, and there are a number of bus services along Pacific Highway. As aforementioned, storage areas will also be provided on-site for contractors, who will be working on-site on a day-to-day basis, to securely store their equipment. This will allow these contractors to use public transport to travel to/from site.

Contractors will also be encouraged to carpool where possible which will reduce the parking demand on-site.

Contractors will be informed of these different travel options as part of the induction process.

It is noted that outside of school terms, the College will be able to accommodate more on-site parking for contractors.

6.7 RAIL LINE IMPACTS

No impacts on the rail line are expected from the proposed construction works.

6.8 OVERALL TRAFFIC IMPACT

Based on the previous sections, it is considered that the traffic generated by the construction associated with the GHP will have minor impacts to the surrounding road network due to the following:

- Contractors are expected to be ready to start work at 7am and thus the majority of worker and contractor movements will occur outside the morning peak;
- Contractors will be encouraged to schedule their shifts to avoid both the morning and afternoon drop-off and pick-up peaks;
- Contractors also tend to start and finish at various times throughout the day, depending on the construction works required, and thus would not necessarily travel altogether during peak hours. Contractor movements are likely to be spread throughout the day;
- Contractors will be encouraged to use available public transport options and will be informed of the limited parking spaces on-site;
- Heavy vehicle movements will be scheduled outside of College drop-off and pick-up hours to reduce potential conflicts and traffic volumes during these times;
- Daily movements for heavy vehicles are expected to be spread out across the day and thus any additional truck movements will be minor; and
- Outside of school terms, the College will be able to accommodate more on-site parking for contractors and truck movements throughout the day.



7.0 TRAFFIC CONTROL PLANS

The Traffic Control Plans (TCP) will be prepared by the Traffic Management Contractor and submitted separately for approval, prior to the commencement of construction works. These TCPs will need to be included in the detailed CTPMP.

The TCPs shall be designed in accordance with the Australian Standards and TfNSW's Traffic Control at Work Sites Guidelines.



8.0 OTHER CONSIDERATIONS

8.1 GENERAL REQUIREMENTS

All construction heavy vehicle drivers will be made are of the following rules:

- All drivers are to follow NSW road rules at all times.
- All loose materials are to be covered entirely and secured.
- Any emergencies (i.e. road deposits caused by site vehicles) shall be communicated to the lead contractors. Any road deposits caused by site vehicles shall be removed at the expense of the contractor.
- Drivers are to follow the proposed haulage routes.
- Drivers must ensure that the vehicles do not create unreasonable noise or vibration.

8.2 SITE INDUCTION

All contractors will be required to undertake a site induction program before commencing work. The induction program will include, but not limited to:

- General policies and procedures.
- Emergency procedures.
- OH&S policies and requirements.
- Driver protocols.
- Permitted construction vehicle routes.
- Key personnel contact details.
- Travel and parking options (public transport and carpooling opportunities).

8.3 EMERGENCY VEHICLE ACCESS

Any emergency vehicles requiring access into the site will do so via Avon Road. In the event that an emergency vehicle is required to access the site or the College, all construction work will be stopped.

In the event of a road closure, traffic controllers shall not, under any circumstances, stop emergency vehicles to allow trucks to enter or leave the site.



9.0 KEY PERSONNEL

The key personnel for the construction site and their contact details will be included as part of the detailed CTPMP.

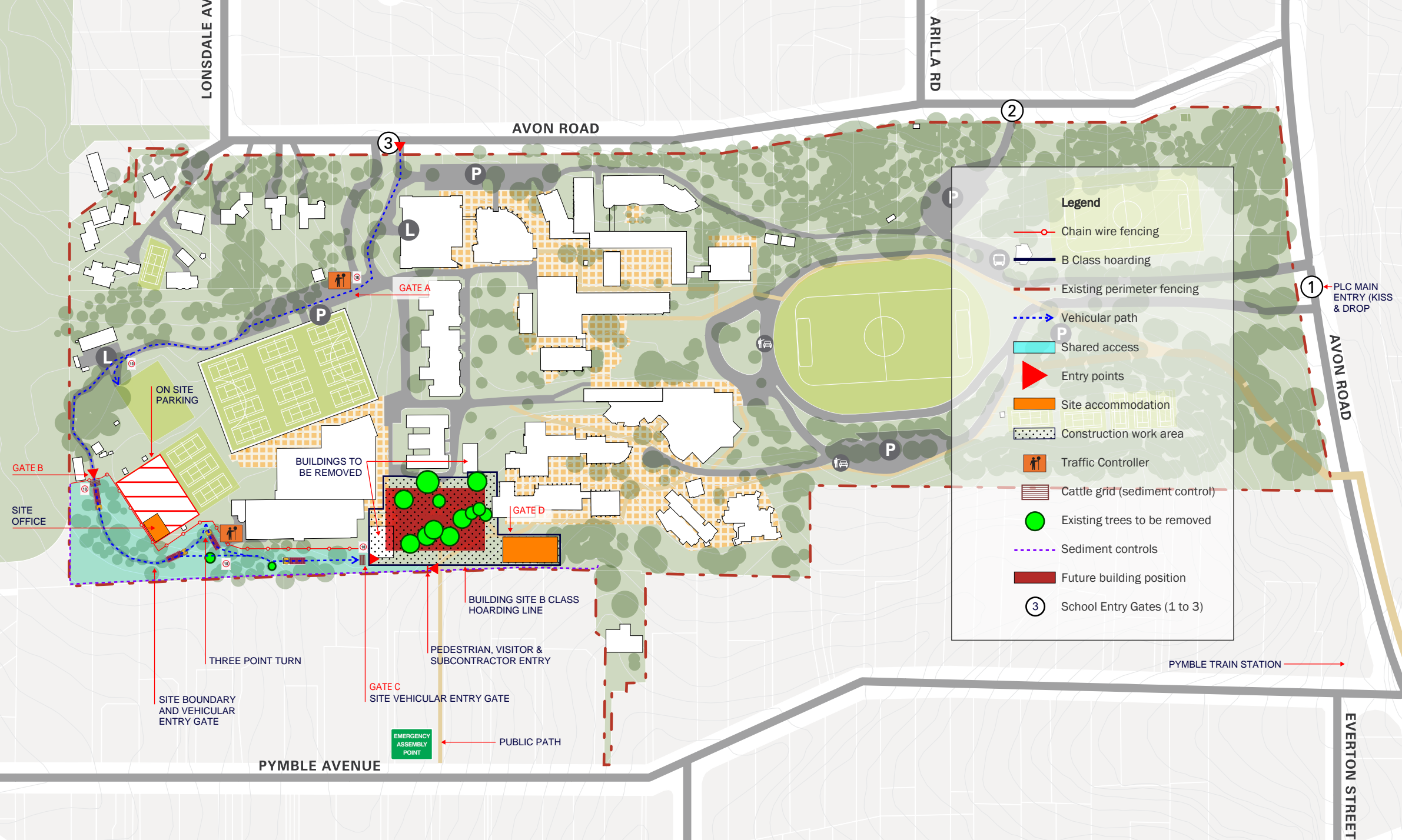


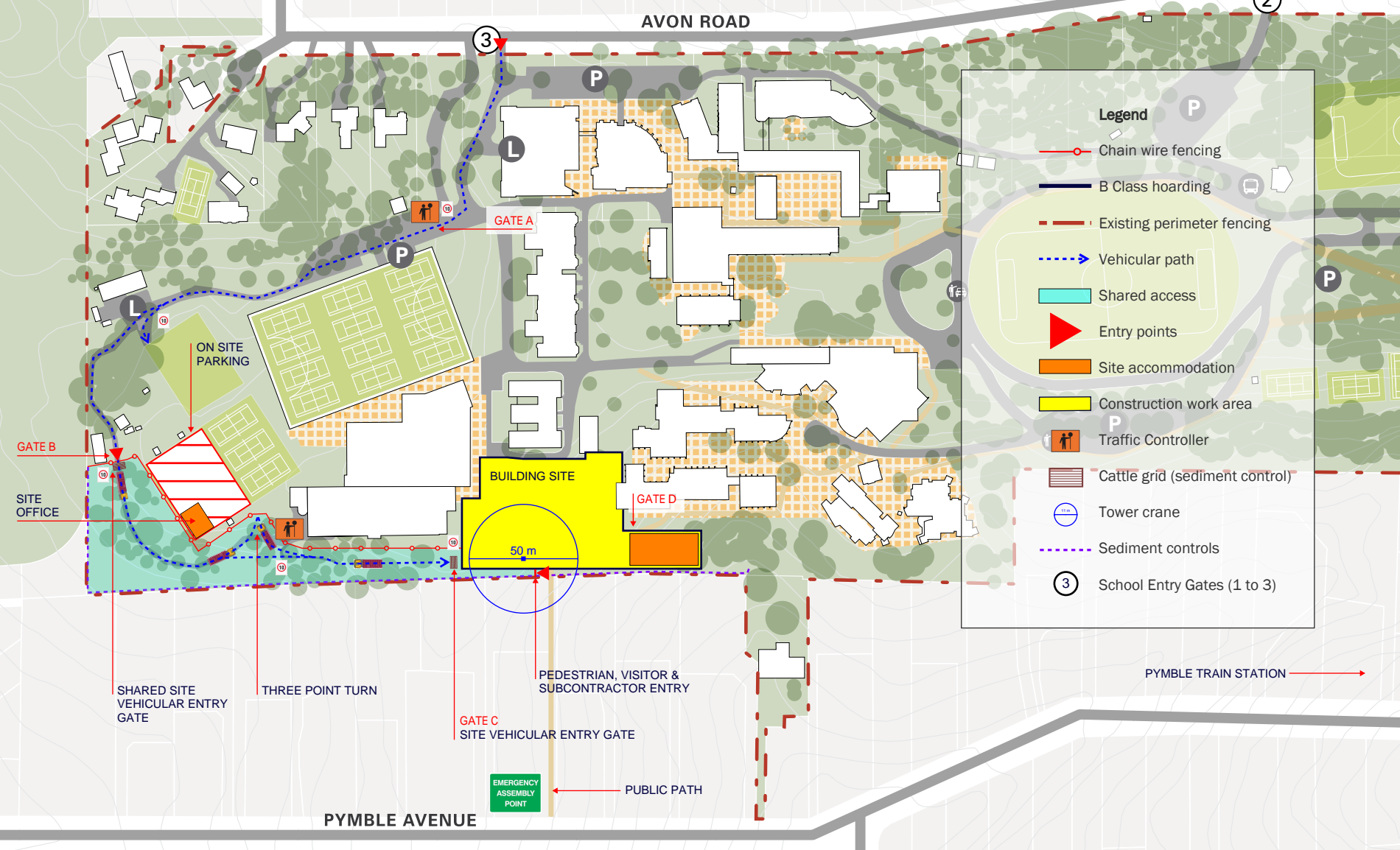
Appendices

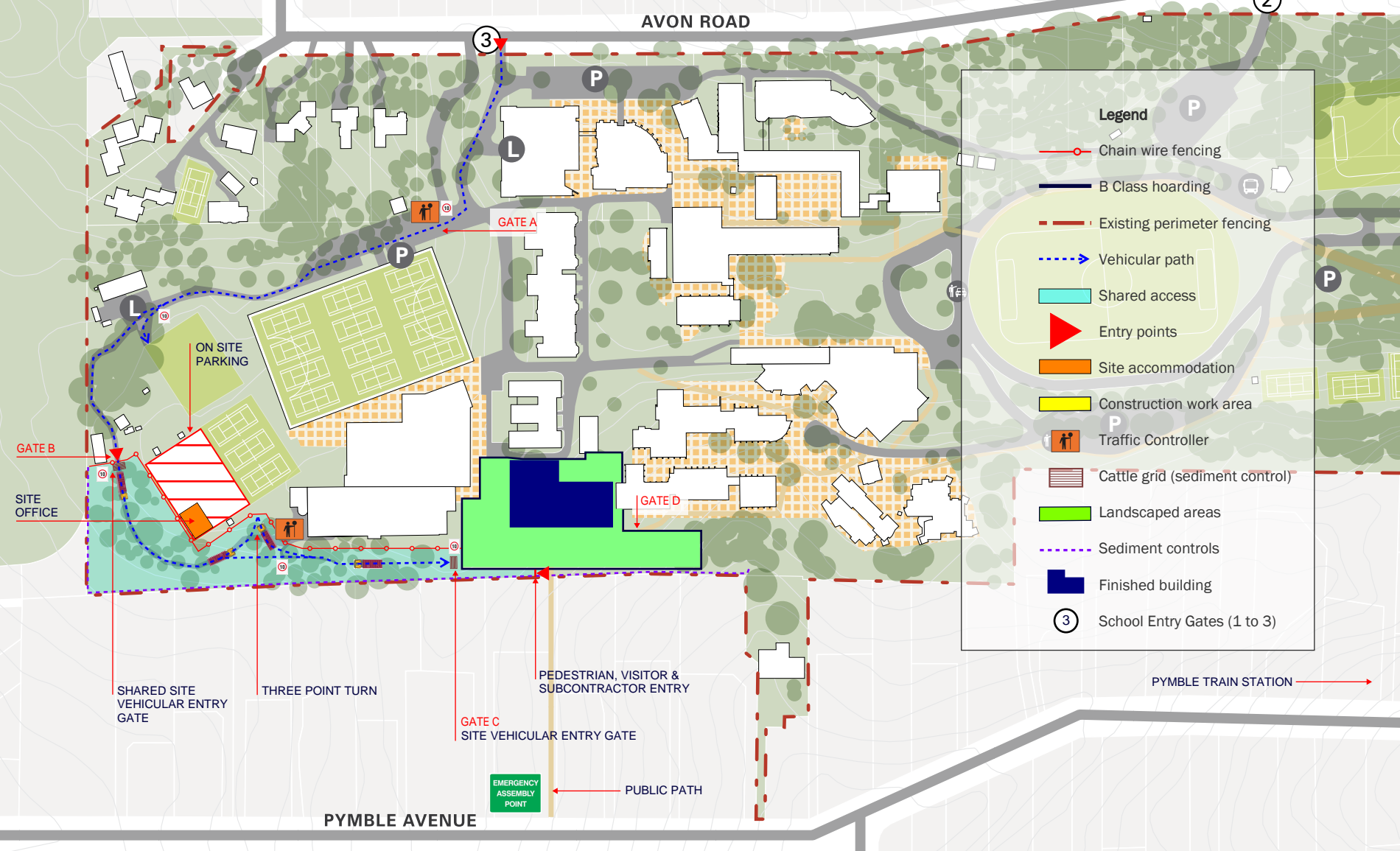


Appendix A SITE PLANS









CREATING COMMUNITIES

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of belonging. That's why at Stantec, we always **design with community in mind**.

We care about the communities we serve—because they're our communities too. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.

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