HANSENYUNCKEN

Construction Environmental Management Plan (CEMP)

Project: Trinity Grammar School Renewal

Job No: SC149

Rev: 2 | March 2022

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Hansen Yuncken would like to acknowledge the CADGIAL people as the traditional custodians of the land where this project is located.

We honour elders; past, present and emerging whose knowledge and wisdom has and will ensure continuation of cultures and traditional practices.

Contents

1 Document Information

1.1 Review & Approval

Review			
Position	**Name**	**Sign**	**Date**
Project Manager	Matthew Coelho		
Snr Contracts Administrator	Michael Gibson		
Site Manager	Ross Pearson		
Project Engineer	Rachael Berry		
Site Engineer	Andrew Sukkar		
Site Engineer	Michaella Edwards		
Foreman	Phil Bau		
Design Manager	Tamara Haidari		
Design Manager	Sasha Vuckovic		
Services Manager	Richard O'Sullivan		
Approval			
State HSE Manager	Peter Fay		
Operations Manager	Max Baroni		

1.2 Change Information

Change Information			
Revision	**Description**	**Issued by**	**Issue date**
1	Issued for Review	Hansen Yuncken	18.03.2022
2	Issued for Approval	Hansen Yuncken	05.04.2022

2 Definitions

The following definitions and abbreviations have been used in this Environmental Management Plan. Further definitions and abbreviations are provided in referenced procedures and plans.

BIM360 Field	Cloud based QHSE field management software application designed specifically for the construction industry.
CEMP	Construction Environmental Management Plan (this document)
EPA	State Environment Protection Authority
ESD	Ecologically Sustainable Development
HSE	Health, Safety & Environment
HY	Hansen Yuncken Pty Ltd
HYWAY	An information management platform developed by HY utilising Microsoft SharePoint
NC	Non-Conformance
NGER	National Greenhouse and Energy Reporting
TGS	Trinity Grammar School Renewal
NVMP	Noise and Vibration Management Plan
OEH	Office of Environment and Heritage
PLN	HY Plan
PMP	Project Management Plan
POEO	The Protection of the Environment Operations Act
PROJ	Project Management
REO	Regional Environmental Officer
RMS	Roads and Maritime Services
S/C	Subcontract(s) or Subcontractor(s) as the context requires
Site Safety Supervisor	Site Manager
SSC	Site Safety Coordinator
SSO	Site Safety Advisor
SWMS	Safe Work Method Statement
TMP	Traffic Management Plan

3 Commitment & Policy

3.1 Scope & Application

The Design and Construction of a 5-storey Teaching and Learning Facility, New Performing Arts Precinct, New Maintenance Quarter, a Multipurpose Pavilion, upgrades to on-site traffic (including a new underground carpark) and site landscaping, and refurbishment of existing facilities (such as The Founders Building, Music Building and Quadrangle Building).

This CEMP has been generated to satisfy the requirements of "*ISO 14001:2015, Environmental management systems – Requirements with guidance for use*" and the "*NSW Government Environmental management guidelines – Construction procurement (4th edition)*". It establishes guidelines and controls for all HY activities that may impact the surrounding environment for the duration of the works, including but not limited to; air, water, land, natural resource use & waste, flora & fauna, and their respective interrelationship. Furthermore, it has been designed to embrace the environmental management requirements, both in terms of the Contract and generally, to demonstrate HY as an environmentally responsible organisation to the broader community.

3.1.1 Hours of Work

In line with Conditions E4 of SSD 10371, the proposed hours of work for the project are as follows:

- Monday - Friday: 7am – 5pm
- Saturday: 8am – 1pm
- Sundays and Public Holidays: Nil

In line with Conditions E7 of SSD 10371, rock breaking, rock hammering, sheet piling, pile driving, and similar activities works may only be undertaken between the following hours:

- Monday - Friday: 9am – 12pm
- Monday - Friday: 2pm – 5pm
- Saturday: 9am – 12pm

3.1.2 24 Hour Contact Details

The 24-hour contact details for the project are as follows:

NAME: Ross Pearson

PHONE: 0438 675 748

EMAIL: RPearson@hansenyuncken.com.au

3.2 CEMP Interrelationship with PMP

This CEMP forms part of Hansen Yuncken's Environmental Management and interfaces with the company's Quality & WHS Management Systems. Furthermore, this CEPM is an integral part of Trinity Grammar School Renewal PMP. The following plans referenced within this CEMP form part of the overall PMP for the project and contribute to the environmental management procedures:

- **Project Site Induction** – Ensures all workers onsite are aware of the Environmental Management Plan & also trains all workers onsite on the requirements for controlling: dust & windblown debris, dirt & debris on public roads, protection of stormwater drains, tool & equipment washout, chemical spills, noise disturbance, waste collection & disposal, rubbish & food scraps & excess concrete.
- **Project HSE Risk Assessment** – Identifies what subcontractor onsite are impacted by or the risk of; air quality/dust, archaeology & cultural heritage, chemical spill, flora & fauna, littering, noise disturbance, stormwater contamination & watercourse pollution each month. This will be monitored through task observations scheduled for each month.
- **Noise & Vibration Management Plan** – Identifies mitigation methods to minimise the risk of noise & vibration to the workers onsite and the surrounding properties.
- **Traffic Management Plan** – Summarises how construction and pedestrian traffic will be managed on the project to minimise the impact on the existing facility and the neighbours surrounding to the project.
- **Site Layout Plan** – Identifies the location of sediment controls, access routes, truck washout, location of site bins, spill kits, concrete washout.
- **Emergency Response Plan** – Outlines the process to manage the following environmental emergencies; asbestos exposure, water pollution, fire, major fuel spill & chemical spill
- **Audit Management Plan** – Describes the frequency of internal and external environmental audits and the process for closing out any non-conformances raised.

3.3 Policy & Objectives

The HY Environmental Policy Statement provides the framework for the development of this CEMP (refer appendix A.1), and details the company's commitment to "*providing a high quality environment, which meets the requirements and expectations of; Clients, Statutory Authorities, Employees and Community Groups*", through the application of "*sustainable development principles, to continually improve environmental performance in minimising impact on, and pollution of, the environment during the construction process"*.

The objective of the Environmental Management Plan is to:

- Satisfy Client requirements related to environmental performance, set out in the Specification for the Works.
- Incorporate and provide mitigation strategies for environmental issues arising from site activities and as detailed in the Trinity Grammar School Renewal Environmental impact assessment document
- Encourage best practice environmental management through planning, commitment and continuous improvement;
- Prevent and minimize adverse impacts on the environment;

- Identify the potential for, and respond to, environmental incidents and emergency situations and take corrective actions;
- Identify and control possible environmental hazards with the works and HY activities;
- Identify and protect any special environmental characteristics of the site including cultural heritage significance;
- Define roles and responsibilities and allocate the necessary resources
- Ensure environmental training and awareness programmes are provided to employees and subcontractors;
- Establish mechanisms to monitor, evaluate and report progress.

The HY Environment Policy commits the company to achieve the following goals:

- Develop and promote a culture of environmental leadership, responsibility and continual improvement across the HY business;
- Audit, monitor and ensure compliance with environmental legislative and regulatory obligations and other environmental commitments;
- Utilise the resources of HY to lead the way in defining and achieving best environmental practice; and
- Advance and disseminate environmental knowledge and applied environmental management through training, research and engagement with the wider community

A copy of the Environment Policy is contained within the PMP and displayed at the project / site office and induction sheds. HY recognises this implementation will involve effective training of personnel to ensure they fully understand their responsibilities to comply with and monitor the management system. In addition, all site workers are consulted on HY environmental policies & procedures through the following mechanisms: site induction, notice board, site inspections, prestart meetings, subcontractor meetings, team meetings, toolbox talks.

3.4 Targets

3.4.1 Objective: Reduce waste

KPI: Waste minimisation and recycling

Target: Recycle > 80% of construction waste

Responsibility: HY Site Manager

3.4.2 Objective: Comply with all environmental legislation

KPI: Number of identified breaches of State or Commonwealth Environmental legislation

Target: Nil for duration of project.

Responsibility: HY & Subcontractors

3.4.3 Objective: Minimise impacts on the environment

KPI: Number of significant environmental incidents causing serious harm to the environment

Target: Nil for duration of project.

Responsibility: HY & Subcontractors

3.4.4 Objective: Conduct environmental site inspections to validate environmental conformance

KPI: Schedule and undertake regular site inspections

Target: > 90% of scheduled HSE inspections

Responsibility: HY Site Manager

3.4.5 Objective: Minimise and manage environmental complaints

KPI: Consult with impacted neighbours and promptly address all complaints

Target: ≤ 1 complaint per significant construction milestone

Responsibility: HY Site Manager

3.5 ESD Vision & Principles

The project provides an opportunity for HY to expand its practical and theoretical knowledge of ESD to a level that is considered 'best practice' status.

As such, the ESD vision and principles for HY involves:

- Identification and prioritisation of environmental risk based on AS/NZS ISO 31000:2009 and Guidelines HB158:2010, using qualitative likelihood vs. consequence methods.
- Development of management systems which build knowledge and capacity on environmental issues, principles and sustainable behaviours including training and communication.
- Reduced energy and water consumption as well as waste minimisation during the construction process.
- Environmental training and management of trade contractor's activities to ensure that the project ESD objectives are obtained.
- Efficient and effective use of natural resources in a way that maintains the ecological processes on which life depends

- Sustainable use of renewable energy resources.

3.6 Environmental Planning

In accordance with the contractual requirements, applicable legislation, and in keeping with proper environmental practices, Hansen Yuncken has instituted a methodology which is reflective of observes the requirement, as set out in ISO 14001:2015.

3.6.1 Environmental Aspects & Impact

All activities related to the Trinity Grammar School Renewal, which are enacted by or on behalf of Hansen Yuncken, are identified in the "Project HSE Risk Assessment". For each activity the environmental aspects and associated actual and potential impacts are identified as they relate to the following environmental elements:

- Location and Land Use;
- Noise & Vibration;
- Traffic and Access;
- Air Quality;
- Soils, Erosion and Water Quality;
- Terrestrial Flora and Fauna;
- Cultural Heritage;
- Site Contamination; and
- Waste Management.

Environmental impacts are detailed in the "**Project HSE Risk Assessment**" and assessed for significance by using the Risk Matrix. Each identified potential impact is rated (Risk rating) in relation to its predicted likelihood and consequence. Environmental Impacts as applicable to the Trinity Grammar School Renewal are summarised in this CEMP "Environmental Risk Register" (Section 4.3).

3.6.2 WORK METHOD STATEMENTS

For each activity rated as a significant risk (i.e. Risk class >M/Medium) to the environment, a further Risk assessment is undertaken and any additional controls identified in a Work Method Statement, detailing the; steps involved, hazards, control measures and persons responsible. Furthermore, a Tool Box Talk will be completed, involving all workers responsible for completing the "Significant Risk" activity.

3.6.3 Legal Compliance and Other Requirements

Hansen Yuncken has developed a procedure ("*Legislation Standards and Codes of Practice*"), available on HYWAY to identify legal and other requirements that are applicable to the Trinity Grammar School Renewal and to ensure the accessibility of the information. The procedure shall be referenced and is applicable to those activities and functions that have the potential to interact with the environment.

Furthermore (URL) links are supplied on HYWAY to regulatory body websites and relevant NSW legislation relevant to environmental Aspects and management of the same.

4 Implementation

4.1 Environmental Awareness

All HY and S/C employees shall receive an induction into the project in accordance with the Site Induction procedure including completing the Site Induction Record Form (FM-CORP-HSE-001).

The induction shall include the requirements for the conduct of activities which have the potential for significant environmental impacts on the project which shall be outlined in the project specific Site Induction Handbook.

This document applies to all HY and S/C employees, environmental awareness is the responsibility of every person working on and associated with the project.

4.2 Environmental Impacts of Subcontractor Activities

The environmental impacts of subcontractor activities shall be assessed during the S/C pre-award meeting in accordance with pre-award meeting procedure and the project HSE risk assessment.

4.3 Environmental Risk Register

Environmental Risk Register Summary & Responsibilities		
Environmental Issue	Risk to Project	Responsible Personnel
Location & Land use Residential properties may be impacted with construction works due to construction noise and dust	Medium	PM, SM, FM, S/C
Noise & Vibration Construction of the development may result in short term impacts during the project due to the use of heavy machinery and plant as well as construction personnel and vehicle movements.	Medium	PM, SM, FM, S/C
Traffic & Access During construction there will be impacts on the existing facility and the public roads surrounding the project from construction vehicles and deliveries for site.	Medium	PM, SM, FM, S/C

Environmental Risk Register Summary & Responsibilities		
Air Quality During the earthworks, stage of the project there is a risk of poor air quality generated by the constructions works.	Medium	PM, SM, FM, S/C
Soils, Erosion, & Water Quality There is a risk of water pollution from the construction works caused by wind or water movement causing sediment and other materials leaving site.	Medium	PM, SM & FM
Terrestrial Flora & Fauna The removal of trees during construction works poses minimal risk to landscaped species throughout the area.	Low	PM & SM
Cultural Heritage It is unlikely that construction works will impact any undisturbed aboriginal artefacts due to the construction zone being in an existing site.	Low	PM & SM
Site Contamination There is a risk of contamination based on testing conducted prior to construction works commencing (There is a risk of unexpected finds being an existing site).	Low	PM & SM
Waste Management The risk of the constructions works waste management is low/medium pending the results of existing materials onsite.	Low	PM, SM, FM, S/C

PM - Project Manager, SM - Site Manager, FM - Foreman, S/C – Subcontractor, PCA - Private Certifier

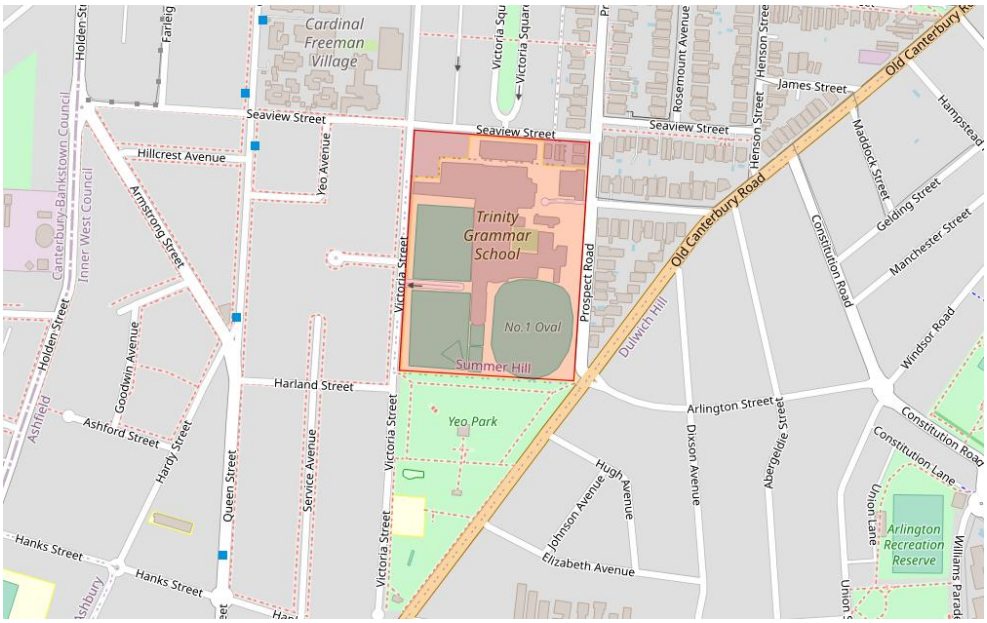
4.4 Location and Land Use

4.4.1 Site Location

The site is located at 119 Prospect Rd, Summer Hill NSW 2130, in the local government area of the Inner West Council. The construction works are staged across the school precinct and extend to an area of approximately 40,000m². The site is recognised as Lot 11 Deposited Plan 1171965. The lot is located on a block bounded by Seaview Street to the north, Prospect Road to the east, Yeo Park to the south, and Victoria Street to the west.

Surrounding the development are low-density residential dwellings and immediately adjacent to the site lies the historical Yeo Park, which includes playground, café, and infant schooling space.

The site features vehicular entry points at Jubilee Drive, Chapel Drive, and a driveway at the most southern point off Victoria Street, to be utilised during construction works. The site general site boundary and neighbouring areas are presented below.



4.4.2 Likely Impacts

The staged development programme will allow for school operation to continue during the construction phase. Construction has been strategically scheduled to primarily utilise school holiday periods and reduce the overall timeline of works by employing a temporary modular teaching facility during the major development.

All construction activities would be carried out with due diligence, duty of care and best management practices. Given the location of residential properties in close proximity to the area of works, minimal impacts associated with construction traffic, noise and dust are likely to affect adjacent residents. These likely impacts will be addressed in the following sections.

4.4.3 Mitigation Strategies

- The neighbouring landowners are to be consulted in regard to the construction works, predicted program and any access restrictions when reasonably required.
- Land disturbance during construction is to be limited to that required to undertake the construction works specified.
- Construction works to be undertaken in consideration of adjacent vegetation.
- Areas disturbed during construction to be returned to the pre-construction condition.

4.5 Noise and Vibration

4.5.1 Likely Impacts

Construction of the proposed development will result in short term noise impacts during the construction period. The predicted noise levels during the construction phase have been identified in the project Construction Noise & Vibration Management Plan (CNVMP), along with associated mitigation strategies provided to minimise these impacts. There is no additional traffic associated with the project scope of works, therefore no noise impact associated with traffic is expected.

4.5.2 Mitigation Strategies

Site construction noise will be managed in accordance with the Construction Noise and Vibration Management Plan (CNVMP) developed for this project. The CNVMP is based on the proposed construction methodology, activities, durations, equipment type and numbers. Noise and vibration mitigation measures include:

- Implement best-practice general mitigation measures onsite, aimed at reducing the effects of construction noise and vibration, such as,
  - regular toolbox talks to reinforce the need to minimise noise and vibration,
  - regular identification of noisy activities and adoption of improvement techniques.
  - Restricting construction activities to the hours specified under conditions C4, C5 and C8 of SSD-11233241.
  - Taking reasonable and feasible measures to minimise noise and vibration effects from plant and equipment where possible.
- Noise monitoring at the commencement of excavation and structural works to confirm measured levels are consistent with the predictions in the acoustic assessment, and to verify that the mitigation procedures are appropriate.
- Issue project updates to stakeholders on current and upcoming works, including advance warning of potential disruptions and noise intensive activities.
- Develop procedures for receiving and addressing complaints from affected stakeholders. Complaints to be investigated as soon as practicable and feasible measures to minimise noise will be implemented if required. Provide consultation where prolonged or consecutive periods of construction works are planned.
- Construction activities shall be restricted to the normal EPA specified daytime construction hours (i.e., 7am to 6pm Monday to Friday, 8am to 5pm Saturday, no work on Sunday or public holidays). If it were deemed necessary to undertake work outside these hours, prior approval would be sought from the Council.

- Any noise complaint received will be investigated as soon as practicable. Any practicable and feasible measures to minimise noise will be identified and implemented if required. All possible steps to be taken to silence construction equipment where possible.
- Optimum siting of work areas, vehicle and plant parking areas, materials stockpiles and equipment storage areas in locations where potential acoustical impacts will be minimised. All plant and machinery used for the project shall be well maintained.

4.6 Traffic & Access

4.6.1 Likely Impacts

Construction of the new site facilities shall see some increase in traffic in the local area. The increased traffic is not predicted to have an impact on local traffic flow, and only a minor inconvenience to local road users is expected. Construction vehicle routes have been developed with the intention of minimising the impact of construction traffic on the local streets in the immediate vicinity. Access to site will primarily be via Seaview Street during Stage 1 and Victoria Street during Stage 2, with an alternative access proposed via Prospect Road towards the later stages of the project. Alternative routes would not be used without specific prior approval from the relevant authorities. No trucks will be permitted to layover on approach to the construction sites without formal prior approval. The management of construction traffic developed as a result of these works is outlined in the Construction Traffic Management Plan.

4.6.2 Mitigation Strategies

The Traffic Management Plan (TMP) details the measures and strategies to be undertaken during construction works to minimise the effects on the surrounding road network, and to ensure the safety and efficiency of the community, workers, and road users. To accurately present the site, the plan incorporates the construction methodology and use of specific heavy vehicles and construction plant. The Traffic Management Plan also includes measures to minimise traffic impacts to ensure public safety and is to be prepared in accordance with:

- Traffic Control at Work Sites Manual (RTA, 2010)
- Australian Standard 1742.3 - 2002 Traffic Control Devices for Works on Roads.

The TMP is developed in consultation with NSW Roads & Maritime Services (RMS) and Inner West City Council to govern the following mitigation techniques:

- Hours of site operation, heavy vehicle volumes (numbers) and routes, construction staff parking, loading/unloading areas, site access arrangements, information signage, and appropriate traffic control devices will be addressed accordingly.
- A-class hoarding, and temporary fencing will be erected around the perimeter of the site and maintained for the duration of the project to keep out unauthorised persons, with access gates closed outside of construction hours.
- All vehicles accessing the site will use the designated access roads. All vehicles transporting loose materials will have their loads covered or secured to prevent large items, excess dust or dirt particles depositing onto the road during travel to and from site. HY will monitor roads leading to and from the site and take necessary steps to rectify any road deposits caused by site vehicles. Where material is tracked onto sealed road, it will be removed so that road pavements are kept safe and trafficable. A dedicated vehicle wash-down area will be established on site.
- All roads, kerbs, gutters and footpaths damaged as a result of construction are to be restored to their pre-construction condition. A dilapidation report will be carried prior to construction.

- Deliveries will be scheduled to prevent queuing by ensuring adequate timeframes between trucks arriving and leave site.
- All traffic shall comply with all applicable traffic laws and regulations including speed limits. All construction vehicles shall comply with the speed limits set for the roads accessing the site. Notification to surrounding landowners at least one week in advance of works will be provided when appropriate.
- Traffic Controllers will be used to supervise vehicle movements and for pedestrian and cyclist management when necessary, during construction activities.
- HY will induct all subcontractors to ensure that procedures are met for vehicles entering and exiting the construction site.

4.7 Air Quality & Dust Control

In accordance with condition D13a (iii) of SSD 10371, repeated in part as follows; the Construction Environmental Management Plan (CEMP) must include details of; management of dust and odour to protect the amenity of the neighbourhood. This section of the CEMP addresses this condition, outlining the likely impact of air quality and dust control for the various aspects of the construction works, along with the mitigation strategies that will be implemented to minimise these impacts on the neighbourhood.

4.7.1 Likely Impacts

The main impact to air quality during construction is expected to arise from the generation of airborne localised dust associated with demolition and earthworks. Given the close proximity to of neighbouring properties and existing building, there is the potential for impact by dust, particularly during windy conditions.

4.7.2 Mitigation Strategies

- Construction vehicles and equipment to be suitably serviced prior to commencement of construction activities and all necessary maintenance to be undertaken during the construction period to meet EPA air quality requirements.
- Excessive use of vehicles and powered construction equipment will be minimised where possible.
- All construction machinery will be turned off when not in use to minimise emissions where possible.
- Construction contractors to monitor dust generation progressively.
- Dust suppression methods will be adopted where required (i.e., on windy days when earthworks and vehicle movements are generating dust). Examples of dust suppression methods include:
  - water carts,
  - localised use of water to supress dust during excavation activities, and
  - covering stockpiles.
- Any stockpiled spoil/fill will be protected to minimise dust generation to avoid sediment moving offsite.
- Vehicles transporting spoil from the site to be covered where required.
- The burning of waste materials will not be permitted on site.

4.8 Soil, Erosion & Water Quality

In accordance with condition D13a, (iv) & (v), of SSD 10371, repeated in part as follows; the Construction Environmental Management Plan (CEMP) must include, but is not limited to, details of; (iv) stormwater control and discharge; and (v), measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the site. This section of the CEMP addresses these conditions, outlining the likely impacts associated with stormwater runoff and the mitigation strategies that will be implemented to ensure that these impacts are minimised.

4.8.1 Likely Impacts

Earthworks and general ground disturbances associated with the site works may result in sediment and other materials leaving the site via wind or water movement. This may have the potential to result in the water pollution such as turbidity and nutrient inputs, should sediment wash into stormwater or natural drainage lines.

Aspects of the site identified as potentially impacting on water quality includes:

- Excavation for foundations and site levelling;
- Stockpiling and transportation of excess spoil; and
- General construction waste entering drainage lines

4.8.2 Mitigation Strategies

Construction is to be undertaken in accordance with the Erosion and Sediment Control Plan. Control measures include:

- All erosion and sediment control devices shall be properly maintained for the duration of the work. All structures are to be inspected after rain events and sediment to be removed
- Any temporary stockpiles should be stabilised using sediment fencing or similar.
- All fuels and other hazardous liquids shall be stored at designated construction compounds. All chemicals used for construction shall be stored and used in accordance with the relevant Safety Data Sheets. An emergency spill kit shall be kept at the construction compound.
- Workers are to be made aware of the provisions of Section 120 of the POEO Act with regards to water pollution.
- Notification to the EPA in accordance with Part 5.7 of the POEO Act is to be undertaken where a pollution incident occurs.
- All construction vehicles and equipment are to be maintained in designated areas away from watercourses. Construction vehicles shall be appropriately cleaned of any soil or mud prior to leaving each works site at dedicated wash down bays.
- “Clean” stormwater shall be diverted around the site where possible. Stormwater shall be diverted to retention basins. All existing stormwater pits and drains subject to HY construction works will be silt protected with geo-fabric and/or granular socks. Drains will be monitored and maintained by HY.
- Stockpiled material to be located as far away as possible from any associated natural watercourses or temporary overland flow paths, with sediment fences installed to the downstream side of stockpiles and any embankment function.
- Sediment fences shall be installed at required locations at the perimeter of the site.
- The location and details of permanent controls shall be included on the Site Layout Plan.

- Erosion and sediment controls shall be inspected as part of the Site HSE Inspection.
- Wet weather management - In the event of heavy rain, site inspections will be undertaken prior to work commencing, with inspections to focus on:
  - The suitability of pedestrian access to the amenities and into the construction work areas.
  - The suitability of access for plant and equipment.
  - The suitability of ground conditions for plant and equipment to operate.
  - Identifying the construction zones suitable for work to commence.
  - Actions to remediate those areas not suitable for work to commence (e.g., de-watering, preparing ground conditions and access ways, etc.)

4.9 Terrestrial Flora and Fauna

4.9.1 Likely Impacts

The project Arborist Report, prepared by Australis Tree Management dated 18 January 2020, details all on site tree's proposed for retention and removal. The tree protection measures outlined in the report will be followed for all trees proposed to be retained to ensure protection from construction vehicles and works.

4.9.2 Mitigation Strategies

- Erect Tree Protection Zone fencing with signage prior to commencing demolition or earthworks, as per Arborist Report.
- Install Trunk Protection if working within TPZ as per Arborist report.
- Prohibit parking of vehicles or plant, and storage of materials within Tree Protection Zones.
- No vegetation removal or modification is to occur beyond the proposed works areas shown on the plans.
- Fireweed should be removed site prior to commencement of earth works
- Carry out landscaping in accordance with the landscape design
- If any additional species are encountered the Site Manager shall arrange for works to be ceased in the area and contact the Superintendent for further directions.

4.10 Archaeology & Cultural Heritage

4.10.1 Likely Impacts

It is unlikely that the proposed works would disturb any undisturbed Aboriginal objects or sites of historical relics as defined under the Heritage Act 1977. However, if anything is uncovered throughout the demolition/excavation process works shall cease and superintendent notified immediately. Work shall only resume once approval has been granted and appropriate steps to address the find have been undertaken.

The project Heritage Impact Statement, prepared by Urbis in 2020, outlines that the following elements contribute to the significance of the site overall:

- Headmaster's Residence and Chapel Garden;
- Chapel Gates and Way;
- War Memorial Chapel Court;
- Dining Hall;
- Presentation of the Quad Building to the Quadrangle; and
- Quadrangle (form).

To ensure that the significant and contributory elements on the site are conserved, the Headmaster's Residence and Chapel is to be retained in their entirety. All demolition is to be confined to areas of no/little significance which generally includes mid – late 20th century utilitarian buildings with no remarkable design features. The contributory elements identified above are to be retained.

The proposed development is concentrated to the centre of the site in areas which are currently occupied by existing buildings (to be demolished). It is not considered that the proposed works would have a notable impact on the scale of the school when viewed from the surrounding streets particularly as the most substantial building decreases in size towards the edges. Further given the new development would replace buildings of no identified significance and would be of a high quality, contemporary character the proposed works would not dominate or detract from the surrounding heritage items or conservation areas.

4.10.2 Mitigation Strategies

- If suspected Aboriginal objects are located during works, works will cease in the affected area and an archaeologist will be called in to assess the finds. If the finds are found to be Aboriginal objects, the NSW Department of Planning, Industry and Environment (DPIE) and Heritage NSW will be notified.
- In the extremely unlikely event that human remains are found, works will immediately cease, and the NSW Police will be contacted. If the remains are suspected to be Aboriginal, the DPIE and Heritage NSW will also be contacted to assist in determining appropriate management.
- Should either of the events above occur, the project team will take all necessary measures to protect the artefacts from being damaged or destroyed. Work will not re-commence in the area until a written instruction from the superintendent is received.

4.11 Site Contamination

4.11.1 Contaminated Soil Risk Assessment

A waste classification assessment on in-situ material located at Trinity Grammar School was undertaken by Douglas Partners in 2021. Potential sources of contamination at the site included fill, hazardous building materials from the demolition of former buildings and contaminants associated with building maintenance were identified. The report concluded that the site is considered suitable for the proposed use, with the following mitigation measures recommended:

- Development of a Construction Environmental Management plan, including an unexpected finds protocol (refer Section 5.11.8).
- Should suspected asbestos containing materials be encountered on site, the affected area is to be fenced off and assessed by a licenced asbestos assessor.

- The fill material encountered beneath the site would be suitable for on-site reuse.
- Should any fill or stockpiled material be required to be disposed off-site, they must first be assessed in accordance with NSW EPA Waste Classification Guidelines Part 1 Classifying Waste (2014) and assigned a waste classification prior to off-site disposal.

The recommended measures will be implemented on the project where required.

A risk assessment of contaminated soil shall be conducted at the start of the project in accordance with the following procedure for Contaminated Soil Assessment.

As soon as possible after possession of the site by HY, an assessment of actual or potential soil contamination and its impacts shall be undertaken using the Soil Contamination Assessment on BIM 360 Field.

The purpose of the assessment is to provoke whether HY should have an independent third party to provide recommendations or seek wider advice within the company so that the additional knowledge can reduce the risk profile of contaminated soil.

Projects which have the following criteria should fill in this form:

- Projects with a geotechnical report that nominates fill on bore logs
- Projects which do not have a geotechnical report but have a requirement for material to be exported off the site.

4.11.2 Identification of Contaminated Soil

During construction, it shall be necessary to monitor soil contamination levels (if any), dust levels and water runoff quality, to ensure that health and environmental standards are not compromised. This is especially important as contaminated soil may be excavated and transported around the site.

Upon discovery of contaminated soil, the HY Site Manager shall arrange for works to be ceased immediately in the area and contact the Superintendent for further directions.

Contaminated waste shall be collected, contained, stored, handled and disposed of in accordance with relevant legislation and codes of practice.

4.11.3 Risk of Exposure

It is important to minimise the risk of exposure of construction personnel to soil contaminants by adopting appropriate site controls and industrial hygiene practices. Site controls may include:

- Defining certain areas as contaminated and restricting access to them;
- Appropriate signage;
- Training construction employees in industrial hygiene procedures;
- Keeping non-essential motor vehicles such as personal cars out of contaminated areas;
- Regular medical checks of construction personnel who are exposed to contaminated soils;
- Keeping stockpiles of contaminated material watered down to minimise dust generation in accordance with any water restriction requirements and ensure that runoff is not generated from excessive watering;
- Covering truck loads with tarpaulins and watering material when loading and unloading;
- Wheel washes for trucks and vehicle leaving the contaminated areas;

- Regular road sweeping and cleaning;
- Dust monitoring and adjustment of construction programs to accommodate high risk periods when conditions are windy or very dry; and
- Monitoring of concentrations of volatiles.

Industrial hygiene practices may include:

- Wearing long sleeved shirts and trousers or overalls to minimise dermal exposure;
- Wearing gloves when handling soils;
- Washing hands and faces before eating, drinking or smoking;
- Leaving overalls at site for laundering;
- Showering and washing facilities; and
- Wearing respiratory equipment during times of high dust or volatile emissions.

4.11.4 Release of Contaminants to Soil and Groundwater

Water spraying of stockpiles and of soils being loaded and unloaded from trucks, covering of truck loads with tarpaulins and other measures described in the previous section would minimise the potential for dust to be generated.

If heavily contaminated soil is placed in contact with clean soils, contaminants could be mobilized by rainwater or chemical / physical reactions and affect the clean soils to a limited extent.

Similarly, there is a risk that contaminated soil is not clearly differentiated from clean soil and that mistakes could occur which cause the materials to be mixed or wrongly handled or disposed of.

This shall be overcome by implementing a material tracking system for all contaminated soils and ensuring that construction staff are trained how to use the system.

This shall involve documenting areas containing contaminated soil and putting signage near stockpiles that indicated the type of material present and its contamination status.

It shall also require supervision and documentation of all movements of contaminated materials around the site.

Avoiding contact between stormwater and contaminated soils is difficult to achieve if larger areas of a site are being exposed within a short period, because it does not allow for minimizing the amount of soil that is uncovered or placed in temporary stockpiles.

Therefore, it is necessary to manage stormwater in such a way that it does not mobilize contaminants and transfer them to clean areas.

This may be achieved by:

- Covering stockpiles of contaminated soil;
- Placing stockpiles of contaminated soil on bitumen or other sealed areas;
- Installation of adequate bunding or other approved method to contain runoff;
- Collecting stormwater run-off from stockpile areas; and

- Analytical testing of collected stormwater prior to its release.

Erosion and sediment control procedures in accordance with the relevant Code of Practice may also be applied, but with the additional objective of keeping water that is exposed to contaminated soils separate from water that has only come into contact with clean soils.

Groundwater could potentially be impacted by contaminants mobilized from stockpiled contaminated soil or by buried material. Minimising runoff from stockpiles, as outlined above would reduce the risk to contaminating groundwater.

Land filling of contaminated material which is below the relevant criteria for soil contamination above the water table and capping the landfill area with low permeability material would minimise the risk of groundwater contamination from infiltration of stormwater into buried soils.

4.11.5 Ground Water Management

In accordance with condition D13a (vi) of SSD 10371, repeated in part as follows; the Construction Environmental Management Plan (CEMP) must include, but is not limited to, details of, (iv) groundwater management plan including measures to prevent groundwater contamination.

As per the project Geotechnical Investigation Report, prepared by Douglas Partners in 2019, Seepage was encountered during the investigation in several locations, however the regional groundwater table is expected to be well below the bedrock surface. Seepage should be expected through the fill and rock, and along strata boundaries. The rate of seepage is likely to vary with climatic conditions.

The subsurface conditions encountered in the boreholes indicate that seepage can probably be controlled using a sub-floor drainage and collection system in any basement levels. A pump or gravity drainage system (if possible) will be required to periodically remove stored water from the lowest part of any basements. A pump may also be needed to remove seepage from footing/pile excavations prior to the placement of concrete.

4.11.6 Heavy Metal Contamination

Any suspicious industrial wastes encountered will be immediately isolated to enable these assumptions to be confirmed by analytical testing.

4.11.7 Mitigation Strategies

In the event that unexpected conditions are encountered during development work or between sampling locations which may pose a contamination risk, all works will come to a stop and an environmental consultant shall be engaged to inspect the site and address the issue. A Salinity Management Plan is to be prepared for the project as per REF requirements.

4.11.8 Unexpected Finds

In accordance with condition D13(f) and (g) of SSD 10371, repeated in part as follows; the Construction Environmental Management Plan (CEMP) must include unexpected finds protocol for contamination, Aboriginal and non-Aboriginal heritage and associated communications procedure.

Unexpected Find shall be addressed in compliance with the Hansen Yuncken's Unexpected Finds protocol listed below:

Unexpected Finds Protocols - General

If a suspected Aboriginal heritage item is discovered:

1. Immediately cease work in the immediate area to prevent any further impacts to the object(s) and contact the Site Manager.
2. Site Manager to construct temporary barricading to prevent worker access to the unexpected find.
3. Site team to contact Client and arrange inspection by the Aboriginal Cultural Heritage consultant or suitably qualified person to determine the significance of the object(s).
4. Aboriginal Cultural Heritage consultant to undertake detailed inspection, sampling and analysis.
5. If the findings assessed are presenting to be of Aboriginal Cultural Heritage significance, the following steps should be in accordance with the Aboriginal Cultural Heritage consultants' direction. The DPIE and Heritage NSW will also be contacted in accordance with Section 5.10.2, EIS and ACHA requirements.
6. Works in that area will only recommence with the written approval of the Client/Planning Secretary and following confirmation that the findings assessed are not presenting to be of Aboriginal Cultural Heritage significance.

If relics of historic heritage are discovered:

1. All works will cease immediately in the area where the object(s) are found.
2. The Client will be contacted, and notice given to Heritage NSW and the Planning Secretary.
3. Depending on the possible significance of the relics, an archaeological assessment and management strategy may be required before further works can continue in that area as determined in consultation with Heritage NSW.
4. Works will only recommence in that area with the written approval of the Client/Planning Secretary.

Unexpected Finds Protocol - Asbestos

If asbestos is detected in unexpected areas prior to, or during, site development works the following 'Unexpected Finds Protocol' will apply:

a. Upon discovery of suspected asbestos containing material, the site manager is to be notified and the affected area closed off by the use of barrier tape and warning signs. Warning signs shall be specific to Asbestos Hazards and shall comply with the AS1319-1994 – Safety Signs for the Occupational Environment.

b. An Occupational Hygienist is to be notified to inspect the area and confirm the presence of asbestos and to determine the extent of remediation works to be undertaken. A report detailing this information would be compiled by the Occupational Hygienist and provided to the Principal (or their representative) and the site manager.

c. The location of the identified asbestos material would be surveyed using sub-meter Differential Global Positioning System (DGPS).

d. If the impacted soil is to be disposed off site, it should be classified in accordance with the DECCW's Waste Classification Guidelines (2008) and disposed of, as a minimum, as asbestos contaminated waste to a suitably licensed landfill. In dry and windy conditions the stockpile would be lightly wetted and covered with plastic sheet whilst awaiting disposal.

e. All work associated with asbestos in soil would be undertaken by a contractor holding a class ASA Licence. WorkCover must be notified 7 days in advance of any asbestos works.

f. Monitoring for airborne asbestos fibres is to be carried out during the soil excavation in asbestos contaminated materials.

g. Documentary evidence (weighbridge dockets) of correct disposal is to be provided to the Principal (or their representative).

h. At the completion of the excavation, a clearance inspection is to be carried out and written certification is to be provided by an Occupational Hygienist that the area is safe to be accessed and worked. If required, the filling material remaining in the inspected area can be covered/sealed by an appropriate physical barrier layer of non-asbestos containing material prior to sign–off.

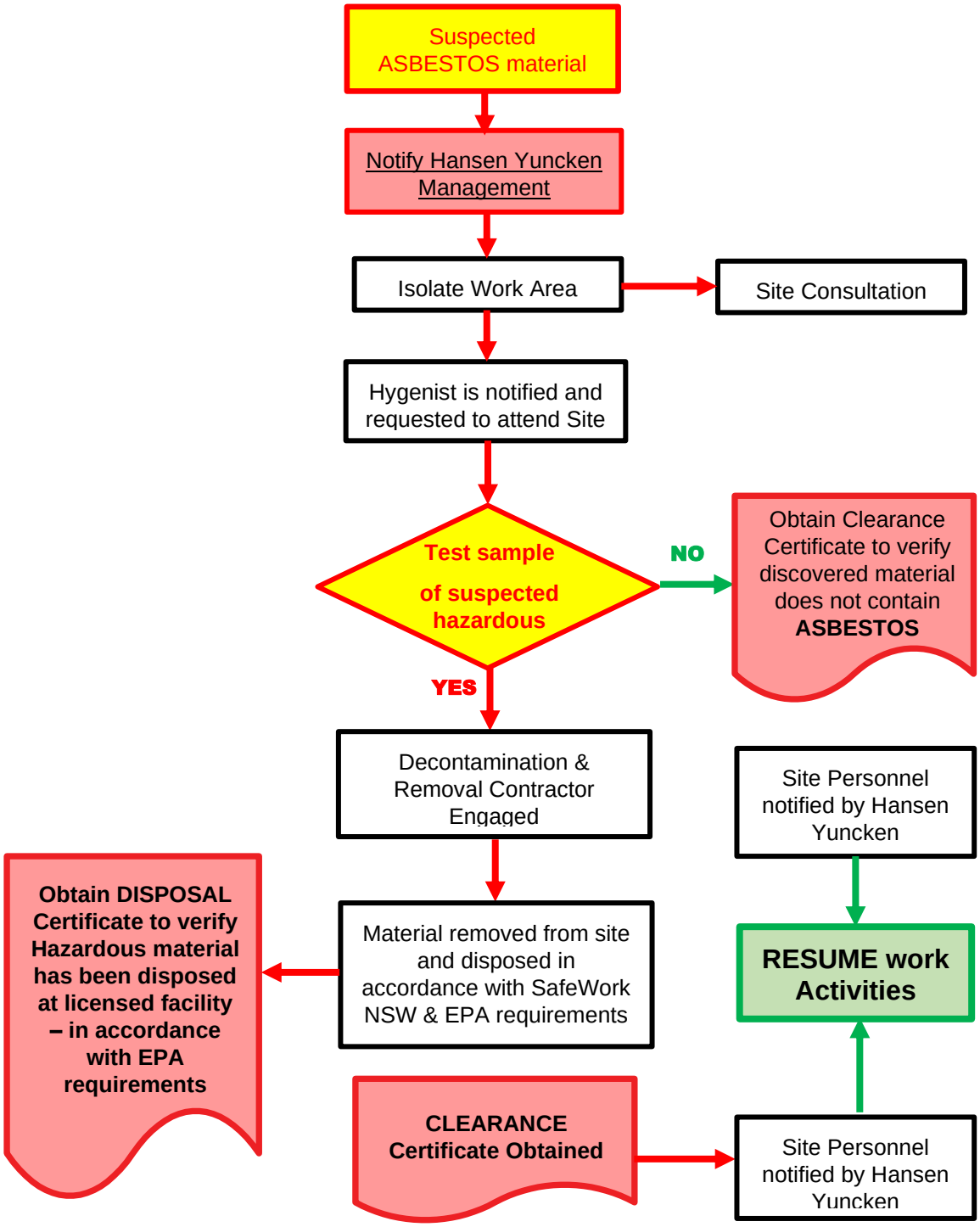
i. Validation samples would be collected from the remedial excavation to confirm the complete removal of the asbestos containing materials. If the asbestos pipes/conduits are uncovered, then sampling density would typically comprise one sample per 10-20 linear meter (depending on the length of the pipe). If asbestos debris are found, then the sampling density would typically comprise 1 sample per 5 metre x 5 metre grid.

j. The sampling locations should be surveyed using a sub-meter DGPS.

k. Details are to be recorded in the site record system.

l. Following clearance by an Occupational Hygienist, the area may be reopened for further excavation or construction work.

Unexpected Finds Protocol - ASBESTOS



Unexpected Finds Protocol - Buried Structures

In the unlikely event that buried structures such as Underground Storage Tanks (USTs) are encountered during site works, the structure(s) and any associated pipework should be managed /removed as follows:

a. Upon discovery of structure, the site foreman is to be notified and the area barricaded;

b. Visual identification of the tank and associated pipework;

c. Remove and dispose of the structure and associated pipework by a qualified contractor. In the case of an UST, the tank must be removed in accordance with Australian Institute of Petroleum (AIP) Code of Practice and Australian Standards;

d. Excavate and stockpile impacted materials (based on field observations) for classification;

e. Validation of the remedial pit by a qualified environmental consultant for the contaminants of concern at the following sampling density:

   i) Base of tank pit excavation - 1 sample per 25 m^2 (i.e., 5m x 5 m grid);

   ii) Side of tank pit excavation - 1 sample per 10 linear metre (minimum of 1 sample per side) and 1 sample per 2m – 3m depth interval;

   iii) Fuel feed lines/pipe-work - 1 sample per 10 linear metre and 2 - 3 depth interval; and

f. If required, “chase out’ all of materials in the remediation pit identified to be impacted by petroleum/hydrocarbons and further validation sampling and analysis as required to assess appropriate removal of impacted materials;

g. Waste classification and off-site disposal of impacted materials in accordance with Section 4.12 of this Construction Environmental Management Plan.

h. Inclusion of validation, waste classification and disposal documents (including landfill dockets and, in the case of USTs, tank and pipe work destruction certificates) in the validation report.

Unexpected Finds Protocol - Volatile Contaminants

Based on the findings of the previous assessments, and noting the nature of the filling and soil encountered at the site the potential for the site being impacted by volatile contaminants would be extremely low.

In the highly unlikely event that significant quantities of volatile compounds are detected, then appropriate gas mitigation strategies may be required as per ANZECC (1999) Guidelines for the Assessment of On-site Containment of Contaminated Soil.

If impacts due to volatile contaminants are detected in the area to be capped, the nature and extent of the impacts of the volatile contaminants should be established as a first step before an appropriate remedial strategy.

4.12 Waste Management

The Construction Waste Management Plan (CWMP) contains detailed information regarding the types, estimated quantities and proposed treatment methods of different waste types throughout the project. Waste management requirements to be adhered to on the project include:

- Maintaining obstruction free access routes between work site and waste storage area, and for waste collection vehicles.
- All waste not being reused on site will be removed during, or at the completion of the construction stage.
- Waste to be collected during hours of approved construction work.
- All vehicles entering or leaving site will be required to have their loads covered.
- The site will be left clear of waste and debris at completion of works.

4.12.1 Waste Reduction

The main source of waste associated with the construction works would be demolished material (bricks, concrete, steel etc.) resulting from the demolition and refurbishment of existing buildings. It is likely that some excess building materials will be produced due to the construction work such as miscellaneous waste associated with packaging and transport of plant and equipment and various other manufactured items forming part of the augmentation works. Waste generated as a result of construction will be minimised, recycled, reused or recovered, where practical.

HY has accepted the challenge to reduce waste on construction projects, particularly in materials transferred to landfill.

The strategy for reducing the waste on the project will be made up of three strategies as detailed below in order of priority. The prime objective is to keep the amount of materials transferred to landfill from this project to the minimum possible amount.

1. Reduce the amount of waste material produced on the project by ensuring that only enough materials required to perform the works are ordered.
2. Any excess materials from particular work areas are to be retained and incorporated into other work areas where practical.
3. Encourage “just in time” delivery of construction materials (minimum storage on site) to reduce the potential of loss / waste due to damage prior to usage.

4.12.2 Waste Generation – Fill Material

Excavated Natural Material (ENM) generated during earthworks will be retained and reused on site where possible. However, there will be a balance of excavated material that will need to be disposed offsite as per the Bulk Earthworks requirements. In accordance with the Construction Waste Management Plan and the Douglas Partners Report on Preliminary Site Investigation, fill material required to be disposed off-site will first be assessed and assigned a waste classification prior to off-site disposal.

4.12.3 Non-Recyclable Waste

Non-recyclable waste will be disposed of at an EPA approved landfill or transfer station.

4.12.4 Waste Collection & Disposal

Appropriate waste bins are to be provided by HY and made available to all S/C.

All S/C shall be directed to place waste in the bins provided. This shall be included in the Site Induction.

Waste collection points are nominated on the Site Layout Plan.

4.12.5 Waste Reporting

Waste generation is monitored by HY on monthly basis to ensure that the company's waste reduction objectives are achieved. Waste disposal quantities are monitored monthly by HY to ensure compliance.

The Project Administrator shall record waste disposal data on BIM360 Field using the waste record checklist.

Waste quantities from the PMR shall be entered into the State HSE Database for analysis and reporting against HY Waste reduction targets.

4.12.6 Concrete Waste & Washout

Concrete trucks and pumps shall be washed out at designated locations as shown on the site layout plan. Washout of concrete pumps and AGI's in other areas will not be permitted.

Washout shall be captured using membranes or other suitable means and allowed to set.

Waste shall be placed in bins for disposal with site waste.

Excess concrete shall be returned to the concrete plant for disposal or re-use.

4.12.7 Mitigation Strategies

- Accurate written records are to be kept such as:
  - Who transported the waste (company name, ABN, vehicle registration and driver details, date and time of transport, description of waste)
  - Copies of waste dockets/receipts for the waste facility (date and time of delivery, name and address of the facility, it's ABN, contact person).
- The construction contractor to ensure that waste generated by the works is transported to a place that can lawfully accept it as per Section 143 of the *Protection of the Environment Operations Act* 1997.
- The removal of any asbestos containing material if found is only to undertaken by an appropriately licenced contractor as per WorkCover NSW requirements and current guidelines.
- All waste, including excess spoil be recycled where practicable
- Trucks transporting spoil off site to be covered.
- The EPA is to be notified immediately of any pollution incidents or harm to the environment (as defined under Part 5.7 of the POEO Act).

4.13 Visual

4.13.1 Likely Impacts

The project has minimal visual impact to neighbouring properties and is well screened by existing trees, site perimeter hoarding and other building structures. The visual impact has been assessed through the SSDA within the Environmental Impact Statement (EIS).

4.13.2 Mitigation Strategies

- Construct landscaping in accordance with the design documentation to reduce visual impacts of the new development.
- Ensure construction works are assessed throughout each project stage to verify satisfaction.

4.14 Environmental Complaints

Complaints received regarding HY's Environmental Impacts or performance shall be recorded as a complaint in accordance with Hansen Yuncken's HSE Incident Procedure. Actions are then to be taken to address the complaint.

4.15 Fuel & Chemical Spills

Response to major fuel spills shall be implemented in accordance with the fuel spill procedure in the Emergency Response Plan. The requirements for storage of large fuel and chemical quantities are not expected for this project.

A spill kit shall be located adjacent to fuel and chemical storage and dispensing areas.

4.16 Hazardous Materials

Hazardous materials shall be controlled in accordance with Hazardous Materials procedure.

4.17 External Lighting

In accordance with condition D13a (vii) of SSD 10371, the external lighting to the proposed Trinity Grammar School Renewal Project complies with AS4282-2019 – Control of the Obstructive Effects, please refer to appendices for certificate from consultant.

4.18 Community Consultation and Complaints Handling

In accordance with condition D13a (viii) of SSD 10371, community consultation and complaints handling are primarily the responsibility of the Client. Hansen Yuncken will provide assistance where possible to ensure that the Client is complying with the requirements of the Community Communication Strategy developed for the project.

4.18.1 Community Consultation

Community consultation is primarily the responsibility of the client. Hansen Yuncken will ensure that the relevant strategies/outcomes are incorporated within the relevant management plans and construction process where possible. The main channels that the client is planning on conducting consultation is through the following:

- Community Information Line (1300 012 483)
- Community Contact Cards
- Complaints and enquiries register
- Door knocks
- Face to Face meetings/briefings
- FAQs
- Information sessions/ community forum
- News Posts
- Works Notifications
- Project email address
- Project Mailing Address
- Trinity Grammar School Website

The above has been extracted from the Community Communication Strategy.

4.18.2 Complaints Handling

The primary form of assistance that Hansen Yuncken will provide is through the complaints handling process. During the project delivery phase, a complaint defined as regarding construction impacts – such as – safety, dust, noise, traffic, congestion, loss of parking, contamination, loss of amenity, hours of work, property damage, property access, service disruption, conduct or behaviour of construction workers or other environmental impacts.

If a complaint is made directly to Hansen Yuncken, it will be redirected to the TGS Project Director or complaints and enquiries register.

Upon receipt of the complaint from the TGS Project Director, Hansen Yuncken will endeavour to close out the complaint in a timely manner. The complaint will be logged to ensure that the impact of future construction works that may impact the community in a similar manner are minimised.

5 Measurement & Evaluation

5.1 Environmental Incidents & Emergencies

5.1.1 Environmental Incidents

Incidents resulting in potential or actual environmental damage shall be reported and investigated in accordance with the HSE Incident Procedure and recorded on BIM360 using the HSE incident report.

5.1.2 Environmental Emergencies

Preparation for and response to the environmental impacts of emergency events shall be conducted in accordance with the project Emergency Response Plan. The environmental impacts controlled in ERP are;

Asbestos Exposure

In the event that during works, personnel become accidentally exposed to asbestos, the following procedures shall be followed:

1. Personnel in the immediate affected area shall cease work and immediately go to the emergency showers on site.
2. All contaminated clothing is to be removed and placed into a thick plastic bag. The plastic bag must then be tightly sealed and labelled as "Asbestos Contaminated Clothing".
3. Personnel are to immediately decontaminate themselves in a shower and a clean set of clothes to be re-issued.
4. Asbestos contaminated clothing is to be industrially cleaned or disposed of appropriately

Water Pollution

An incident involving actual or potential harm to human or environmental health must be reported immediately to the EPA.

Firstly, call 000 if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

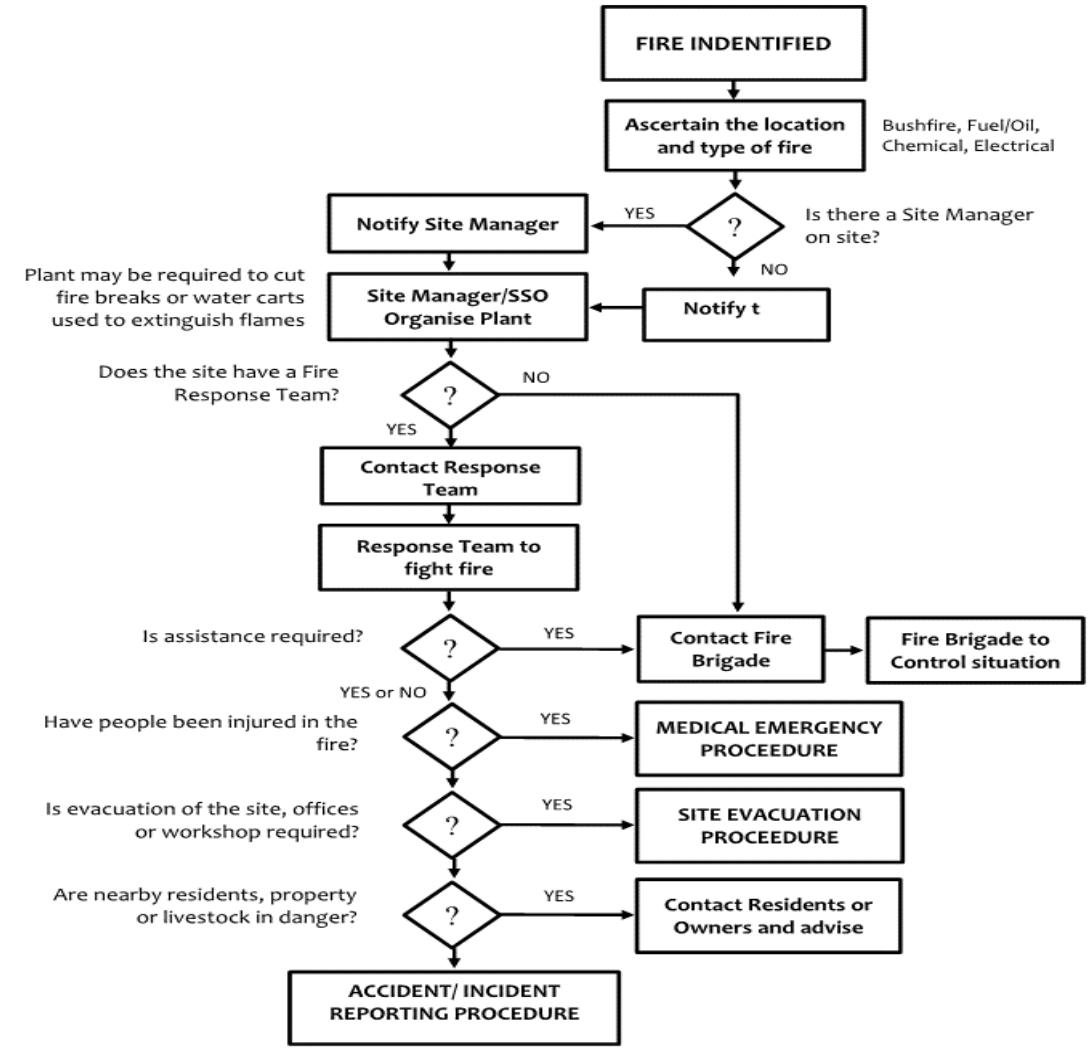
If the incident does not require an initial combat agency, or once the 000 call has been made, notify the HY Site Manager who will notify the relevant authorities in the following order. The 24-hour hotline for each authority is given when available:

EPA Environment Line on 131 555

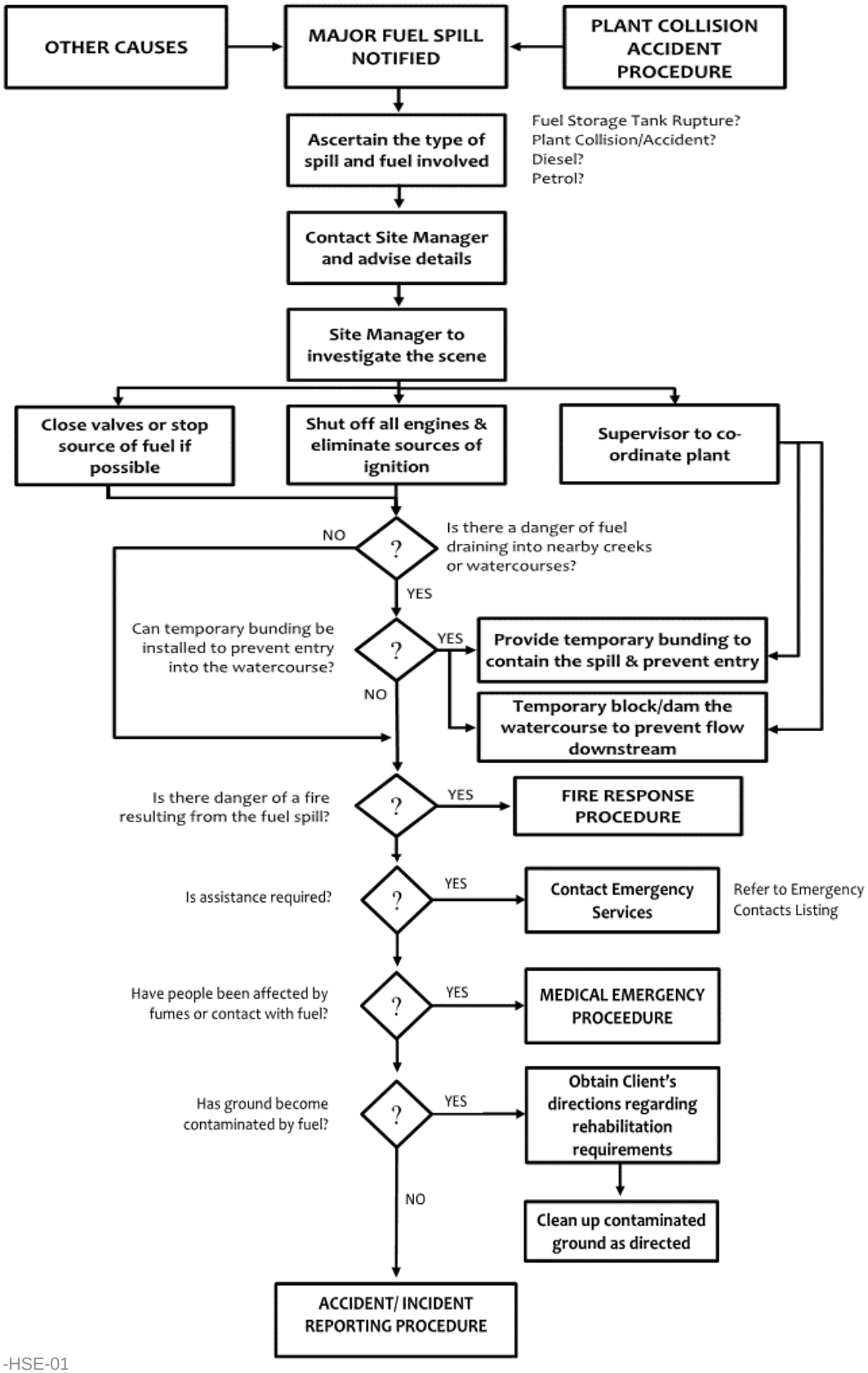
Safework NSW Authority – phone 13 10 50 (Where appropriate)

Inner West City Council (02) 9392 5000

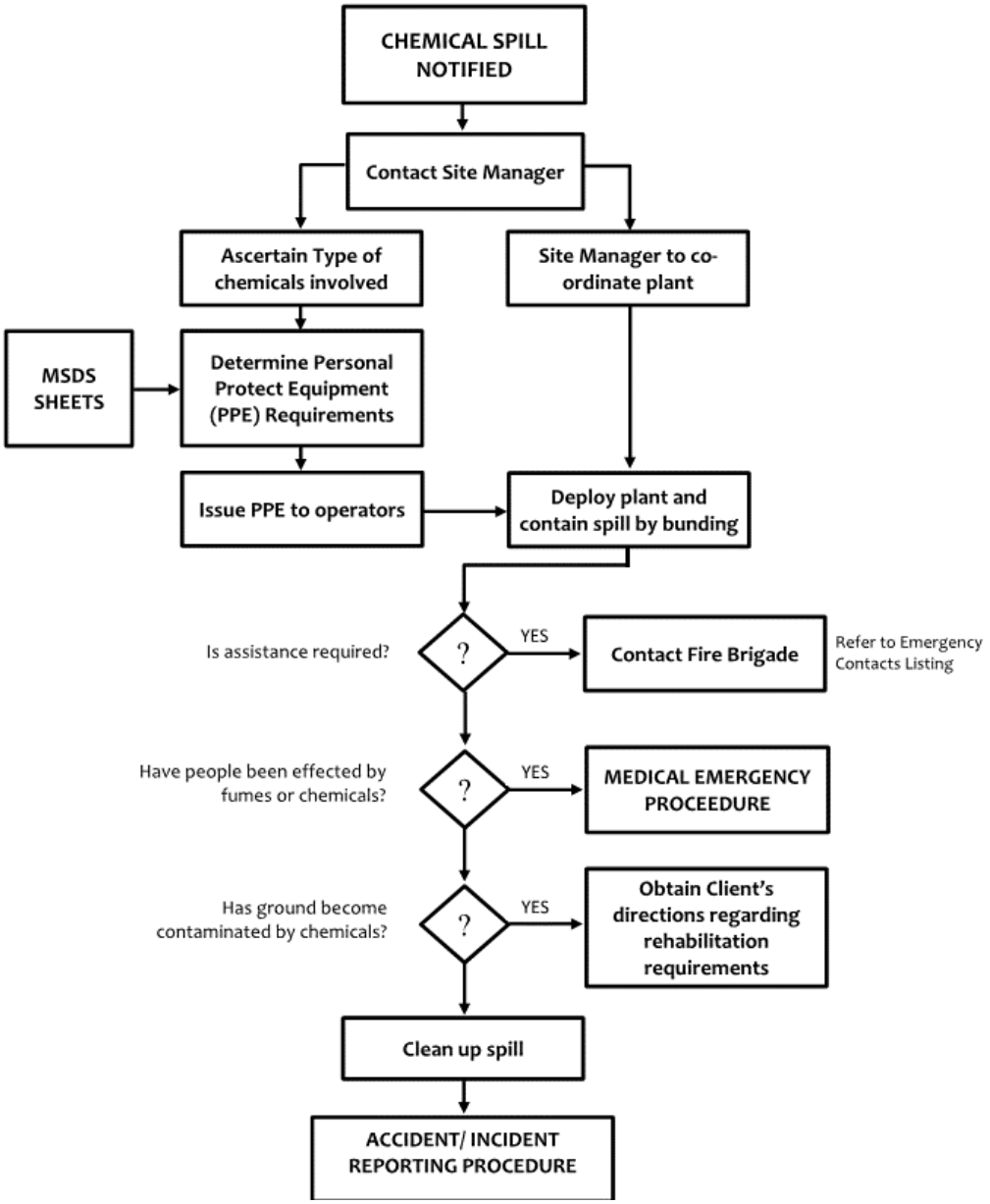
Fire


FIRE INDENTIFIED
Ascertain the location and type of fire
Bushfire, Fuel/Oil, Chemical, Electrical
Is there a Site Manager on site?
YES
NO
Notify Site Manager
Notify t
Site Manager/SSO Organise Plant
Plant may be required to cut fire breaks or water carts used to extinguish flames
Does the site have a Fire Response Team?
NO
YES
Contact Response Team
Response Team to fight fire
Is assistance required?
YES
Contact Fire Brigade
Fire Brigade to Control situation
YES or NO
Have people been injured in the fire?
YES
MEDICAL EMERGENCY PROCEEDURE
Is evacuation of the site, offices or workshop required?
YES
SITE EVACUATION PROCEEDURE
Are nearby residents, property or livestock in danger?
YES
Contact Residents or Owners and advise
ACCIDENT/ INCIDENT REPORTING PROCEDURE

Major Fuel Spill



Chemical Spill



5.2 Environmental Inspections & Audits

Inspections & audits of the site including environmental controls shall be conducted in accordance with the procedure for Site HSE Inspections & the project Audit Management Plan. The following inspections will be conducted onsite throughout the time on the project:

- Fortnightly site inspections,
- Monthly task observations,
- 3 monthly internal audits,
- External audits in line with the contract requirements.

Where an item has been assessed as Non-Conformance (NC) during any internal inspection an issue shall be raised in BIM360 Field to bring the activity or process into compliance with requirements. The issue(s) shall be recorded in BIM360 Field and allocated to the relevant contractor/subcontractor.

The independent consultant in writing shall raise all items assessed as non-conformance during external audits and HY will address all issues and close out within the time frame advised.

HY shall ensure that product/ works which does not conform to specified requirements are identified and controlled to prevent its unintended use or delivery. A nonconformance shall be raised when:

- Works/products not meeting specified requirements are identified; and/or
- Works have not been inspected or tested in accordance with specified requirements (frequency, method, authority); and/or
- A systematic and/or repeated omission/error that may result in a time or cost implication to the project.

5.3 National Greenhouse & Energy Reporting (NGER)

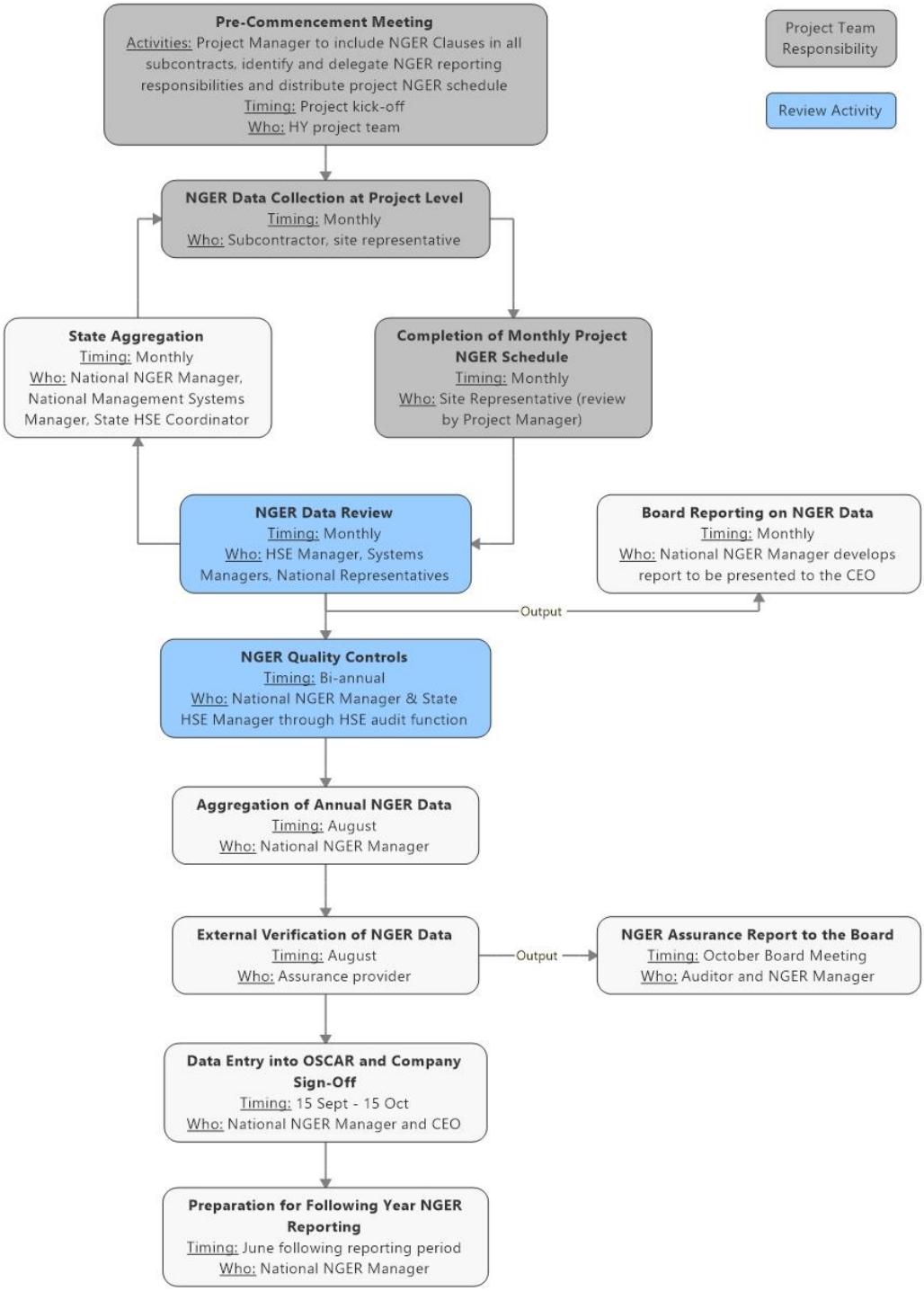
5.3.1 National Reporting Guidelines

The purpose of the National Greenhouse and Energy Reporting Guidelines is to help corporations understand their obligations under the National Greenhouse and Energy Reporting Act 2007 (the Act).

5.3.2 Reporting Thresholds

HY's has been assessed and determined to be below the corporate group reporting thresholds – detailed in the below table. Notwithstanding this, all natural gas and electricity consumption is recorded monthly on BIM360 Field and collated for national reporting. Furthermore, all site mobile plant and equipment fuel consumption is registered on BIM360 Field and incorporated in the HY greenhouse gases (CO2-e) annual report (NGER).

5.3.3 NGER Reporting process



5.3.4 NGER Data Collection

NGER data shall be collected and recorded on BIM360 Field using the Site Electricity and Natural Gas Usage Checklist

6 References

Environmental Planning and Assessment Act 1979 No 203

Environmental Planning and Assessment Regulation 2000

Protection of the Environment Operations Act 1997 (NSW)

Protection of the Environment Operations (General) Regulation 2009

ISO 14001; 2015 Environmental management systems - Requirements with guidance for use

AS/NZS ISO 31000:2009 Risk management – Principles and guidelines

HB158:2010 Delivering assurance based on ISO 31000:2009 – Risk management – Principles and guidelines

NSW Government Environmental management guidelines – Construction procurement (edition 4-December 2019)

7 Appendices

A.1 Hansen Yuncken Environmental Policy Statement

HANSENYUNCKEN

ENVIRONMENT POLICY

At Hansen Yuncken we mitigate our impact as much as reasonably practical to protect the environment during our operation in the building and construction industry, which meets the requirements and expectations of Clients, Statutory Authorities, Employees and Community Groups.

We affirm our legal obligation to comply with relevant environmental legislation, standards and codes of practice as the minimum level of performance and a professional obligation to acknowledge the views of Environmental and Community Groups.

Hansen Yuncken recognises that impacts on the environment in the building and construction industry relate not only to the process of construction but also to the design and subsequent use of the buildings constructed. We affirm our commitment to applying sustainable development principles to all facets of the building and construction process and to continually improve our performance in minimising the impact on, and pollution of, the environment during the construction process.

The Business Performance Committee shall review environmental objectives and set performance targets each year to ensure continual improvement through our 2020/23 Health Safety Environment & Quality (HSEQ) Strategic Plan. State Managers, through their line management structure, are accountable for ensuring all workers achieve these objectives and targets.

The Environment Business Function Workgroup shall monitor compliance with this policy and performance against our objectives and targets and this shall be reported to the CEO and Board of Directors on a regular basis.

In achieving this Hansen Yuncken is committed to the implementation, maintenance and improvement of a Management System complying with:

- ISO 14001:2005 Environment Management Systems

Hansen Yuncken acknowledge that environmental excellence can only be achieved and maintained through clear direction by all levels of management and commitment to continual improvement.

Training, education and awareness are critical to Hansen Yuncken's success in environmental management. Communicating and fostering a collaborative relationship with our workers results in advancement and further pride in our environmental achievements by all workers and stakeholders

Peter Salveson
Chief Executive Officer
January 2022

A.2 Environmental Management Accreditation - ISO14001

CERTIFICATE OF REGISTRATION

Hansen Yuncken Pty Ltd

SCP, Building 1, Level 3, 75-85 O'Riordan Street, Alexandria NSW 2015 Australia
Suite 12/125 Bull Street, Newcastle West NSW 2302 Australia
and transient sites

complies with the requirements of

ISO 9001:2015
Quality Management Systems – Requirements

and

ISO 14001:2015
Environmental Management Systems – Requirements with guidance for use

for the following capability:

This registration covers the Quality and Environmental Management Systems for the provision of project management and the design and construction of commercial, industrial and institutional buildings and civil engineering works.

Registered by:
Quality Control Services (Environmental) Pty Ltd
ABN 16 994 323 622
10 Rosina Street Woodcroft South Australia 5162 Australia

This certificate is subject to the Terms and Conditions for Certification, and relevant program rules. Currency of certification can be validated at www.qcse.com.au and www.jas-anz.org/our-directory/certified-organisations; it remains the property of QCSE Pty Ltd and must be returned upon request.

Certificate Number: 160052025
Issue Date: 11 February 2022

Original Certification: 23 February 2010
Expiry Date: 22 February 2025

Cheryl Stone
Certification Manager

QMS/EMS Certified Company
Licence Number: Q0160

www.jas-anz.org/register

A.3 External Lighting Compliance

In accordance with SSD Condition D13(a)(vii)

JHA

ABN 48 612 666 172

Sydney | Brisbane | Melbourne

Level 23, 101 Miller St
North Sydney NSW 2060

PO Box 3
North Sydney NSW 2059
Ph (02) 94371000

28 March 2022

Hansen Yuncken Pty Ltd

Building 1, L3, 75-85 O'Riordan Street

ALEXANDRIA NSW 2015

DESIGN STATEMENT – ELECTRICAL SERVICES

JOB NO.: 220011

REVISION NO.: [A]

SUBJECT PREMISES: **Trinity Grammar School, The Renewal Project – Stage 1**

Pursuant to the provisions of **Clause A5.2 of the National Construction Code 2019 Amendment 1**, I hereby certify that the above design is in accordance with normal engineering practice, and meets the requirements of the Building Code of Australia and relevant Australian Standards. In particular, the design is in accordance with the following:

- NCC 2019 Amendment 1 — Part J6, J8, E2.2, E4.2, E4.4, E4.5, E4.6, E4.8 & F4.4
- AS/NZS 3000 - 2018 — Wiring Rules
- AS/NZS 1680 - 2009 — Artificial Lighting
- AS/NZS 4282 – 2019 — Control of the obtrusive effects of outdoor lighting
- AS/NZS 2293.1 – 2018 — Emergency Lighting and Exit Signs for Buildings
- Fire Engineering Report — Arup FER report (Stage 1 & 2) – 281228 (revision V01 – dated 17th March 2022)
- BCA Assessment Report Stage 1 — Design Confidence (P219_288-1.3_Seaview Maintenance Precinct (BCA) LS - 07th June 2021)

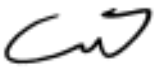
I am an appropriately qualified and competent person in this area and as such can certify that the design complies with the above and which are detailed on the following drawings:

DRAWING NUMBER	REVISION	DRAWING NAME
JHA-EL-DWG-0ST-01001	B	COVER SHEET AND DRAWING LIST
JHA-EL-DWG-0ST-01002	B	LEGEND OF SYMBOLS AND GENERAL NOTES
JHA-EL-DWG-0ST-11000	B	SITE PLAN LIGHTING AND POWER LAYOUT
JHA-EL-DWG-0ST-11001	B	SITE PLAN COMMUNICATIONS AND SECURITY LAYOUT
JHA-EL-DWG-0ST-41000	B	SCHEMATICS AND DETAILS SHEET 1
JHA-EL-DWG-0ST-41001	B	SCHEMATICS AND DETAILS SHEET 2

JHA-EL-DWG-0ST-41002	B	SCHEMATICS AND DETAILS SHEET 3
JHA-EL-DWG-0ST-41003	B	SCHEMATICS AND DETAILS SHEET 4
JHA-EL-DWG-0ST-41004	B	SCHEMATICS AND DETAILS SHEET 5
JHA-EL-SPC-0ST-91001	A	ELECTRICAL SERVICES STAGE 1 SPECIFICATION

Full Name of Designer:	Mike Peh
Qualifications:	BE(Elec)
Address of Designer:	Level 23, 101 Miller Street North Sydney NSW 2060
Business Telephone No:	(02) 9437 1000
Name of Employer:	JHA Consulting Engineers

Yours sincerely,



Mike Peh

Senior Electrical Engineer

ABN 48 612 666 172

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Level 23, 101 Miller St
North Sydney NSW 2060

PO Box 3
North Sydney NSW 2059
Ph (02) 94371000

28 March 2022

Hansen Yuncken Pty Ltd

Building 1, L3, 75-85 O'Riordan Street

ALEXANDRIA NSW 2015

DESIGN STATEMENT – ELECTRICAL SERVICES

JOB NO.: 220011

REVISION NO.: [A]

SUBJECT PREMISES: **Trinity Grammar School, The Renewal Project – Stage 2**

Pursuant to the provisions of **Clause A5.2 of the National Construction Code 2019 Amendment 1**, I hereby certify that the above design is in accordance with normal engineering practice, and meets the requirements of the Building Code of Australia and relevant Australian Standards. In particular, the design is in accordance with the following:

- NCC 2019 Amendment 1 — Part J6, J8, E2.2, E4.2, E4.4, E4.5, E4.6, E4.8 & F4.4
- AS/NZS 3000 - 2018 — Wiring Rules
- AS/NZS 1680 - 2009 — Artificial Lighting
- AS/NZS 4282 – 2019 — Control of the obtrusive effects of outdoor lighting
- AS/NZS 2293.1 – 2018 — Emergency Lighting and Exit Signs for Buildings
- Fire Engineering Report — Arup FER report (Stage 1 & 2) – 281228 (revision V01 – dated 17th March 2022)
- BCA Assessment Report Stage 2 — Design Confidence (P219_288-2.2_Oval-3_JS Link (BCA) LS - 16th August 2021)

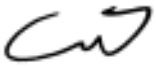
I am an appropriately qualified and competent person in this area and as such can certify that the design complies with the above and which are detailed on the following drawings:

DRAWING NUMBER	REVISION	DRAWING NAME
JHA-EL-DWG-0ST-02001	C	COVER SHEET AND DRAWING LIST
JHA-EL-DWG-0ST-02002	C	LEGEND OF SYMBOLS AND GENERAL NOTES
JHA-EL-DWG-0ST-12002	C	SITE PLAN POWER LAYOUT
JHA-EL-DWG-0ST-12003	C	SITE PLAN COMMUNICATIONS AND SECURITY LAYOUT
JHA-EL-DWG-0ST-42000	C	SCHEMATICS AND DETAILS SHEET 1
JHA-EL-DWG-0ST-42001	C	SCHEMATICS AND DETAILS SHEET 2

JHA-EL-DWG-0ST-42002	C	SCHEMATICS AND DETAILS SHEET 3
JHA-EL-DWG-0ST-42003	C	SCHEMATICS AND DETAILS SHEET 4
JHA-EL-SPC-0ST-92001	B	ELECTRICAL SERVICES STAGE 2 SPECIFICATION

Full Name of Designer:	Mike Peh
Qualifications:	BE(Elec)
Address of Designer:	Level 23, 101 Miller Street North Sydney NSW 2060
Business Telephone No:	(02) 9437 1000
Name of Employer:	JHA Consulting Engineers

Yours sincerely,



Mike Peh

Senior Electrical Engineer

A.4 Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP)

In accordance with SSD Condition D13(b)

Trinity Grammar School, Summer Hill Campus SSD 10371 (Stages 1 and 2)

Construction Traffic and Pedestrian Management Sub-Plan

119 Prospect Road, Summer Hill
6/05/2022
Ref: P1896r01v07

Info@asongroup.com.au
+61 2 9083 6601
Suite 17.02, Level 17,
1 Castlereagh Street,
Sydney, NSW 2000

Document Control

Project No	1896
Project	SSD 10371 Trinity Grammar School Redevelopment, 119 Prospect Rd, Summer Hill
Client	Hansen Yuncken Pty Ltd
File Reference	P1896r01v07 CTPMSP_Trinity Grammar School, 119 Prospect Road, Summer Hill

Revision History

Revision No.	Date	Details	Author	Approved by
01	29/03/2022	Final	S. Bandaranayake/ M. Kong	D. Choi
02	05/04/2022	Updated Final based on HY comments	S. Bandaranayake/ M. Kong	D. Choi
03	07/04/2022	Updated Final based on CCC comments	S. Bandaranayake/ M. Kong	D. Choi
04	08/04/2022	Updated to include consultation with TfNSW and Council	S. Bandaranayake/ M. Kong	D. Choi
05	19/04/2022	Updated to address comments from Bloompark Pact and CJP	S. Bandaranayake/ M. Kong	D. Choi
06	04/05/2022	Updated to address comments from Council and TfNSW	S. Bandaranayake/ M. Kong	D. Choi
07	06/05/2022	Updated to address comments from HY	S. Bandaranayake/ M. Kong	D. Choi

Contents

Contents continued

Figures

Tables

APPENDICES

1 Introduction

1.1 Introduction

Ason Group have been engaged by Hansen Yuncken (HY) to prepare a Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) in relation to the construction activities associated with Stages 1 and 2 works of Trinity Grammar School, Summer Hill Campus at 119 Prospect Road, Summer Hill (the Site).

This CTPMSP details the measures and strategies to be undertaken during construction to minimise the effects of work on the surrounding road network, and to ensure the safety and efficiency of the community, all workers, and all road users. The CTPMSP has also incorporated the measures outlined in Section 7 - Construction Traffic Management Plan framework in the "Trinity Grammar School – Transport and Accessibility Report - Reference: 19SYT0056" prepared by TTM as part of the EIS.

A Construction Environmental Management Plan (CEMP) has been prepared by HY.

1.2 Project Representatives & Stakeholders

This report has been prepared by a consultant who holds a SafeWork NSW Work Health & Safety Traffic Control Work card, accredited for the 'Prepare a Work Zone Traffic Management Plan'. Details of the accredited consultant is provided below:

- Dora Choi Ticket No. TCT0021456

This Construction Traffic Management Plan has been prepared to meet the requirements outlined in Appendix A and Appendix E, Section E.2 of the Transport for NSW Traffic Control at Work Sites Technical Manual (Issue No. 6.1, 2022).

Through the preparation of this CTPMSP, the project representatives and stakeholders consulted in the development of the traffic management strategy are listed below:

TABLE 1: PROJECT REPRESENTATIVES AND STAKEHOLDERS

Name	Organisation	Role
Peter Brogan	Bloompark Pact on behalf of Trinity Grammar School (School)	Director
Tim Russell	Bloompark Pact on behalf of Trinity Grammar School (School)	Assistant Project Manager
Daniel Ngo	TfNSW	Project Manager Operations Customer Journey Planning
Joe Bertacco	Inner West Council	Development Engineer
Boris Muha	Inner West Council	Engineer – Traffic and Parking Services
Ross Pearson	HY	Senior Site Manager
Dora Choi	Ason Group	Principal Lead: Traffic Management & Operations

Meg Kong	Ason Group	Principal: Traffic Management & Operations
Wendy Zheng	Ason Group	Senior Traffic Engineer

1.3 Project Details

The project involves the alterations and additions to Trinity Grammar School in construction stages which comprises the following staging works:

- Alterations and additions to Trinity Grammar School in construction stages and changes to staff and student numbers comprising:
- demolition of existing buildings including New School building, dwelling houses at 119 Prospect Road and 50 and 52 Seaview Street and part demolition of Music Building and Assembly Hall.
- construction of a:
  - new building with a basement known as the T&L Building.
  - new Multi-Purpose Pavilion; and
  - new Maintenance Building on Seaview Street.
- alterations and additions to existing buildings to create a Performing Arts Building.
- refurbishment of the Music Building, New Founders Building, the Assembly Hall and North Quad Building.
- extension and reconfiguration of the Oval 2 Carpark (Jubilee carpark) and the staff carpark to increase the car parking spaces from 312 to 324 and a new underground connection.
- associated landscaping, removal of 29 trees, road and public domain works, ancillary signage.
- staged increase in student numbers from 1500 to 2100 and increase in FTE staff from 277 to 321.

1.3.1 Site Location

The Site is located at 119 Prospect Rd and 50-52 Seaview Street, Summer Hill, NSW 2103, and is legally known as Lot 11 DP 1171965, Lot 5 DP 15765 and Lot 6 DP 15765.

The Site is bound by Seaview Street to the north, Prospect Road to the east, Victoria Street to the west, and Yeo Park to the south. The areas surrounding the campus are primarily low density residential. The Site is zoned as SP2 Educational Establishment under Ashfield Local Environmental Plan 2013.

The Site is located within the suburbs of Summer Hill and Ashfield, which forms part of the Inner West Local Government Area (LGA).

The location of the Site is presented in **Figure 1** below:

Figure 1: Site Location and Surrounding Roads

1.4 Authority Requirements

The proposed development received a Development Consent for Application No. SSD-10371 from Independent Planning Commission on 24 September 2021.

Condition D15 of the SSD-10371 required the preparation and submission of a Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) prior to commencement of construction. The condition specified the following:

D15. The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following:

(a) be prepared by a suitably qualified and experienced person(s);

(b) be prepared in consultation with Council, TfNSW and the CCC;

(c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services;

(d) incorporate the measures outlined in the Construction Traffic Management Plan framework submitted with the EIS;

(e) incorporate measures to minimise conflicts between the construction vehicles and ongoing operations of the school including student safety during construction periods, details of equitable, all abilities access within the site;

(f) details of alternate drop-off / pick-up and car parking arrangements during ongoing construction works within the Jubilee car park;

(g) details of alternate parking arrangements (if needed) for the staff and driving age students, during ongoing construction works within the basement (where relevant);

(h) details of on-site parking for construction vehicles and work zones on the surrounding streets, where needed and in consultation with Council; and

(i) detail heavy vehicle routes, access and parking arrangements for heavy construction vehicles.

This CTPMSP forms part of the CEMP and outlines the proposed construction traffic management arrangements associated with the construction phases for the development.

TABLE 2: RESPONSE TO SSD-10371 CONDITION D15

Condition No.	Condition	Response
D15 a)	be prepared by a suitably qualified and experienced person(s);	Refer to Section 1.2 and **Appendix A**
D15 b)	be prepared in consultation with Council, TfNSW and the CCC	Refer to Section 1.6
D15 c)	detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services;	Refer to Section 3
D15 d)	incorporate the measures outlined in the Construction Traffic Management Plan framework submitted with the EIS;	Refer to Sections 1 and 3
D15 e)	incorporate measures to minimise conflicts between the construction vehicles and ongoing operations of the school including student safety during construction periods, details of equitable, all abilities access within the site;	Refer to Sections 2 and 3
D15 f)	details of alternate drop-off / pick-up and car parking arrangements during	Refer to Section 3.4 and 3.5.

	ongoing construction works within the Oval 2 Carpark;	
D15 g)	details of alternate parking arrangements (if needed) for the staff and driving age students, during ongoing construction works within the basement (where relevant).	Refer to Section 3.5.
D15 h)	details of on-site parking for construction vehicles and works zones on the surrounding streets, where needed and in consultation with Council; and	Refer to Section 3.2
D15 i)	detail heavy vehicle routes, access and parking arrangements for heavy construction vehicles.	Refer to Section 2.3 and Section 3

1.5 Site Related Data

1.5.1 Road Details

The key roads surrounding the Site are as identified within **Figure 2** and summarised in **Table 3** below.

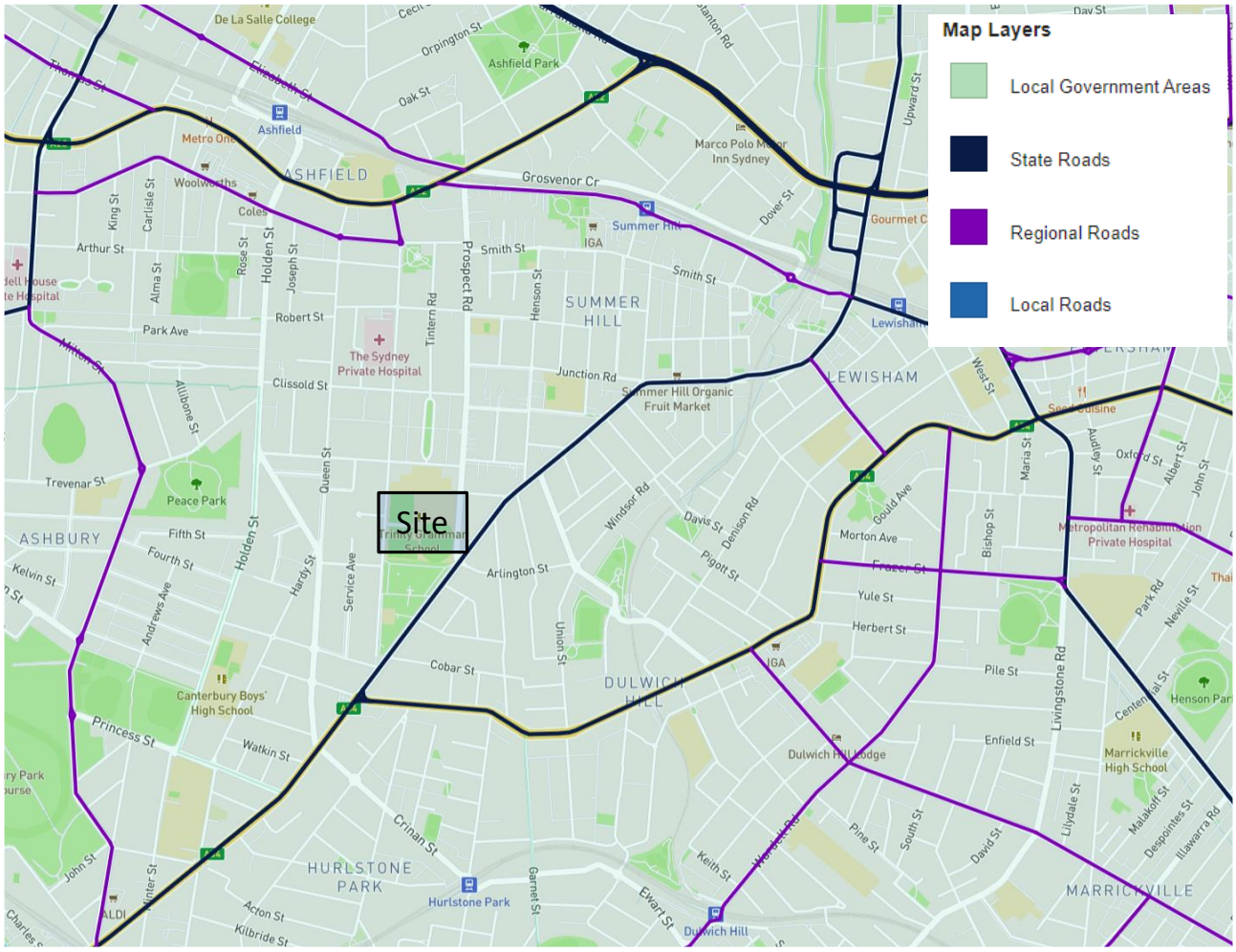


Figure 2: Road Hierarchy

TABLE 3: LOCAL ROAD NETWORK

Road Name	Section	Speed Limit	Parking	Traffic Volumes and Peak Times	Urban / Rural
Seaview St	Victoria St & Prospect Rd	50 km/hr, 40km/hr during school zone	Untimed Parking	2019 ADT: 2770 veh/day	Urban
Victoria St	Seaview St & Harland St	50 km/hr, 40km/hr during school zone	Untimed Parking	2019 ADT: 4835 veh/day	Urban
Prospect Rd	Seaview St & Old Canterbury Rd	50 km/hr, 40km/hr during school zone	Untimed Parking	2019 ADT: 4570 veh/day	Urban
Old Canterbury Rd	Hurlstone Ave & Elizabeth St	50 km/hr, 40km/hr during school zone	Untimed Parking	2020 ADT: 15,000 veh/day	Urban

1.5.2 Crash History

A review of RMS crash database has been undertaken to establish the crash history in the vicinity of the Site. The crash history for the 5-year period between 2016 and 2020 (inclusive) is outlined below in **Figure 3** and **Table 4.**

Figure 3: 2016 to 2020 Crash History Surrounding the Site

Of those crashes, the ones that occurred on the Site frontage roads are highlighted below.

TABLE 4: CRASH HISTORY

Year	Location	RUM Code[1]	Number injured	Degree of crash
2016	Seaview St, west of Seaview St / Prospect Rd intersection	71 – Left Off Carriageway into Object / Parked Vehicle	nil	Non-casualty (towaway)
	Old Canterbury Rd, south of Prospect Rd / Old Canterbury Rd intersection	31 – Left rear	1 x Injury	Minor/Other Injury
2018	Seaview St / Victoria St intersection	10 – Cross traffic	1 x Injury	Minor/Other Injury
2019	Prospect Rd, north of Prospect Rd / Old Canterbury Rd intersection	71 – Left Off Carriageway into Object / Parked Vehicle	nil	Non-casualty (towaway)

2020	Prospect Rd, north of Prospect Rd / Hurlstone Ave intersection	63 – Vehicle door	1 x Injury	Serious Injury
	Harland St / Service Ave intersection	16 – Left near	nil	Non-casualty (towaway)

Note: 1) Source: RMS Crash Statistics Website

A review of the above indicates that there were no fatalities within the reporting period.

1.5.3 Vulnerable Road Users

Vulnerable road users (VRU) are road users not in a car, bus or truck. In the event of a crash, VRUs have little to no protection from crash forces, therefore, need to be addressed within this CTPMSP.

TABLE 5: PUBLIC AND ACTIVE TRANSPORT

Road Name	Pedestrian	Cycling	Public Transport
Seaview St	Yes Footpath Width = 1.5m; Footpath Width = 1.5m	No dedicated cycle/shared path	No
Victoria St	Yes 300m along site frontage, West to Victoria St: Footpath Width = 2.0m; 300m along site frontage, East to Victoria St: Footpath Width = 1.7m	No dedicated cycle/shared path	No
Prospect Rd	Yes 300m along site frontage, West to Prospect Rd: Footpath width = 2.5m 300m along site frontage, East to Prospect Rd: Footpath Width: 1.5m	No dedicated cycle/shared path	Yes Bus stops for bus route 406

1.6 Stakeholder Engagement

1.6.1 Pre-Submission Consultation

HY has liaised with the School, CCC, Council and TfNSW regarding construction schedules and trucks routes.

1.6.2 Stakeholder Engagement Plan and Notification

HY will continue to liaise with relevant stakeholders and will raise any potential conflict with stakeholder at the earliest time. The subsequent consultation actions are shown in Table 6.

TABLE 6: STAKEHOLDER CONSULTATION ACTIONS

Stakeholder	Action
TfNSW	HY submitted CTPMSP to stakeholder. See **Appendix B**. HY has addressed stakeholder's comments in this final CTPMSP
Inner West Council	HY submitted CTPMSP to stakeholder. See **Appendix B**. HY has addressed stakeholder's comments in this final CTPMSP.
Community Consultative Committee	HY discussed the CTPMSP in the CCC meeting on 30 March 2022 and have addressed all comments from Bloompark Pact (on behalf of the School) between 6 April 2022 and 19 April 2022. See **Appendix B**. HY has addressed stakeholder's comments in this final CTPMSP
NSW Police	HY to obtain NSW Police permit in the event of lane or road closure as required.
Emergency Services	HY to inform Emergency Services in the event of lane or road closure as required and to attend fortnightly meetings with Emergency Services if necessary
Bus Operators	HY to inform bus operators in the event of any construction activities which will affect the bus operations as required.

The CTPMSP will be monitored accordingly, and changes made if major issues arise. Council and Police/TfNSW reserve the right to re-enter in discussions with HY to review the CTPMSP if major issues arise.

1.6.3 Stakeholder Notification

In the event that any disruptions to roadways / footpath occur as a result of construction works, the procedure outlined below is to be followed:

- If any future disruptions to roadways / footpaths are required, Council / TfNSW is to be notified first and depending on the extent of the disruption HY is to notify affected property occupiers using letter drops and Variable Message Sign (VMS)
- If any unforeseen disruptions to roadways / footpaths occur, Council / TfNSW is to be notified first and depending on the extent of the disruption HY is to notify affected property occupiers via traffic controllers and Variable Message Sign (VMS)
- In the event that heavy vehicle damage to Council / TfNSW assets / infrastructure, contractors will notify Inner West Council's Traffic & Transport team and / or Assets Branch.

1.6.4 Liaison Officer

HY will assign a liaison officer to deal with any residential issues/concerns, and that HY will arrange to regularly update the community on the progress of the works. HY community engagement and communication will be maintained through the HY Bid/Marketing Team.

Tessa Vrachnos
Bid & Marketing Manager
tvrachnos@hansenyuncken.com.au

0297 707 600

HY will also continue to inform Trinity of disruptive works through the disruption notice procedure, to be passed onto the neighbouring public.

2 Proposed Works and Staging

2.1 Proposed Construction Activity / Works

The proposed construction activities for Stages 1 and 2 works will be undertaken concurrently to the existing operation of the Site. Construction of the Stage 2 works is set for completion in June 2023.

TABLE 7: STAGING AND DURATION OF WORKS

Stage	Duration	Description
1	End-March 2022 to April 2023 (12 months)	• Installation of ATF Fencing along the western, southern and eastern site boundaries with shade cloth covering • Installation of hoarding with vinyl covering along the northern site boundary • Demolition of 4 residential dwellings (46-52 Seaview Street, Ashfield) • Prior to demolition: Access via the existing driveway of 48 & 50 Seaview Street • Post-demolition: Ingress via 46 Seaview Street driveway and egress via 52 Seaview Street driveway • Stage 1 site compound to the rear of 48 Seaview Street • Establish site compound north of existing No. 1 Oval • See **Figure 4**.
2	14 months	• Installation of a gate at the existing driveway off Victoria Street to/from the existing underground carpark under Oval no. 3, as a truck entry/exit point • Use of existing gate and driveway to/from Oval no. 3 • Construction of a new maintenance building • Construction of Oval 3 Basement Carpark • Provision of container gardening storage shelter approximately 10m wide • Widening of the connecting ramp between Oval 2 and 3 to facilitate two-way traffic • Provision of Junior School linkway • Provision of temporary school via demountable within the eastern side of the existing Oval no. 1 • See **Figure 5**.

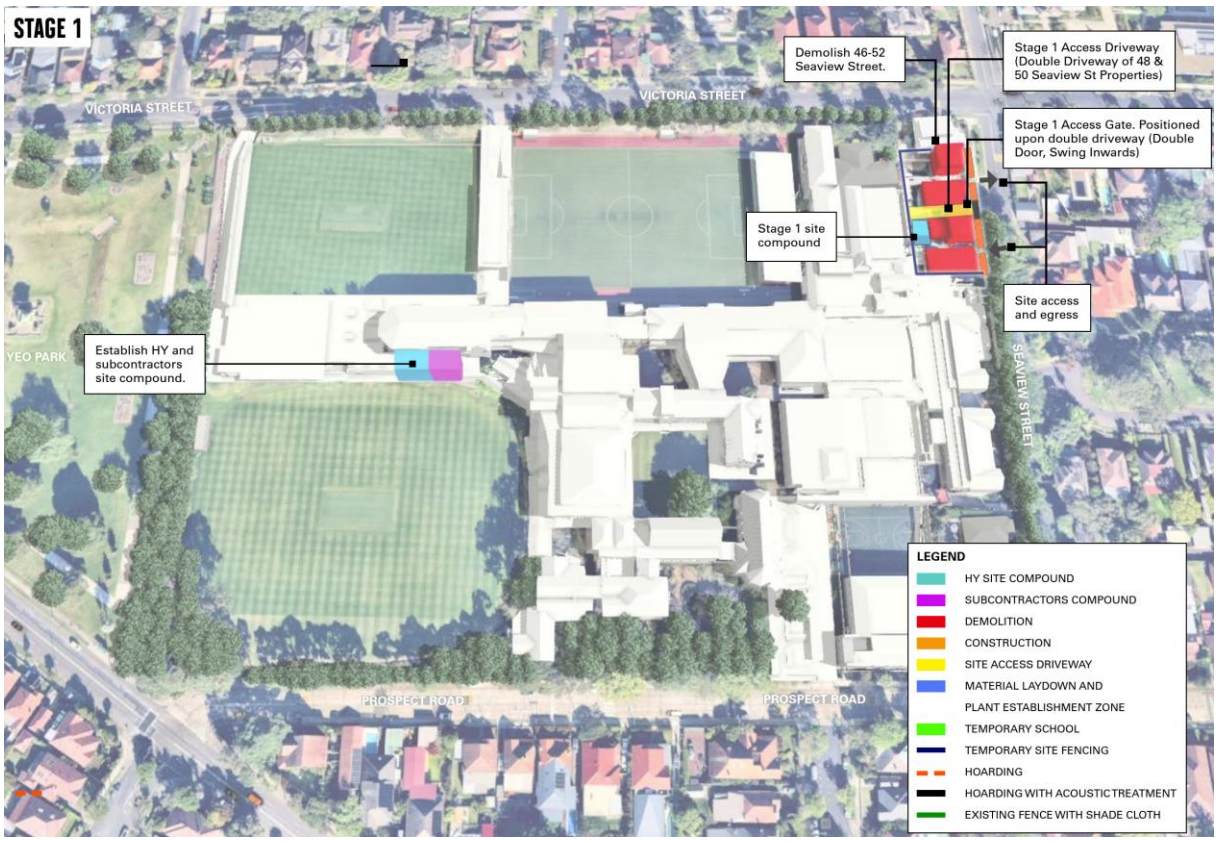
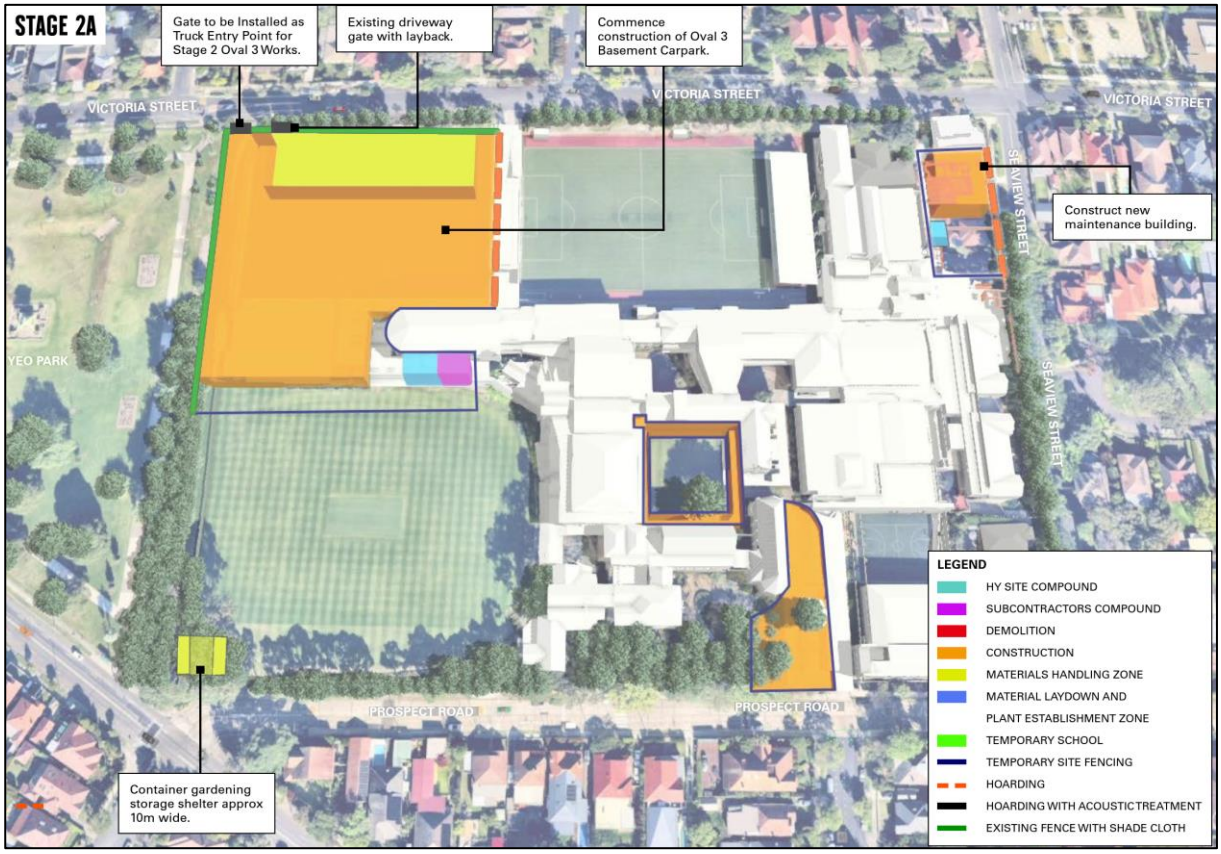


Figure 4: Stage 1 Works



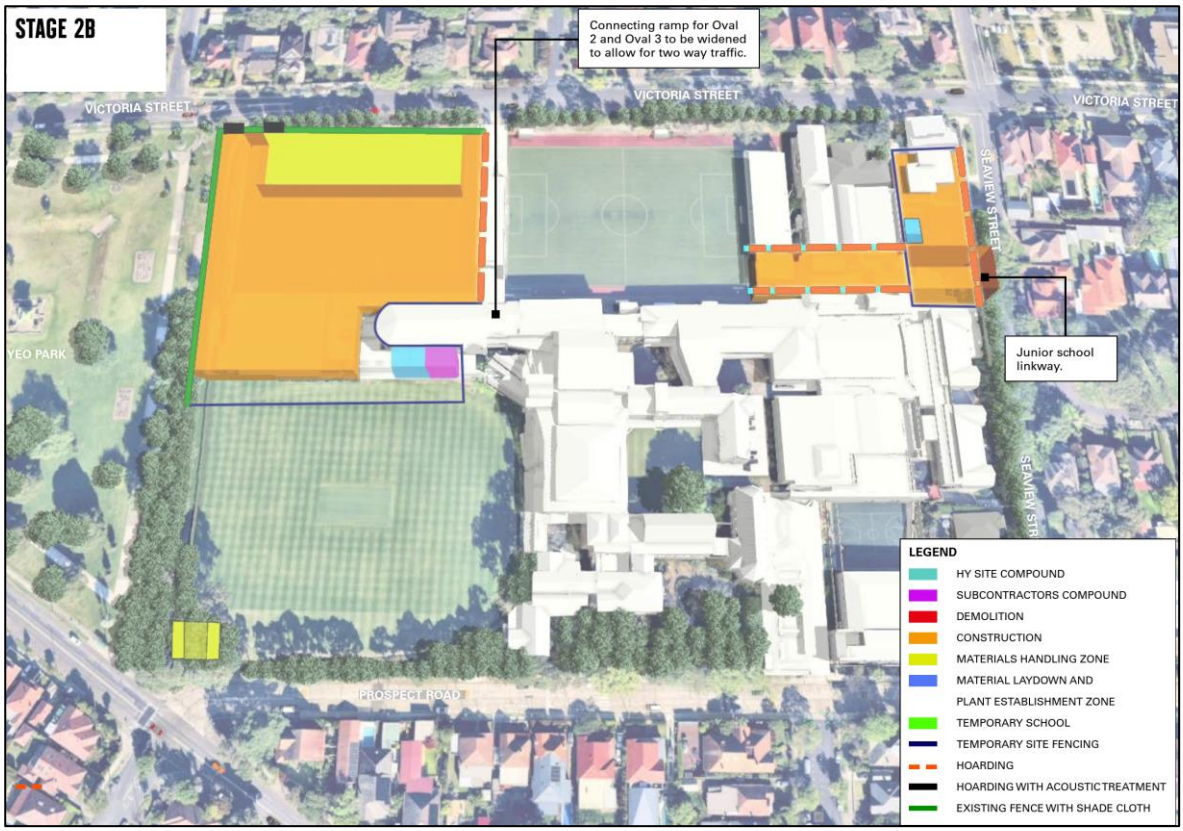


Figure 5: Stage 2 Works

The Stages 1 and 2 site establishment plan is shown in the **Figure 6**.

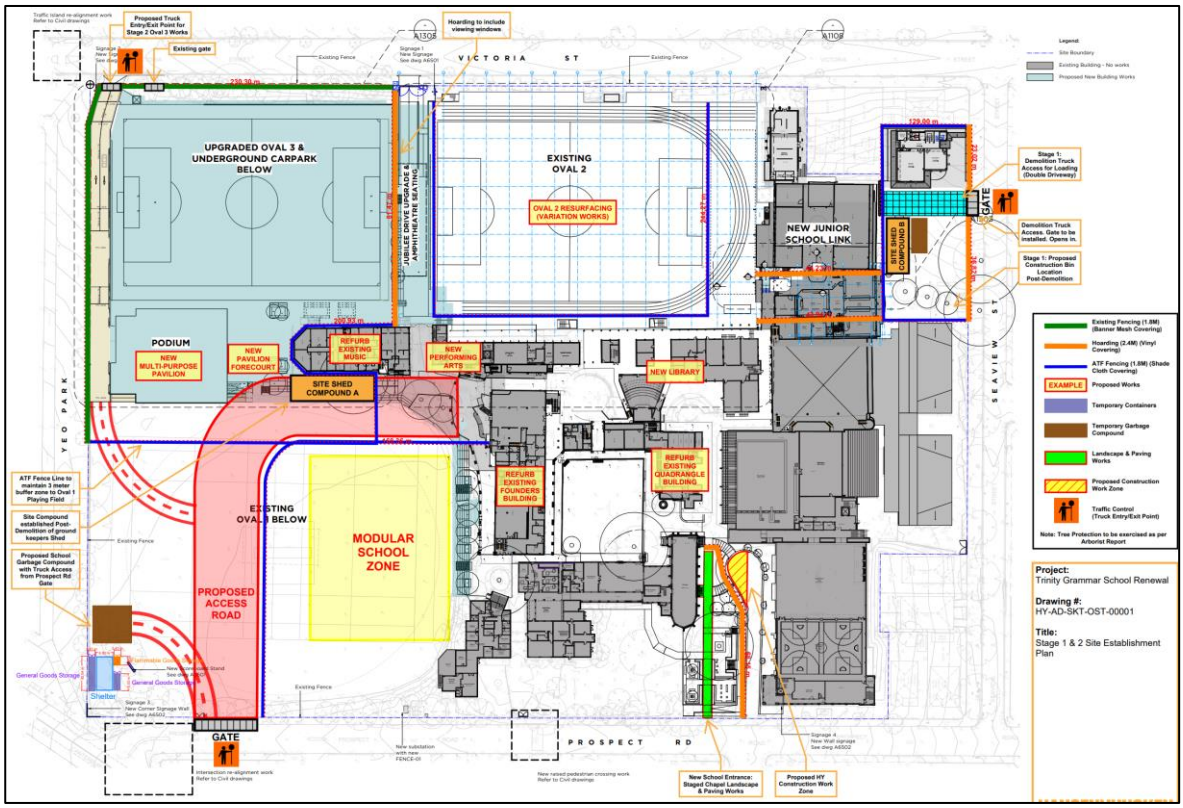


Figure 6: Stage 1 and 2 Site Establishment Plan

The access and traffic management required is outlined later within this report.

2.1.1 Stage 1 – Site Establishment

TABLE 8: STAGE 1

Criteria	Response
Description of Key Activities	Demolition of 4 existing residential dwellings along Seaview Street
Max. Vehicle Size	9.5m Rigid Vehicle
Vehicle Movement Frequency	10 movements / day
Truck Access Requirements	Traffic controllers not required
Vehicle access / egress in a forward direction (Y / N)	N prior to demolition Y post demolition
Out of Hours Deliveries (Y/N)	No – refer section 2.2 for construction hours. Deliveries to align with these hours.
Contractor Parking	None provided on site
Pedestrian Control	Hoarding with Vinyl covering and ATF Fencing with shade cloth to provide separation from construction zone. Trained on-site personnel present on footpath during operations.
Public Transport Services Affected	N
Road Occupancy Requirements (if yes, provide further details)	Yes for hoarding/fencing installation – subject to separate Hoarding Permit
Lane or Footpath Closures (if yes, provide further details)	Yes – pedestrian management to be implemented at the Seaview footpath to redirect pedestrians when required.
Traffic Control Plan	see **Appendix C** for applicable TGS

2.1.2 Stage 2 – Main Works

TABLE 9: STAGE 2

Criteria	Response
Description of Key Activities	Construction of Oval 3 Carpark and Maintenance
Max. Vehicle Size	23m AV
Vehicle Movement Frequency	30 movements / day
Truck Access Requirements	Traffic controllers will be required
Vehicle access / egress in a forward direction (Y / N)	Y
Out of Hours Deliveries (Y/N)	No – refer section 2.2 for construction hours. Deliveries to align with these hours.
Contractor Parking	None provided on site

Pedestrian Control	A mix of existing fencing, hoarding with Vinyl covering and ATF Fencing with shade cloth to provide separation from construction zone. Trained on-site personnel present on footpath during operations.
Public Transport Services Affected	N
Road Occupancy Requirements (if yes, provide further details)	n/a
Lane or Footpath Closures (if yes, provide further details)	N Y during footpath reconstruction works – pedestrian management to be implemented at the Victoria Street footpath to redirect pedestrians when required.
Traffic Control Plan	see **Appendix C** for applicable TGS

2.2 Construction Hours

The approved construction hours have been outlined below in **Table 6** per SSD Condition E4.

TABLE 10: HOURS OF WORK

Activity	Day	Time
Construction works (Condition E4)	Monday – Friday	7 am to 5 pm
	Saturday	8 am to 1 pm
	Sunday & Public Holidays	No Work to be carried out
Rock breaking, rock hammering, sheet piling, pile driving and similar activities (Condition E7)	Monday – Friday	9 am to 12 pm and 2 pm to 5 pm
	Saturday	9 am to 12 pm
	Sunday & Public Holidays	No Work to be carried out

Condition E5 states that construction activities may be undertaken outside of the hours in Condition E4 stated above if required:

(a) by the Police or a public authority for the delivery of vehicles, plant or materials; or

(b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or

(c) where the works are inaudible at the nearest sensitive receivers; or

(d) where a variation is approved in advance in writing by the Planning Secretary or his nominee if appropriate justification is provided for the works.

Notification of the above out-of-hours construction activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards, in accordance with Condition E6.

Requests to work outside of these types of working hours will also be submitted to HY for review and approval by the School through a Notice of Disruption (NOD) process that clearly defines the scope of works to be carried out and specific timeframes including risks assessment within a Contractors Access Form (CAF).

2.3 Truck Routes

It is proposed that all construction vehicles would enter and exit the Site via the main routes shown in **Figure 7**.

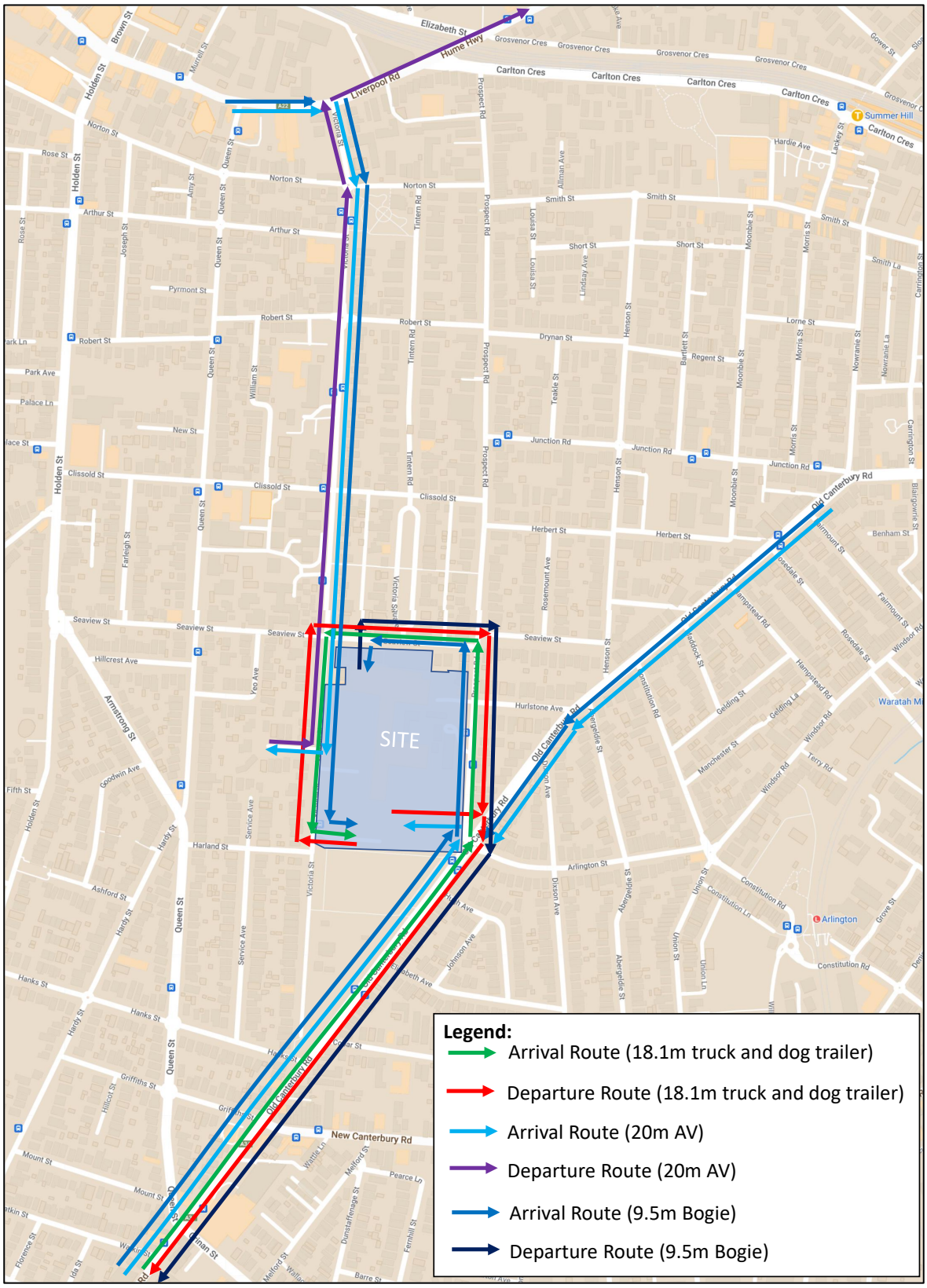


Figure 7: Construction Vehicle Primary Route Map

Truck and dog trailers can use Victoria Street as an alternative arrival route, as shown in **Figure 8.**

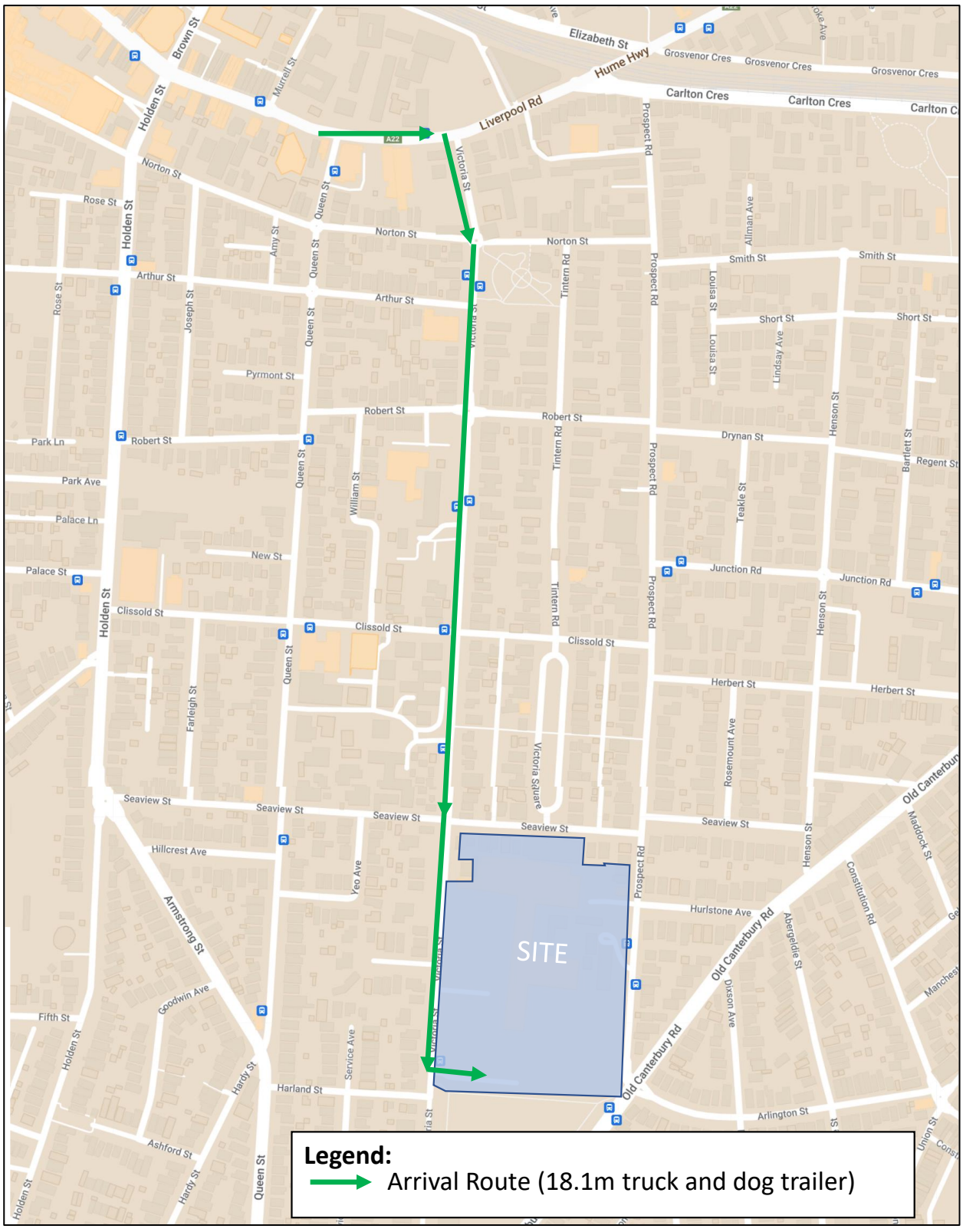


Figure 8: Construction Vehicle Alternative Route Map

The routes shown are to be utilised by all construction vehicles travelling to and from the site and represents the shortest route available - hence minimising the impacts of the construction process. A copy of the approved routes will be distributed by HY to all drivers before their arrival to Site.

2.4 Temporary Traffic Management Method

Traffic management shall be undertaken in accordance with the methodology outlined within the TGS, **Appendix C**. Traffic and non-vehicle related roads users are expected to be directed around the worksite in order to physically separate the road user from any hazards within the worksite.

It is noted that any traffic control/devices on Old Canterbury Road are subject to further ROL applications and TfNSW approval. The TGS and hours associated with the lane closure and traffic stoppages on Old Canterbury Road will be approved as part of the ROL applications.

2.5 Risk Assessment

A risk assessment is aimed to identify the hazards and risks associated with the works. The purpose of this risk assessment is to determine the controls required for the protection of the road workers and road users. A Risk assessment has been completed and is attached in **Appendix D**.

2.6 Site Contact

The nominated site contact from HY is:

Ross Pearson
Senior Site Manager
rpearson@hansenyuncken.com.au
T 02 9770 7600
M 0438 675 748

2.7 Site Access

During Stage 1, access to the site will be via the existing driveways of 48 & 50 Seaview Street site (See **Figure 9**) along Seaview Street. Vehicles will drive forward along Seaview Street from Prospect Road and reverse into the driveways under the management of traffic controllers on arrival. On departure, the truck will turn right in a forward direction onto Seaview Street towards Prospect Road.

Figure 9: Existing 48 & 50 Seaview Street driveways

The above driveway will be restricted to vehicles up to 9.5m Rigid Vehicles only as demonstrated in the swept path assessments provided in **Appendix E**.

During Stage 2, access to the site for the demolition and excavation stages would be via the existing driveways along Victoria Street with the largest vehicle accessing the site being an 18.1m truck and dog trailers

- Entry/exit via existing driveway off Victoria Street to/from the existing underground carpark under Oval no. 3, as a truck entry/exit point (See **Figure 10**)
- exit via existing driveway off Victoria Street to/from Oval no. 3 (See **Figure 11**)

Figure 10: Existing Driveway off Victoria Street to/from the Existing Underground Carpark

Figure 11: Existing Driveway off Victoria Street to/from Oval no. 3

During the Stage 2 construction stage, a 20m-wide temporary driveway will be provided from Prospect Road on the south-eastern boundary of the site. The proposed access will be utilised by up to 23m articulated

vehicles with 3.4m wide load (demountable). A separate application would be submitted to Council and Transport for NSW for the oversized vehicles for approval prior to the major deliveries. Temporary crossover and driveway layback will be constructed in accordance with Council's specifications.

Swept path assessments have been undertaken at the existing driveways along Victoria Street and the temporary driveway along Prospect Road which indicated that that the site can accommodate the necessary vehicle movements, with the largest vehicles being 23m Articulated Vehicles (AV) and 18.1 m truck and dog trailers. Refer to **Appendix E** for further details.

The tail end of the central median will be removed and replaced with painted median. The median will be cut at the start of the curvature position of the median. The keep left sign will be relocated further to the south, noting that this sign will be temporarily removed during construction hours and reinstated after the construction hours. The stop sign will also be temporarily removed during semi arrival and departure when traffic controllers are in place to manage traffic movements at the intersection. See **Appendix E** for details.

The details of the changes to the median will be further addressed via an on-site consultation with Inner West Council.

Median island works to be potentially captured within Condition C14, subject to further consultation with Inner West Council, Transport for NSW, and Bloompark. See alternative proposal to the future median design shown in **Appendix E**.

In accordance with Condition E9:

- all construction vehicles will be contained wholly within the site, except if located in an approved on-street works zone.
- vehicles must enter the site before stopping and exit the site in a forward direction

Mobile cranes will set up within the site when required. Refer to **Figure 7**, showing the location of fencing, access points and site accommodation and parking for site personnel.

2.8 Works Zone

No Works Zone is proposed. All civil and construction works will take place within the work site.

In the event that the implementation of any temporary traffic control measures on public road/road related area HY will obtain a Road Occupancy Permit (ROP) from Council. If excavation and/or road opening works on a public road is required, HY will obtain a Road Opening Permit.

3 Traffic Management

3.1 Vehicle Management

In accordance with TfNSW requirements, all vehicles transporting loose materials will have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway during travel to and from the site. All drivers are to be familiar with the Driver Code of Conduct before attending the Site. A copy of the Code is included in **Appendix F**.

All subcontractors must be inducted by the lead contractor to ensure that the procedures are met for all vehicles entering and exiting the construction site. The lead contractors will monitor the roads leading to and from the site and take all necessary steps to rectify any road deposits caused by site vehicles.

Vehicle movements to, from and within the site shall do so in a manner which does not create unreasonable or unnecessary noise or vibration. No tracked vehicles will be permitted or required on any paved roads. Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.

At no stage shall un-planned queueing occur on the public road network. It is expected that a schedule for deliveries of materials and goods will be established prior to that day, with Traffic Controllers maintain radio contact with construction vehicles at all times. This schedule shall be prepared by utilising construction traffic management software (such as Mooven or other similar products).

3.2 Contractor Parking

It is anticipated that there will be a maximum of 80 workers on-site during the construction stage. No construction worker parking will be provided on site. The site is very accessible via public transport and public on-street parking availability is limited.

To encourage the use of public transport, an on-site secure tool storage facility would be provided by the project team to allow construction workers to drop off and securely store their tools and equipment for the project within the Site.

A Construction Worker Transportation Strategy (CWTS) has been prepared with the objective to minimise demand for parking in nearby public and residential streets or public parking facilities. In accordance with Condition E9, the site personnel vehicles will be managed in accordance with the CWTS, included in **Appendix G**.

3.3 Pedestrian and Cyclist Management

During the building construction activities, pedestrian movements will be maintained along the School's Victoria Street, Seaview Street and Prospect Road frontages of the site. It is expected that site fencing is to be located as close as possible to the property boundary, maintaining maximum footpath width along the footpaths of the site to minimise impact on pedestrian amenity.

Construction hoarding / fencing arrangement shall be as per the arrangement documented in the Project's CEMP.

Site personnel will be present to supervise all site access to manage pedestrian and vehicular traffic to ensure public safety while construction vehicles enter and exit the site. Pedestrians will not be directed to use the other footpath by use of signage alone. Also, traffic controls would need to be in accordance with AS1742.3 and TfNSW 'Traffic Control at Worksites' manual at all times.

During the footpath reconstruction works, pedestrians will be detoured temporarily onto the carriageway with 1.5m wide (min) pathway protected by TfNSW approved barrier products with MASH TL1 barrier system. Installation of this barrier system shall be in accordance the corresponding TfNSW guidance. Such provision will be completed via the removal of the on-street parking along the eastern side of Victoria Street.

3.4 Student Drop-off/Pick-Up

The existing Oval 2 Carpark provides underground parking for up to 221 cars within the school grounds. The Oval 2 Carpark currently serves as the primary pick-up and drop-off point for parents. Access to the Oval 2 Carpark is via the Jubilee driveway/ramp off Victoria Street between the two sports fields.

It is noted that the "Jubilee driveway/ramp" work will be undertaken as part of Stage 2 works, and coordinated around School Holiday periods and/or feature a new temporary construction ramp to maintain access to the existing Oval 2 Carpark.

As such, the pick-up and drop-off point for parents will not be affected by the construction activities.

To minimise disruption to the School's pedestrian and vehicular movements, truck movements will be managed to occur outside of peak School periods, between 7.30am to 9.00am and from 2.30 to 4pm.

As such, no alternate drop-off / pick-up arrangements will be required during the ongoing construction works.

3.5 On-site Car Parking

3.5.1 Stage 1

Nill Impact.

3.5.2 Stage 2

The staff carpark currently provides underground parking within the school grounds for up to 91 cars. The staff carpark is accessed via a driveway next to Yeo Park and is controlled by a boom gate with electronic access.

Impact to existing staff car park (Oval 3), which is to be demolished. Parking loss is taken up by the surplus of car spaces available in the existing Oval 2 Carpark (Jubilee car park) for the duration of works on Oval 3, but also supplemented by TGS car parking/transport strategies currently being finalised and implemented under the approved SSDA 10371. These include:

- Green Travel Plan:
  Mode Share

TGS are actively progressing the GTP which is inclusive of short- and long-term mode share targets, showing the ramp up towards the 10% target over 10 years (10% increase in sustainable/active transport modes). There is a robust annual Monitoring Program in place to measure and take action to stay on or above target.

- OTAMP

TGS are currently producing an Operational Transport and Access Management Plan (OTAMP) which is a condition of consent for the SSDA 10371. The OTAMP will include enabling infrastructure for EV charging stations has been incorporated in the design.

- End of Trip facilities

As part of the approved works, TGS will be implementing end of trip facilities and bike parking in stage 3 to compliment the overall transport strategy.

- Travel Access Guide (TAG)

TGS are actively progressing a TAG as part of their overall transport strategy and GTP.

- Travel Surveys

TGS are currently undertaking travel surveys at this level of detail and development of strategies as required will occur annually as part of the Monitoring Plan.

Based on the above measures, the impact of the construction activities on the School's campus carpark will be minimal.

HY will also rely on the GTP and TAG to ensure that their workers will be well informed of the public transport options to/from the Site.

In addition to the above, it should be noted that under stage 2 of the TGS approved works, there will be some augmentation/refurbishment works to the existing Oval 2 Carpark (Jubilee Carpark), but ONLY at the completion of the Oval 3 Carpark works, which can accommodate up to 180 car parking spaces. The augmentation/refurbishment works will be implemented during low impact times for the School operations (School Holidays etc) to ensure minimal impact. As such, the car parking demand associated with Oval 2 Carpark will be accommodated within the new Oval 3 Carpark during ongoing construction works within the Oval 2 Carpark.

It is the intent of TGS that ALL car parking, kiss and drop construction works are completed as part of the first 2 stages of the overall project and as quickly as possible to ensure any impacts to the surrounding community are reduced and managed appropriately.

The programme allows for 2-3 weeks for the Jubilee driveway/ramp works which prohibit access to the Oval 2 Carpark. These works will be undertaken during the school shutdown holidays, to ensure availability of the carpark when required.

In the event where construction workers are permitted to drive to site i.e., for drop-off of tools; vehicles will be directed to park in less traffic-dense streets; away from the site perimeter.

Year 12 student spaces will not be affected by the proposed construction activities.

3.6 Fencing Requirements

A mix of existing fencing, hoarding with Vinyl covering and ATF Fencing with shade cloth covering will be utilised along the entire boundary of the site and will be maintained for the duration of the construction program. The fencing is to ensure unauthorised persons are kept out of the Site.

Site access gates would be provided along the Victoria Street, Prospect Road and Seaview Street frontages depending on stage and will be closed at all times outside of the permitted construction hours.

3.7 Traffic Control

Site-specific TGS's have been developed as required, to reflect specific work activities and/or changes to road conditions. See **Appendix C**.

3.8 Authorised Traffic Controller

Authorised traffic controllers will be present as required throughout the project.

Whilst on Site, the responsibilities include:

- Implementation of the Traffic Guidance Scheme.
- Pedestrian and cyclist management, to ensure that adverse conflicts between vehicle movements and pedestrians do not occur.
- Supervision of all vehicle movements across pedestrian footpaths at all times, and
- Supervision of all loading and unloading of construction materials during the deliveries in the construction phase of the project.

Refer to **Appendix C** for the Traffic Guidance Scheme for details of the proposed location of traffic controllers and associated traffic management measures.

Supervised personnel at driveway crossing points for pedestrians will be accredited traffic controllers.

3.9 Driver Code of Conduct

All drivers shall adhere to the Driver Code of Conduct, outlined in **Appendix F.**

3.10 Worker Induction

All workers and subcontractors engaged on-site would be required to complete a site induction. The induction should include permitted access routes to and from the construction site for all vehicles, as well as standard environmental, work, health and safety (WHS), driver protocols and emergency procedures.

Any workers required to undertake works or traffic control within the public domain would be suitably trained and covered by adequate and appropriate insurances.

3.11 Occasional Machinery Deliveries

The machinery delivery activity via Victoria Street would only be undertaken on few (infrequent) occasions, The occasional deliveries will be approved by Council under separate standing plant or road occupation permits.

Under the condition of these permits, residents would be informed on the dates that the nominated parking to the corners of Holwood Avenue and Victoria Street needs (See **Appendix E**) to be temporally removed. HY will be responsible to appropriately cordon off parking in the area.

4 Monitoring and Review

4.1 Work Site Inspections, Recording, Reporting and Monitoring Program

Construction work should be monitored to ensure it complies with this CTPMSP. A daily inspection before starting works should take place to ensure that conditions are in accordance with those stipulated in the plan and there are no potential hazards. Any potential risks or non-conformances to the CTMP must be identified, recorded and appropriately resolved if they arise.

4.2 Contingency Plan

A contingency plan shall be established by HY and is to be included in the overarching CEMP. Notwithstanding, **Table 11** outlines an indicative plan to be undertaken by the builder in the event that the monitoring program identifies the management plan is not effective in managing the construction impacts.

TABLE 11: CONTINGENCY PLAN

Risk		Condition Green	Condition Amber	Condition Red
Construction Movements	Trigger	Construction traffic volume is in accordance with permissible and programmed volume and time constraints	Construction traffic volumes exceeds programmed volume but is within permissible volume constraints	Construction traffic volumes exceeds permissible volume and time constraints
	Response	No response required	Review and investigate construction activities, and where appropriate, implement additional remediation measures such as: • Review CTPMSP and update where necessary • Provide additional training.	As with Condition Amber, plus; • If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies. • Stop all transportation into and out of the site.
	Trigger	No construction vehicle movement during peak periods	Construction vehicle movement close to peak periods	Construction vehicle movement during peak periods
	Response	No response required Continue monitoring program	Review and investigate construction activities, and where appropriate, implement additional remediation measures such as: • Provide additional training (including toolbox talks and further notification of	As with Condition Amber, plus; • If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies.

			Driver Code of Conduct)	• Stop all transportation into and out of the site. • Review CTPMSP and update where necessary.
Queuing	Trigger	No queuing identified	Queuing identified within site	Queuing identified on the public road
	Response	No response required Continue monitoring program	Review the delivery schedule prepared by the builder. If drivers are not following the correct schedule, then they should be provided with additional training and an extra copy of the Driver Code of Conduct	As with Condition Amber, plus • Review and investigate construction activities. • If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies. • Temporary halting of activities and resuming when conditions have improved. • Stop all transportation into and out of the site. • Review CTPMSP and update where necessary, provide additional training.
Noise	Trigger	Noise levels do not exceed imposed noise constraints	Noise levels in minor excess of imposed noise constraints	Noise levels greatly in excess of imposed noise constraints
	Response	No response required	Undertake all feasible and reasonable mitigation and management measures to minimise noise impacts.	As with Condition Amber If noise levels cannot be kept below applicable limits, then a different construction method or equipment must be utilised.
Traffic Guidance Scheme	Trigger	No observable issues	Minor inconsistencies with TGS to onsite operations	Near miss or incident occurring regardless of / as a result of the TGS being implemented
	Response	No response required	Traffic Controller to amend TGS on site and to keep a log of all changes	Stop work until an investigation has been undertake into the incident. There are to be changes made to the TGS to ensure that the safety of all workers,

				students and civilians are catered for.
Dust	Trigger	No observable dust	Minor quantities of dust in the air and tracking on to the road	Large quantities of dust in the air and tracking on to the road
	Response	No response required	Review and investigate construction activities and respective control measures, where appropriate. Implement additional remedial measures, such as: • Deployment of additional water sprays • Relocation or modification of dust-generating sources • Check condition of vibrating grids to ensure they are functioning correctly. • Temporary halting of activities and resuming when conditions have improved	As with Condition Amber. • If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies. • Implement relevant responses and undertake immediate review to avoid such occurrence in future.

Appendix A. Author CV

Dora Choi

Principal Lead – Traffic Management & Operations

Email: dora.choi@asongroup.com.au

Phone: 0450 923 889

Dora has 20 years of professional experience across the fields of urban planning, and traffic and transport engineering. With specialities in concept and schematic traffic design, road safety engineering, construction traffic management planning and major event traffic and transport operations planning, Dora focus on achieving practical, customer centred solutions commensurate with the project type, purpose and level of user experience established in collaboration with clients, delivery partners and project teams.

Dora's expertise in land use development planning and design has specific focus on car park design, traffic management system design, and loading facilities design and design of traffic systems based on the operational requirements as well as future adaptability of spaces. Dora has been involved in a broad range of traffic and transport projects providing high quality service and end to end project advice to a range of public and private sector clients.

Dora has worked on a broad range of inter-disciplinary design teams where she collaborated with clients and consultants of various disciplines in achieving forward thinking outcomes that considers both current and future needs of end users.

QUALIFICATIONS & EDUCATION

- Post Graduate Diploma in Transport and Traffic (Monash)
- Post Graduate Diploma Planning & Design (Melbourne)
- Bachelor of Science (Auckland)

PROFESSIONAL BACKGROUND

- Current Ason Group (Principal Lead: Traffic Management & Operations)
- 2018 – 2020 GTA Consultants (Associate Director)
- 2008 – 2018 Ratio Consultants (Senior Associate)
- 2013 – 2014 G20 Taskforce, Department of the Prime Minister and Cabinet (Assistant Director – Transport)
- 2007 – 2008 City of Melbourne (Senior Traffic Engineer)
- 2006 – 2007 City of Port Phillip (Transport Engineering Officer)
- 2005 – 2006 City of Port Phillip (Melbourne 2006 Commonwealth Games Operations Planner)
- 2000 – 2005 City of Port Phillip (Various Roles)

KEY SKILLS

- Transport Management and Operations Planning
- Transport Design
- Event Traffic and Transport Management Operations Planning and Delivery
- Stakeholder management

KEY PROJECTS

Warrick Lane Precinct, Blacktown NSW
Blacktown City Council

The Warrick Lane Precinct (The Precinct) is located within the Blacktown City Centre, 500 metres east of Blacktown Railway Station. The 2.8-hectare site has been identified for redevelopment as part of the of the Blacktown City Centre Transformation. The objective of the transformation is to provide employment, housing, social, cultural,

Dora Choi
Principal Lead – Traffic Management & Operations
Email: dora.choi@asongroup.com.au
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recreation and transport infrastructure within a framework of sustainability and design excellence.

Dora was engaged by Blacktown City Council to provide traffic and transport advice on the transformation project, and managed the delivery of a range of transport engineering output including schematic and detailed design input to the Project, Transport Impact Assessment in multiple phases, DA stage and Detailed Stage Construction Traffic and Pedestrian Management Plan preparation and worked closely with the broader project team.

Blacktown Health Precinct, Blacktown NSW Blacktown City Council

Blacktown Health Precinct is located to the east of the Blacktown City Centre. The Health Precinct has been identified as a transformation project of the Blacktown City Council to support the forecasted growth in population planned for Blacktown. The objective of the transformation is to provide employment and social infrastructure within a framework of sustainability and design excellence.

Dora was engaged by Blacktown City Council to provide traffic and transport advice on the transformation project, and managed the delivery of a range of transport engineering output including masterplan, strategic transport analytics and design input to the Project.

Woolworths National Loading Facilities Transport Management Safety Review | Woolworths

Dora was the National Technical Leader for the development and delivery of a loading facilities transport management safety review program for the Supermarkets branch of Woolworths which involved the development and delivery of a transport management inspection, review and reporting program involving over 1000 stores. Dora worked closely with the Health and Safety section of Woolworths and was a key member of the delivery team of the study.

Woolworths Drive Program Design Standards Development and Test Fit | Woolworths

Dora was the National Technical Design Lead for the review and provision of technical design advice to inform the development of standard layout and the design guideline of drive through facilities for Woolworth Supermarket assets. Dora has completed a series of test fits across a number of stores located in NSW, SA, WA and NT reviewing and providing design options to retrofit drive through facilities.

Woolworths Minchinbury Distribution Centre (NSW) | Woolworths

Dora was the Project Director and Transport Engineering Lead for the redesign of loading, circulation and parking facilities within the existing Woolworths Minchinbury Distribution Centre and associated Development Application Transport Assessment and Modification application.

Woolworths Fresh Refrigerated Distribution Centre (VIC) | Fabcot

Dora was the Transport Engineering Lead from feasibility phase of the project, to completion of Planning Permit application and associated Concept to Schematic Design phases of the Woolworths Fresh Project in Truganina, Victoria. The project involved the development of a fourth leg to a roundabout, B-Double queuing areas, vehicle circulation, as well as parking facilities and design of a channelised right turn facility along Foundation Road.

Woolworths Melbourne South Regional Distribution Centre (VIC) | Fabcot

Dora was the Transport Engineering Lead for the project and has provided transport engineering input from the development of the Principal's Project Requirement, assisting the Project Architect in the development of a reference design, assistance in provision of transport engineering advice to inform site selection, subsequent Concept and Schematic Design work, and Transport Impact Assessment for the Planning Application.

Victoria Police Centre (2016 – 2020) and City West Police Complex (2011 – 2015), Melbourne | Cbus Property

The recently completed Victoria Police Centre and the City West Police Complex located at the corner of Spencer Street and La Trobe Street, Melbourne forms a custom-designed, integrated precinct.

Dora was the Transport Engineering Lead for the project since 2011 and has worked collaboratively with both the Project Principal, representatives of Victoria Police and the Project Design Team to develop custom designed solutions

Dora Choi

Principal Lead – Traffic Management & Operations

Email: dora.choi@asongroup.com.au

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to traffic and transport facilities associated with the development. Dora prepared Transport Assessment reports, technical memorandums, and heavily involved in consultation with authorities and stakeholder consultation.

Secure Facilities, Melbourne | Reserve Bank of Australia

Dora was the Traffic Management Lead for the Secure Facilities developed by the Reserve Bank of Australia in Craigieburn, Melbourne.

Dora was engaged to develop traffic management arrangements, functional requirements and specifications embedded into the architectural, civil and security arrangements of the project.

Other Select Projects:

Education

Alex Avenue Public School | NSW Department of Education

Dora was the Transport Engineering Lead for the project, and assisted in the preparation of contingency parking and site access design, responses to Response to Submissions, development of School Transport Plan, and liaison with Council.

Estella Public School | NSW Department of Education

Dora was the Transport Engineering Lead for the project, and assisted in the preparation of responses to Response to Submissions, development of site access design, School Transport Plan, and liaison with key stakeholders.

Barramurra Public School | NSW Department of Education

Dora was the Transport Engineering Lead for the project, and assisted in the preparation of responses to Response to Submissions, development of site access design, School Transport Plan, and liaison with key stakeholders.

Hastings Secondary College (Port Macquarie Campus) | NSW Department of Education

Dora was the Transport Engineering Lead for the project, and assisted in the preparation of contingency parking and site access design, responses to Response to Submissions, development of Preliminary School Transport Plan, and liaison with Council.

Murrumbateman Public School | NSW Department of Education

Dora is the Transport Engineering Lead for the project, and assisted in the preparation of responses to Response to Submissions, development of site access design, School Transport Plan, and liaison with key stakeholders.

Googong Public School | NSW Department of Education

Dora is the Transport Engineering Lead for the project, and assisted in the preparation of responses to Response to Submissions, development of site access design, School Transport Plan, and liaison with key stakeholders.

North Sydney Public School | NSW Department of Education

Dora is the Transport Engineering Lead for the project, and assisted in the preparation of contingency parking and site access design, responses to Response to Submissions, development of School Transport Plan, and liaison with Council.

Mixed Use

Langston Place, Epping (NSW) | Cbus Property

88 Walker Street, North Sydney | Billbergia

1 Dension Street, North Sydney | Multiplex and The Winten Property Group

435 Collins Street, Melbourne (VIC) | Cbus Property

140 – 150 Queen Street, Melbourne (VIC) | Cbus Property

Community

Tom Wills Community Oval | Sydney Olympic Park Authority

Appendix B. Consultation with TfNSW (CJP), Inner West Council and CCC

PRE-APPROVAL CONSULTATION RECORD 01

Identified Party to Consult:	Hansen Yuncken (HY) / Ason Group / Transport for NSW / Inner West Council / Bloompark / Trinity Grammar School
Consultation type:	Teleconference/Email/Microsoft Teams Meeting
When is consultation required?	Prior to construction
Why?	To meet Condition D22
When was consultation scheduled/held?	Thursday 07/04/22 Email: Ason Group to Transport for NSW Thursday 07/04/22 Email: Ason Group to Inner West Council Tuesday, 12/04/22 Meeting: HY, Bloompark Thursday 14/04/22 Email: Transport for NSW to Ason Group Thursday 14/04/22 Email: Bloompark to HY Wednesday 20/04/22 Email: Inner West Council to HY Friday 29/04/22 Email: Inner West Council to HY Tuesday 03/05/22 Meeting: Inner West Council, HY, Bloompark
When was consultation held?	Thursday 07/04/22 Email: Ason Group to Transport for NSW Thursday 07/04/22 Email: Ason Group to Inner West Council Tuesday, 12/04/22 Meeting: HY, Bloompark Thursday 14/04/22 Email: Transport for NSW to Ason Group Thursday 14/04/22 Email: Bloompark to HY Wednesday 20/04/22 Email: Inner West Council to HY Friday 29/04/22 Email: Inner West Council to HY Tuesday 03/05/22 Meeting: Inner West Council, HY, Bloompark
Identify persons and positions who were involved	Meg Kong | Principal, Traffic Management & Operations (Ason) Daniel Ngo | Project Manager TfNSW Jake Coles | Transport for NSW Representative Boris Muha | Engineer - Traffic and Parking Services (Council) Joe Bertacco | Coordinator Development Engineering (Council) Peter Brogan | Director (Bloompark) Shaun Diamond | Senior Project Manager (Bloompark) Tim Russell | Assistant Project Manager (Bloompark)
Provide the details of the consultation	- Introduction to the project. Consultation with TfNSW, Inner West Council, Ason Group, Bloompark and Trinity Grammar School with regards to the development of the CTPMSP and CWTS.
What specific matters were discussed?	- Background and staging of the project. - Construction vehicle activity and routes. - Traffic controllers/supervising personnel. - Construction worker transportation. - Methods of monitoring potential issues. - School drop-off and pick up times.
What matters were resolved?	- Construction truck sizes and routes. - Entry/Exit to site. - Machinery delivery. - Traffic controller requirements. - Construction worker transportation and parking.

What matters are unresolved?	- None
Any remaining points of disagreement?	- No

CONDITIONS D15 & D22 - RESPONSE MATRIX

No.	Comment	AG/HY Response
1	In regard to the Haulage Plan Route: **(a)** The side street connections between Victoria Street to Holden Street are too narrow to sustain safe and proper truck movements not to mention likely	Truck to arrive/depart via Seaview Street, Prospect Road, Old Canterbury Road (Main Routes) and
	(b) Victoria Street, could be looked as an alternative, provided all trucks needing to access from the west can negotiate through all intersection, e.g. roundabouts at Arthur Street and Norton Street, signals at Liverpool Road.	20m semis to to arrive via Victoria Street and Liverpool Road (Alternative Routes for 18.1m truck
	(c) The Haulage plan is to be amended to identify what size trucks are to use routes coming to/from the site from the west and east.	See Figures 7 (main routes) and 8 (alternative) of CTPMSP.
	(d) Can all dog and trailer vehicles exit out via Prospect Road-Old Canterbury road, rather than exit back out of Victoria Street? By doing so the western routes would be more limited to 9.5m and below, for construction vehicles.	Yes, under the management of traffic controllers. See Figure 7 and Appendix E of the CTPMSP.
	(e) Can 9.5m vehicles coming to the maintenance building site in Seaview Street be contained in and out via Prospect Road?	Yes, see Figure 7 of CTPMSP. See Appendix E for swept path assessments demonstrating
2	It is viewed that the machinery delivery activity via Victoria Street would only be undertaken on few (infrequent) occasions, and that these occasions be approved under separate standing plant or road occupation permit. As to when parking	See Section 3.11 of CTPMSP.
3	No construction vehicle activity shall operate in school hour drop-off and pick up times being 8-9.30am and 2.30pm-4pm, or other hours as requested by the school.	See Section 3.4 of CTPMSP - nominated hours are 7.30am to 9.00am and from 2.30 to 4pm
4	Supervised personnel at driveway crossing points for pedestrians should also be accredited traffic controllers if traffic is required to be stopped for construction vehicle access at driveways.	See Section 3.8 of CTPMSP.
5	Per our previous agreement on site it was understood that the tail end of the central median island be removed only, and that the tail end of the median be replaced and drawn out by line marking. Signs on the median be made to remove	See Section 2.7 of the CTPMSP.
6	Parking should be made available on-site for workers, staff and displaced parent/careers (when temporarily transferred from oval 2 to 3). Oval 3 carpark has a lesser capacity of parking than Oval 2. This can collectively account for a	See Section 3.5 of the CTPMSP and Section 5.3 of the CWTS
7	The CTPMSP should be monitored accordingly, and changes made if major issues arise. Council and Police/TfNSW also reserve the right to re-enter in discussions with the builder to review the CTPMSP if major issues arise.	Noted and included in Section 1.6.1 of the CTPMSP and Section 1.3 of CWTS.
8	The builder shall assign a liaison officer to deal with any residential issues/concerns, and that the builder arrange to regularly update the community on the progress of the works.	Noted and included in Section 1.6.4 of the CTPMSP and Section 5.4.3 of the CWTS.

Meg Kong

From: Joe Bertacco <Joe.Bertacco@innerwest.nsw.gov.au>
Sent: Friday, 29 April 2022 2:11 PM
To: Meg Kong
Cc: Ross Pearson; Andrew Sukkar; Wendy Zheng; Boris Muha
Subject: RE: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Hi Meg

I refer to The CTMP submitted for Trinity Grammar,

Please find below comments for discussion. It is recommended that the issues below be discussed in a TEAMS meeting next week to ensure that agreement is reached on the changes required and to aid a speedy approval. Please advise of your teams available times and I will advise of availability of Boris and I.

Comments on CTMP

1. In regard to the Haulage Plan Route-
   (a). The side street connections between Victoria Street to Holden Street are too narrow to sustain safe and proper truck movements not to mention likely complaints from residents. Seaview Street between Farleigh Street and Holden Street is 'No Entry' towards Holden Street, thereby forcing trucks to negotiate through tight intersection corners is unacceptable.
   (b). Victoria Street, could be looked as an alternative, provided all trucks needing to access from the west can negotiate through all intersection, e.g. roundabouts at Arthur Street and Norton Street, signals at Liverpool Road.
   (c) The Haulage plan is to be amended to identify what size trucks are to use routes coming to/from the site from the west and east.
   (d) Can all dog and trailer vehicles exit out via Prospect Road-Old Canterbury road, rather than exit back out of Victoria Street? By doing so the western routes would be more limited to 9.5m and below, for construction vehicles.
   (e) Can 9.5m vehicles coming to the maintenance building site in Seaview Street be contained in and out via Prospect Road?
2. It is viewed that the machinery delivery activity via Victoria Street would only be undertaken on few (infrequent) occasions, and that these occasions be approved under separate standing plant or road occupation permit. As to when parking needs to be removed temporality to the corners of Holwood Avenue and Victoria Street is unknown. Under condition of permits, residents would be informed on dates that parking needs to be removed. The Builder is responsible to appropriately cordon off parking in the area.
3. No construction vehicle activity shall operate in school hour drop-off and pick up times being 8-9.30am and 2.30pm-4pm, or other hours as requested by the school.
4. Supervised personnel at driveway crossing points for pedestrians should also be accredited traffic controllers if traffic is required to be stopped for construction vehicle access at driveways.
5. Per our previous agreement on site it was understood that the tail end of the central median island be removed only, and that the tail end of the median be replaced and drawn out by line marking. Signs on the median be made to remove and replaced at the end of the day. -*see below*. It was viewed that some of the physical island be maintained to control traffic movement around the intersection particular after hours. This will need to be clearly rediscussed based on the available swept path movements.
6. Parking should be made available on-site for workers, staff and displaced parent/careers (when temporarily transferred from oval 2 to 3). Oval 3 carpark has a lesser capacity of parking than Oval 2.

This can collectively account for a larger demand for on-street parking which would be impactive and noticeable to the residential community. It is viewed that Oval 1 and 3 can be re-configurated in use under construction to provide off-street parking.

7. The CTPMSP should be monitored accordingly and changes made if major issues arise. Council and Police/TfNSW also reserve the right to re-enter in discussions with the builder to review the CTMP if major issues arise.
8. The builder shall assign a liaison officer to deal with any residential issues/concerns, and that the builder arrange to regularly update the community on the progress of the works.

Note. Information is only descriptive, and markings may appear off-set from its actual position.

Any other additional issues we will also be raised and discussed at the meeting.

Regards

Joe Bertacco
Coordinator Development Engineering
p +61 2 9335 2225 e Joe.Bertacco@innerwest.nsw.gov.au m 0421 619 358

Council acknowledges the Traditional Custodians of these lands, the Gadigal-Wangal people of the Eora Nation.

From: Meg Kong <meg.kong@asongroup.com.au>
Sent: Wednesday, 20 April 2022 8:56 AM
To: Boris Muha <Boris.Muha@innerwest.nsw.gov.au>; Joe Bertacco <Joe.Bertacco@innerwest.nsw.gov.au>
Cc: Sasha Vuckovic <SVuckovic@hansenyuncken.com.au>; Matthew Coelho <MCoelho@hansenyuncken.com.au>; Michaella Edwards <MichaellaEdwards@hansenyuncken.com.au>; Richard Osullivan <RO'Sullivan@hansenyuncken.com.au>; Michael Gibson <MGibson@hansenyuncken.com.au>; Ross Pearson <RPearson@hansenyuncken.com.au>; Andrew Sukkar <ASukkar@hansenyuncken.com.au>; Dora Choi <dora.choi@asongroup.com.au>; Wendy Zheng <wendy.zheng@asongroup.com.au>; 'council@innerwest.nsw.gov.au'
Subject: RE: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

> Some people who received this message don't often get email from meg.kong@asongroup.com.au. Learn why this is important

Hi Boris

Hope you are well and had a good Easter break.

Just following up on the indicative timing of Council's comments.

Thank you in advance.

Kind regards

Meg Kong
Principal - Traffic Management & Operations | Ason Group

T: +61 2 9083 6601 | M: +61 424 007 141 | E: meg.kong@asongroup.com.au
A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

From: Meg Kong
Sent: Thursday, 7 April 2022 5:18 PM
To: Boris.Muha@innerwest.nsw.gov.au; Joe.Bertacco@innerwest.nsw.gov.au
Cc: Sasha Vuckovic <SVuckovic@hansenyuncken.com.au>; Matthew Coelho <MCoelho@hansenyuncken.com.au>; Michaella Edwards <MichaellaEdwards@hansenyuncken.com.au>; Richard Osullivan <RO'Sullivan@hansenyuncken.com.au>; Michael Gibson <MGibson@hansenyuncken.com.au>; Ross Pearson <RPearson@hansenyuncken.com.au>; Andrew Sukkar <ASukkar@hansenyuncken.com.au>; Dora Choi <dora.choi@asongroup.com.au>; Wendy Zheng <wendy.zheng@asongroup.com.au>; 'council@innerwest.nsw.gov.au'
Subject: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Hi Boris, Joe

Hope you are keeping well.

Condition D15(b) requires us to prepare the CTPMSP for Trinity Grammar School, Summer Hill Campus (Stages 1 and 2) works in consultation with Council.

D15. The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following:

(a) be prepared by a suitably qualified and experienced person(s);

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(c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services;

(d) incorporate the measures outlined in the Construction Traffic Management Plan framework submitted with the EIS;

(e) incorporate measures to minimise conflicts between the construction vehicles and ongoing operations of the school including student safety during construction periods, details of equitable, all abilities access within the site;

(f) details of alternate drop-off / pick-up and car parking arrangements during ongoing construction works within the Jubilee car park;

(g) details of alternate parking arrangements (if needed) for the staff and driving age students, during ongoing construction works within the basement (where relevant);

(h) details of on-site parking for construction vehicles and work zones on the surrounding streets, where needed and in consultation with Council; and

(i) detail heavy vehicle routes, access and parking arrangements for heavy construction vehicles.

Please download the plan from the link below:

P1896r01v03 CTPMSP_Trinity Grammar School, 119 Prospect Road, Summer Hill.pdf

Appreciate Council's review and comments. Feel free to contact me if you have any questions.

Kind regards

Meg Kong
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T: +61 2 9083 6601 | M: +61 424 007 141 | E: meg.kong@asongroup.com.au
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Subject: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Tracking:

Recipient	Delivery	Read
Boris.Muha@innerwest.nsw.gov.au		
Joe.Bertacco@innerwest.nsw.gov.a		
Sasha Vuckovic		
Matthew Coelho		
Michaella Edwards		
Richard Osullivan		
Michael Gibson		
Ross Pearson		
Andrew Sukkar		
Dora Choi	Delivered: 7/04/2022 5:19 PM	Read: 7/04/2022 5:26 PM
Wendy Zheng	Delivered: 7/04/2022 5:19 PM	
'council@innerwest.nsw.gov.au'		

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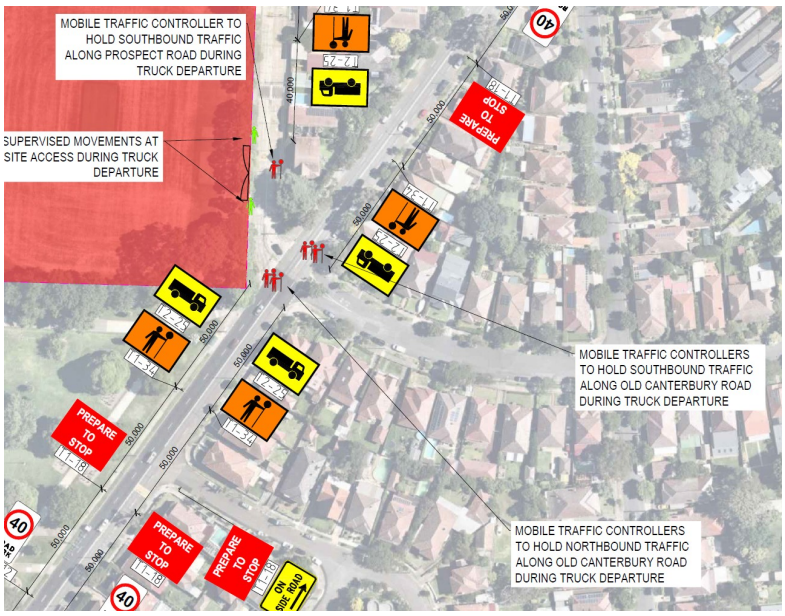
A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

Meg Kong

From: Daniel Ngo <Daniel.Ngo@transport.nsw.gov.au>
Sent: Thursday, 14 April 2022 1:33 PM
To: Meg Kong
Subject: RE: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Hi Meg,

Please see our comments below for your CTMP.

Item	Reviewer Org	Reviewer Name	Document Reference	Reviewer Comment
1	CJP	D.Ngo	Appendix B	Any traffic control/devices on Old Canterbury Road is subject to further ROL applications and TfNSW approval. This TGS/ROL is unlikely to be issued for peak periods as it requires a lane closure and traffic stoppages on Old Canterbury Road.
1	CJP	D.Ngo	Appendix B	TGS shows the use of two traffic controllers stopping northbound or southbound traffic on Old Canterbury Road during truck arrivals and departures. Traffic controllers cannot hold two lanes of traffic. The use of lane closures in each direction and porta-booms to remove traffic controllers from line of traffic will be required. 

Regards,

Daniel Ngo
Project Manager
Operations
Customer Journey Planning
Transport for NSW

M 0484 374 559 **E** daniel.ngo@transport.nsw.gov.au

transport.nsw.gov.au

25 Garden Street

Eveleigh NSW 2015

Transport for NSW

From: >
Sent: Tuesday, 12 April 2022 2:16 PM
To: Jake Coles <Jake.COLES@transport.nsw.gov.au>
Subject: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Hi Jake

Hope you are keeping well.

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Appreciate TfNSW's review and comments. Feel free to contact me if you have any questions.

Kind regards

Meg Kong
Principal - Traffic Management & Operations | Ason Group

T: +61 2 9083 6601 | M: +61 424 007 141 | E: meg.kong@asongroup.com.au
A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

OFFICIAL

OFFICIAL

Meg Kong

From: Meg Kong
Sent: Thursday, 7 April 2022 5:12 PM
To: Development Applications; development.CTMP.CJP@transport.nsw.gov.au; Jake Coles
Cc: Sasha Vuckovic; Matthew Coelho; Michaella Edwards; Richard Osullivan; Michael Gibson; Ross Pearson; Andrew Sukkar; Dora Choi; Wendy Zheng
Subject: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Tracking:

Recipient	Delivery
Development Applications	
development.CTMP.CJP@transport.nsw.gov.au	
Jake Coles	
Sasha Vuckovic	
Matthew Coelho	
Michaella Edwards	
Richard Osullivan	
Michael Gibson	
Ross Pearson	
Andrew Sukkar	
Dora Choi	Delivered: 7/04/2022 5:12 PM
Wendy Zheng	Delivered: 7/04/2022 5:12 PM

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Appreciate TfNSW's review and comments. Feel free to contact me if you have any questions.

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Meg Kong
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T: +61 2 9083 6601 | M: +61 424 007 141 | E: meg.kong@asongroup.com.au
A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

Appendix C. Traffic Guidance Scheme

LEGEND

- WORK AREA
- SIGN AND POST
- EXISTING FENCING (1.8M) (BANNER MESH COVERING)
- HOARDING (2.4M) (VINYL COVERING)
- ATF FENCING (1.8M) (SHADE CLOTH COVERING)
- EXISTING FENCE
- ACCESS GATE
- TRAFFIC CONE
- PORTABOOM

TGS GENERAL NOTES

- ALL PUBLIC ROADS WILL HAVE A SPEED LIMIT OF 50KM/H UNLESS IDENTIFIED OTHERWISE
- NOT ALL DIMENSIONS SHOWN ARE TO SCALE
- LOCATION OF SIGNS ARE TO BE CONFIRMED ON-SITE TO ENSURE APPROPRIATE VISIBILITY
- ALL SIGNS ARE TO BE MINIMUM SIZE A
- ALL SIGNS ARE TO BE CLASS 1 RETROREFLECTIVE
- ALL TRAFFIC CONTROL PLANS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH TFNSW'S TRAFFIC CONTROL AT WORK SITES TECHNICAL MANUAL ISSUE 6 (RELEASED 2020) AND AUSTRALIAN STANDARDS AS1742.3:2019 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 3: TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS
- THIS TRAFFIC CONTROL PLAN MUST BE SET UP BY A PERSON HOLDING AN "IMPLEMENT TRAFFIC MANAGEMENT PLAN" TICKET AND TFNSW'S TRAFFIC CONTROL AT WORK SITES CHECKLIST SHALL BE COMPLETED PRIOR TO IMPLEMENTATION

- THE ACCREDITED PERSONNEL SHALL IMPLEMENT THE APPROVED TCP BEFORE ANY PHYSICAL WORK COMMENCES AND ENSURE A COPY OF THE TCP IS KEPT ON-SITE. THE ACCREDITED PERSONNEL SHALL ALSO DRIVE THROUGH THE SITE BEFORE WORKS BEGIN TO ENSURE THAT THE TCP HAS BEEN IMPLEMENTED CORRECTLY AND THAT THE IT WILL WARN, INSTRUCT AND GUIDE ROAD USERS AS DESIGNED. ANY VARIATIONS TO THE PLAN MUST BE MARKED ON THE PLAN AND INITIALED BY THE ACCREDITED PERSONNEL
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  * VEHICULAR ACCESS AND SERVICING REQUIREMENTS ARE TO BE MAINTAINED AT ALL TIMES TO ADJACENT PROPERTIES AFFECTED BY TRAFFIC CONTROL MEASURES
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- ALL SIGNAGE IS TO BE CLEAN, CLEARLY VISIBLE AND NOT OBSCURED
- ALL WORKERS MUST ADHERE TO THE APPLICABLE SAFE WORK DISTANCE AS DESCRIBED IN AS1742.3:2019
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- IF REQUIRED, A TGS MUST BE SELECTED, DEVELOPED AND IMPLEMENTED BY A SUITABILITY QUALIFIED PERSON (PWZTMP AND ITCP QUALIFICATIONS)

MOBILE TRAFFIC CONTROLLER TO HOLD SOUTHBOUND TRAFFIC ALONG PROSPECT ROAD DURING TRUCK ARRIVAL

SUPERVISED MOVEMENTS AT SITE ACCESS DURING TRUCK ARRIVAL

MOBILE TRAFFIC CONTROLLERS TO HOLD NORTHBOUND TRAFFIC VIA PORTABLE BOOMGATE ALONG OLD CANTERBURY ROAD DURING TRUCK ARRIVAL

Horwood Avenue
Victoria Street
Harland Street
Hurlstone Avenue
Prospect Road
Old Canterbury Road
Dixson Avenue
Arlington Street
Hugh Avenue

AMENDMENTS

REV	DATE	DESCRIPTION	DRW	CHK	APP
2	05.04.22	FINAL	SB	MK	MK

GENERAL NOTES

This drawing is provided for information purposes only and should not be used for construction.
Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Old Canterbury Road and Prospect Road have a posted speed limit of 50km/h.

DESIGNED: Meg Kong	PAPER SIZE: A1
CHECKED BY: M. KONG	DATE: 05.04.2022
APPROVED BY: M. KONG	SCALE: Custom

CLIENT: HANSEN YUNCKEN

PROJECT: 1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

TRAFFIC GUIDANCE SCHEME FOR SITE ACCESS (ARRIVAL)

OLD CANTERBURY ROAD & PROSPECT ROAD (STAGE 2)

DRAWING STATUS: XXXX

FILE NAME: AG1896-02-v05.dwg

SHEET: AG01

.\CAD Template\asongroup.jpg
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

LEGEND

- WORK AREA
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MOBILE TRAFFIC CONTROLLERS TO HOLD NORTHBOUND TRAFFIC VIA PORTABLE BOOMGATE ALONG OLD CANTERBURY ROAD DURING TRUCK ARRIVAL

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Hurlstone Avenue
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Dixson Avenue
Arlington Street
Hugh Avenue

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REV	DATE	DESCRIPTION	DRW	CHK	APP
2	05.04.22	FINAL	SB	MK	MK

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
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DESIGNED: Meg Kong	PAPER SIZE: A1
CHECKED BY: M. KONG	DATE: 05.04.2022
APPROVED BY: M. KONG	SCALE: Custom

CLIENT: HANSEN YUNCKEN

PROJECT: 1896

119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

TRAFFIC GUIDANCE SCHEME FOR SITE ACCESS (DEPARTURE)

OLD CANTERBURY ROAD & PROSPECT ROAD (STAGE 2)

DRAWING STATUS: XXXX

FILE NAME: AG1896-02-v05.dwg

SHEET: AG02

.\CAD Template\asongroup.jpg
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

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SEAVIEW STREET

VICTORIA STREET

T2-25

40,000

50,000

T2-25

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- IF REQUIRED, A TGS MUST BE SELECTED, DEVELOPED AND IMPLEMENTED BY A SUITABILITY QUALIFIED PERSON (PWZTMP AND ITCP QUALIFICATIONS)

N

AMENDMENTS

REV	DATE	DESCRIPTION	DRW	CHK	APP
2	05.04.22	FINAL	SB	MK	MK

GENERAL NOTES

This drawing is provided for information purposes only and should not be used for construction.
Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Seaview Street has a posted speed limit of 50km/h.

DESIGNED: Meg Kong	PAPER SIZE: A1
CHECKED BY: M. KONG	DATE: 05.04.2022
APPROVED BY: M. KONG	SCALE: Custom

CLIENT: HANSEN YUNCKEN

PROJECT: 1896

119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

TRAFFIC GUIDANCE SCHEME FOR SITE ACCESS (ARRIVAL)

ALONG SEAVIEW STREET (STAGE 1 - PRE DEMOLITION)

DRAWING STATUS: XXXX

FILE NAME: AG1896-02-v05.dwg

SHEET: AG03

.\CAD Template\asongroup.jpg

Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

LEGEND

- WORK AREA
- SIGN AND POST
- EXISTING FENCING (1.8M) (BANNER MESH COVERING)
- HOARDING (2.4M) (VINYL COVERING)
- ATF FENCING (1.8M) (SHADE CLOTH COVERING)
- EXISTING FENCE
- ACCESS GATE

VICTORIA STREET

HARLAND STREET

12-25

50,000

ON SIDE ROAD

SUPERVISED MOVEMENTS AT SITE ACCESS DURING TRUCK ARRIVAL AND DEPARTURE

BOOM GATE SYSTEM AND CENTRAL MEDIAN TO BE REMOVED TO ACCOMMODATE TRUCK TURNING PATHS

N

TGS GENERAL NOTES

- ALL PUBLIC ROADS WILL HAVE A SPEED LIMIT OF 50KM/H UNLESS IDENTIFIED OTHERWISE
- NOT ALL DIMENSIONS SHOWN ARE TO SCALE
- LOCATION OF SIGNS ARE TO BE CONFIRMED ON-SITE TO ENSURE APPROPRIATE VISIBILITY
- ALL SIGNS ARE TO BE MINIMUM SIZE A
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AMENDMENTS

REV	DATE	DESCRIPTION	DRW	CHK	APP
2	05.04.22	FINAL	SB	MK	MK

GENERAL NOTES

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Victoria Street and Harland Street have a posted speed limit of 50km/h.

DESIGNED: Meg Kong	PAPER SIZE: A1
CHECKED BY: M. KONG	DATE: 05.04.2022
APPROVED BY: M. KONG	SCALE: Custom

CLIENT: HANSEN YUNCKEN

PROJECT: 1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

TRAFFIC GUIDANCE SCHEME FOR SITE ACCESS

ALONG VICTORIA STREET (STAGE 2)

DRAWING STATUS: XXXX

FILE NAME: AG1896-02-v05.dwg

SHEET: AG05

.\CAD Template\asongroup.jpg

Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

LEGEND

- WORK AREA
- SIGN AND POST
- EXISTING FENCING (1.8M) (BANNER MESH COVERING)
- HOARDING (2.4M) (VINYL COVERING)
- ATF FENCING (1.8M) (SHADE CLOTH COVERING)
- EXISTING FENCE
- ACCESS GATE

VICTORIA STREET

HARLAND STREET

T1-5 SIDE ROAD ON

10.000

50.000

50.000

113.240

50.000

T1-5 R4-212 ROAD WORK 40

T1-18 PREPARE TO STOP

T2-25

SUPERVISED PEDESTRIAN MOVEMENTS AT SITE ACCESS DURING TRUCK ARRIVAL AND DEPARTURE

T1-5 T1-18 PREPARE TO STOP T1-5 SIDE ROAD ON T2-25

20.000 20.000

50.000

T2-25

PREPARE TO STOP T1-18

50.000

40 ROAD WORK R4-212 T1-5

50.000

N

TGS GENERAL NOTES

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AMENDMENTS

REV	DATE	DESCRIPTION	DRW	CHK	APP
2	05.04.22	FINAL	SB	MK	MK

GENERAL NOTES

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Victoria Street and Harland Street have a posted speed limit of 50km/h.

DESIGNED: Meg Kong	PAPER SIZE: A1
CHECKED BY: M. KONG	DATE: 05.04.2022
APPROVED BY: M. KONG	SCALE: Custom

CLIENT: HANSEN YUNCKEN

PROJECT: 1896

119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

SITE ACCESS TGS FOR VEHICLES SMALLER THAN A 12.5M HRV

ALONG VICTORIA STREET AND HARLAND STREET (STAGE 2)

DRAWING STATUS: XXXX

FILE NAME: AG1896-02-v05.dwg

SHEET: AG06

.\CAD Template\asongroup.jpg

Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

LEGEND

- WORK AREA
- SIGN AND POST
- EXISTING FENCING (1.8M) (BANNER MESH COVERING)
- HOARDING (2.4M) (VINYL COVERING)
- ATF FENCING (1.8M) (SHADE CLOTH COVERING)
- EXISTING FENCE
- ACCESS GATE

TGS GENERAL NOTES

- ALL PUBLIC ROADS WILL HAVE A SPEED LIMIT OF 50KM/H UNLESS IDENTIFIED OTHERWISE
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VICTORIA STREET

HARLAND STREET

10,000 | 20,000 | 20,000

50,000 | 50,000 | 113,240 | 50,000 | 50,000 | 50,000

T1-5 | ON SIDE ROAD

R4-212 | ROAD WORK | 40 | T1-5

T1-18 | PREPARE TO STOP

T1-34 | T2-25

T1-34 | T2-25 | ON SIDE ROAD | T1-18 | T1-5

T1-34 | T2-25

T1-18 | PREPARE TO STOP

R4-212 | 40 | ROAD WORK | T1-5

MOBILE TRAFFIC CONTROLLER TO HOLD SOUTHBOUND TRAFFIC ALONG VICTORIA STREET DURING TRUCK DEPARTURE

SUPERVISED PEDESTRIAN MOVEMENTS AT SITE ACCESS DURING TRUCK ARRIVAL AND DEPARTURE

MOBILE TRAFFIC CONTROLLER TO HOLD NORTHBOUND TRAFFIC ALONG VICTORIA STREET DURING TRUCK DEPARTURE

N

AMENDMENTS

REV	DATE	DESCRIPTION	DRW	CHK	APP
2	05.04.22	FINAL	SB	MK	MK

GENERAL NOTES

This drawing is provided for information purposes only and should not be used for construction.
Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Old Canterbury Road and Prospect Road have a posted speed limit of 50km/h.

DESIGNED: Meg Kong	PAPER SIZE: A1
CHECKED BY: M. KONG	DATE: 05.04.2022
APPROVED BY: M. KONG	SCALE: Custom

CLIENT: HANSEN YUNCKEN

PROJECT: 1896

119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

SITE ACCESS TGS FOR VEHICLES LARGER THAN A 12.5M HRV

ALONG VICTORIA STREET AND HARLAND STREET (STAGE 2)

DRAWING STATUS: XXXX

FILE NAME: AG1896-02-v05.dwg

SHEET: AG07

.\CAD Template\asongroup.jpg
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

TGS GENERAL NOTES

- ALL PUBLIC ROADS WILL HAVE A SPEED LIMIT OF 50KM/H UNLESS IDENTIFIED OTHERWISE
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AMENDMENTS

REV	DATE	DESCRIPTION	DRW	CHK	APP
2	05.04.22	FINAL	SB	MK	MK

GENERAL NOTES

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Victoria Street and Harland Street have a posted speed limit of 50km/h.

DESIGNED	Meg Kong	PAPER SIZE	A1
CHECKED BY	M. KONG	DATE	05.04.2022
APPROVED BY	M. KONG	SCALE	Custom

CLIENT

HANSEN YUNCKEN

PROJECT

1896

119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

TRAFFIC GUIDANCE SCHEME FOR MACHINERY DELIVERY

ALONG VICTORIA STREET AND HOLWOOD AVENUE

.\CAD Template\asongroup.jpg

Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

DRAWING STATUS	FILE NAME	SHEET
XXXX	AG1896-02-v05.dwg	AG08

PLOT DATE: 4/05/2022 6:27:11 PM | CAD REFERENCE: C:\Users\Meg Kong\Documents\1896\AG1896-02-v05.dwg | Meg Kong |

LEGEND

- WORK AREA
- SIGN AND POST
- EXISTING FENCING (1.8M) (BANNER MESH COVERING)
- HOARDING (2.4M) (VINYL COVERING)
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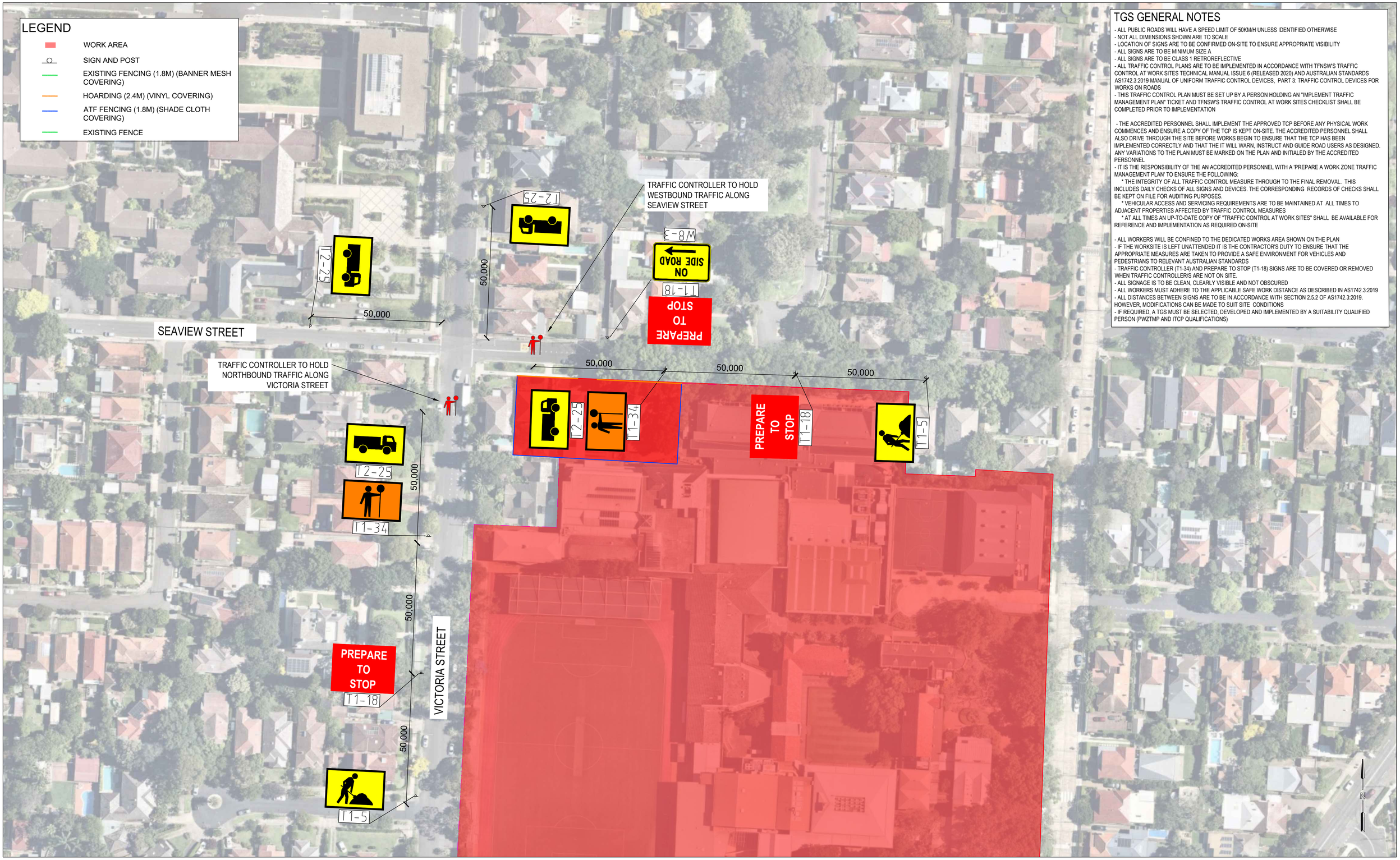
- EXISTING FENCE



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AMENDMENTS

REV	DATE	DESCRIPTION	DRW	CHK	APP
1	04.05.22	FINAL	SB	MK	MK

GENERAL NOTES

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Victoria Street and Seaview Street have a posted speed limit of 50km/h.

DESIGNED: Sadeepth	PAPER SIZE: A1
CHECKED BY: M. KONG	DATE: 04.05.2022
APPROVED BY: M. KONG	SCALE: Custom

CLIENT: HANSEN YUNCKEN

PROJECT: 1896

119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

TRAFFIC GUIDANCE SCHEME FOR TURNING TRUCK & DOG

VICTORIA STREET AND SEAVIEW STREET

DRAWING STATUS: XXXX	FILE NAME: AG1896-04-v01.dwg	SHEET: AG01

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Sydney NSW 2000
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LEGEND

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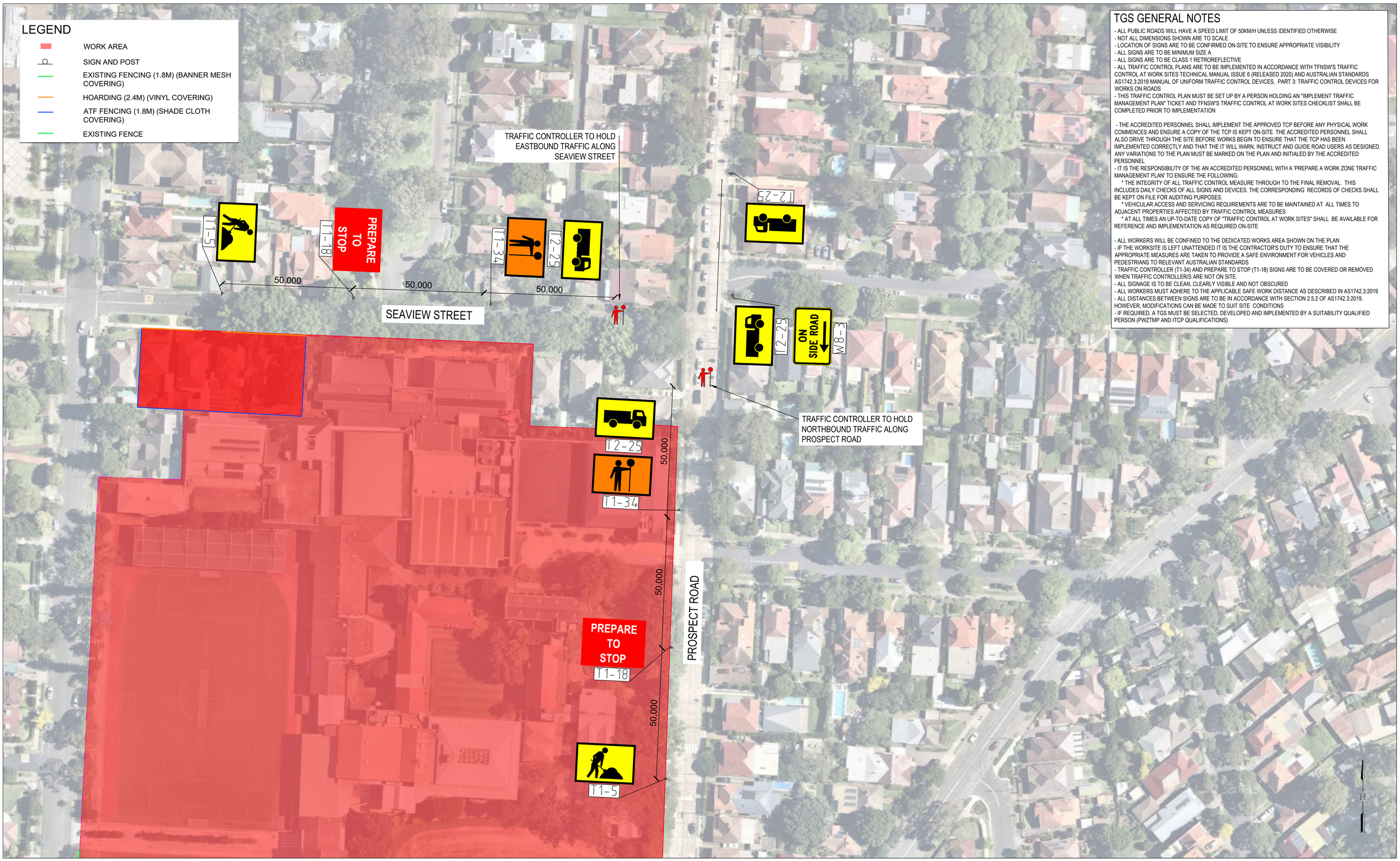
- HOARDING (2.4M) (VINYL COVERING)
- ATF FENCING (1.8M) (SHADE CLOTH COVERING)
- EXISTING FENCE



TGS GENERAL NOTES

- ALL PUBLIC ROADS WILL HAVE A SPEED LIMIT OF 50KM/H UNLESS IDENTIFIED OTHERWISE
- NOT ALL DIMENSIONS SHOWN ARE TO SCALE
- LOCATION OF SIGNS ARE TO BE CONFIRMED ON-SITE TO ENSURE APPROPRIATE VISIBILITY
- ALL SIGNS ARE TO BE MINIMUM SIZE A
- ALL SIGNS ARE TO BE CLASS 1 RETROREFLECTIVE
- ALL TRAFFIC CONTROL PLANS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH TFNSW'S TRAFFIC CONTROL AT WORK SITES TECHNICAL MANUAL ISSUE 6 (RELEASED 2020) AND AUSTRALIAN STANDARDS AS1742.3:2019 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 3: TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS
- THIS TRAFFIC CONTROL PLAN MUST BE SET UP BY A PERSON HOLDING AN "IMPLEMENT TRAFFIC MANAGEMENT PLAN" TICKET AND TFNSW'S TRAFFIC CONTROL AT WORK SITES CHECKLIST SHALL BE COMPLETED PRIOR TO IMPLEMENTATION

- THE ACCREDITED PERSONNEL SHALL IMPLEMENT THE APPROVED TCP BEFORE ANY PHYSICAL WORK COMMENCES AND ENSURE A COPY OF THE TCP IS KEPT ON-SITE. THE ACCREDITED PERSONNEL SHALL ALSO DRIVE THROUGH THE SITE BEFORE WORKS BEGIN TO ENSURE THAT THE TCP HAS BEEN IMPLEMENTED CORRECTLY AND THAT THE IT WILL WARN, INSTRUCT AND GUIDE ROAD USERS AS DESIGNED. ANY VARIATIONS TO THE PLAN MUST BE MARKED ON THE PLAN AND INITIALED BY THE ACCREDITED PERSONNEL
- IT IS THE RESPONSIBILITY OF THE AN ACCREDITED PERSONNEL WITH A 'PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN' TO ENSURE THE FOLLOWING:
  - * THE INTEGRITY OF ALL TRAFFIC CONTROL MEASURE THROUGH TO THE FINAL REMOVAL. THIS INCLUDES DAILY CHECKS OF ALL SIGNS AND DEVICES. THE CORRESPONDING RECORDS OF CHECKS SHALL BE KEPT ON FILE FOR AUDITING PURPOSES.
  - * VEHICULAR ACCESS AND SERVICING REQUIREMENTS ARE TO BE MAINTAINED AT ALL TIMES TO ADJACENT PROPERTIES AFFECTED BY TRAFFIC CONTROL MEASURES
  - * AT ALL TIMES AN UP-TO-DATE COPY OF "TRAFFIC CONTROL AT WORK SITES" SHALL BE AVAILABLE FOR REFERENCE AND IMPLEMENTATION AS REQUIRED ON-SITE

- ALL WORKERS WILL BE CONFINED TO THE DEDICATED WORKS AREA SHOWN ON THE PLAN
- IF THE WORKSITE IS LEFT UNATTENDED IT IS THE CONTRACTOR'S DUTY TO ENSURE THAT THE APPROPRIATE MEASURES ARE TAKEN TO PROVIDE A SAFE ENVIRONMENT FOR VEHICLES AND PEDESTRIANS TO RELEVANT AUSTRALIAN STANDARDS
- TRAFFIC CONTROLLER (T1-34) AND PREPARE TO STOP (T1-18) SIGNS ARE TO BE COVERED OR REMOVED WHEN TRAFFIC CONTROLLERS ARE NOT ON SITE.
- ALL SIGNAGE IS TO BE CLEAN, CLEARLY VISIBLE AND NOT OBSCURED
- ALL WORKERS MUST ADHERE TO THE APPLICABLE SAFE WORK DISTANCE AS DESCRIBED IN AS1742.3:2019
- ALL DISTANCES BETWEEN SIGNS ARE TO BE IN ACCORDANCE WITH SECTION 2.5.2 OF AS1742.3:2019. HOWEVER, MODIFICATIONS CAN BE MADE TO SUIT SITE CONDITIONS
- IF REQUIRED, A TGS MUST BE SELECTED, DEVELOPED AND IMPLEMENTED BY A SUITABILITY QUALIFIED PERSON (PWZTMP AND ITCP QUALIFICATIONS)

AMENDMENTS

REV	DATE	DESCRIPTION	DRW	CHK	APP
1	04.05.22	FINAL	SB	MK	MK

GENERAL NOTES

This drawing is provided for information purposes only and should not be used for construction.
Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Prospect Road and Seaview Street have a posted speed limit of 50km/h.

DESIGNED: Sadeepth	PAPER SIZE: A1
CHECKED BY: M. KONG	DATE: 04.05.2022
APPROVED BY: M. KONG	SCALE: Custom

CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
TRAFFIC GUIDANCE SCHEME FOR TURNING TRUCK & DOG
PROSPECT ROAD AND SEAVIEW STREET

DRAWING STATUS: XXXX
FILE NAME: AG1896-04-v01.dwg
SHEET: AG02

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Appendix D. Risk Assessment

Trinity Grammar School, Summer Hill Campus
Risk Assessment

Project Number	1896
Project Name	Trinity Grammar School, Summer Hill Campus
Site Location	119 Prospect Road, Summer Hill
Date of Assessment	30th March 2022
Revision	Issue A

Name	Company	Title
M.Kong	Ason Group	Principal - Traffic Management & Operations

Document Control

Date Issued	Revision	Issued By	Checked By
30/03/2022	Draft	S. Kong	

Risk Matrix		**Consequence**				
		Minor	Major	Severe	Critical	Catastrophic
		A	B	C	D	E
Very Unlikely	1	Low	Low	Medium	Medium	Medium
Unlikely	2	Low	Low	Medium	Medium	High
Possible	3	Low	Medium	High	High	High
Likely	4	Medium	Medium	High	High	Extreme
Almost Certain	5	Medium	High	High	Extreme	Extreme

Description	
A - Minor	Could result in injury or illness not resulting in a lost workday or minimal environmental damage not required to be notified under jurisdiction requirements.
B - Major	Could result in injury or illness resulting in one or more lost workday(s) or environmental damage can be mitigated and is not required to be notified under jurisdiction
C - Severe	requirements where restoration activities can be accomplished.
D - Critical	Could result in permanent partial disability, injuries or illness that may result in
E - Catastrophic	hospitalisation of persons or environmental damage can be mitigated and is required to be notified under jurisdiction requirements.

Likelihood Descriptor	Design Likelihood
1 - Very unlikely	Industry experience suggests design failure is very unlikely. It can be assumed failure
2 - Unlikely	Industry experience suggests design failure is unlikely to occur in the life of design.
3 - Possible	Industry experience suggests design failure is possible sometime during the life of the
4 - Likely	Industry experience suggests design failure is likely to occur during the life of the product.
5 - Almost certain	Industry experience suggests design failure is almost certain to occur during the life of the

Risk Assessment

ID. Ref	Risk and/ or Hazard	Risk Description	Location	Existing Control	Initial Risk Rating			Design Response to risk and /or hazard	Status of Risk	Assignment of risk or hazard	Residual risk rating		
					C	L	RR				C	L	RR
1	Unauthorized Access to the Site	Site prevents unauthorised access	Entire Site	Nil	C	3	High	Boundary fence will be provided as part of the works. The design provides a defined separation between public areas and work area.	Design Solution	Main Contractor	B	2	Low
2	Interaction between pedestrians and vehicles	Vehicles and pedestrians to be separates as best possible	Entire Site & Access Roads	Nil	D	3	High	Footpath and pedestrian crossings will be retained. Pedestrian controllers to be provided at all site accesses. Reduction of posted speed limit to 40kmph along the school's frontage roads. Truck drivers will be inducted to drive safely and at posted speed limit at all times.	Design Solution	Main Contractor	B	2	Low
3	Potential vehicle conflict points	Vehicles can crash with each other while manoeuvring within the site	Entire Site & Access Roads	Nil	B	3	Medium	Truck visitation will be programmed in a way that only one vehicle will arrive or depart at any one time. In addition, truck drivers will be inducted to	Design Solution	Main Contractor	B	1	Low

ID. Ref	Risk and/ or Hazard	Risk Description	Location	Existing Control	Initial Risk Rating			Design Response to risk and /or hazard	Status of Risk	Assignment of risk or hazard	Residual risk rating		
					C	L	RR				C	L	RR
								drive safely and no more than 10kmph within the site at all times.					
4	Fatigue	Injury caused by fatigue	Entire Site	Nil	C	3	High	Toolbox meetings and regular breaks (in line with WHS practices) to minimise fatigue	Design Solution	Main Contractor	B	1	Low
5	Fall risks	Injury due to falls (in general)	Entire Site	Nil	E	3	High	Ensuring level changes across the site to be minimised as best possible, with additional black & yellow hazard tape/marking being installed where appropriate. Installation of handrails where level changes / ramps grades are significant.	Design Solution	Main Contractor	C	2	Medium
6	Misdirected access into neighbouring site	Vehicle in unsafe locations	Entire Site	Nil	C	3	High	Ensuring appropriate directional signage has been provided to ensure vehicles do not access the wrong construction site, which could create potential safety breaches and hazards	Design Solution	Main Contractor	B	2	Low

ID. Ref	Risk and/ or Hazard	Risk Description	Location	Existing Control	Initial Risk Rating			Design Response to risk and /or hazard	Status of Risk	Assignment of risk or hazard	Residual risk rating		
					C	L	RR				C	L	RR
								for all partied. In addition, all drivers will undertake an induction of the site layout prior to arriving to the site.					
7	Conflicting Traffic Management	Coordinating Traffic Controllers could create misleading and wrong advice	Entire Site	Nil	C	3	High	Toolbox meetings, regular liaison with all construction teams and review of signage plans on site in order to minimise contradicting signage.	Design Solution	Main Contractor	C	2	Medium

Appendix E. Swept Path Assessment

GENERAL NOTES

This drawing is provided for information purposes only and should not be used for construction.
Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Victoria Street, Prospect Road and Old Canterbury Road have a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: Truck & Dog Check Vehicle: Truck & Dog

DESIGNED: Sadeepth B	PAPER SIZE: A3	CLIENT: HANSEN YUNCKEN	DOCUMENT INFORMATION: SWEPT PATH ASSESSMENT
APPROVED BY: M. KONG	DATE: 30.03.2022	PROJECT: 1896	TRUCK AND DOG ACCESS
SCALE: 1:500	0 5 10	119 PROSPECT ROAD, SUMMER HILL	FILE NAME: AG1896-01-v02.dwg / SHEET: AG02

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Victoria Street, Prospect Road and Old Canterbury Road have a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: Truck & Dog Check Vehicle: Truck & Dog

DESIGNED	Sadeepth B
PAPER SIZE	A3
APPROVED BY	M. KONG
DATE	30.03.2022
SCALE	1:500
	0 5 10

CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT
TRUCK AND DOG ACCESS

FILE NAME	SHEET
AG1896-01-v02.dwg	AG03

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PLOT DATE: 30/03/2022 4:30:27 PM | CAD REFERENCE: C:\Users\Sadeepth B\Documents\1896 - Trinity College\New\AG1896-01-v01 - Standard\AG1896-01-v02.dwg | Sadeepth B |

GENERAL NOTES

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Victoria Street has a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: 20.0m AV   Check Vehicle: 20.0m AV

DESIGNED	Sadeepth B
PAPER SIZE	A3
APPROVED BY	M. KONG
DATE	30.03.2022
SCALE	1:500

0 5 10

CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT
20.0M AV ACCESS FOR MACHINERY DELIVERY

FILE NAME	SHEET
AG1896-01-v02.dwg	AG05

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Seaview Street has a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: 9.45m Construction Vehicle   Check Vehicle: 9.45m Construction Vehicle

DESIGNED	PAPER SIZE
Sadeepth B	A3
APPROVED BY	DATE
M. KONG	30.03.2022
SCALE	0 5 10
1:500	

CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT
9.45M CONSTRUCTION VEHICLE ACCESS ON SEAVIEW ST

FILE NAME	SHEET
AG1896-01-v02.dwg	AG06

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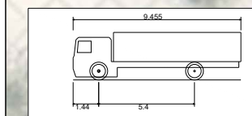

9.45m Construction Vehicle	
Overall Length	9.455m
Overall Width	3.000m
Overall Body Height	2.674m
Min Body Ground Clearance	0.173m
Track Width	2.494m
Lock-to-lock time	5.00s
Wall to Wall Turning Radius	10.450m

VEHICLE ENVELOPE

300mm CLEARANCE

EXISTING DRIVEWAY

9.45m Construction Vehicle

N

GENERAL NOTES

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Seaview Street has a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: 9.45m Construction Vehicle Check Vehicle: 9.45m Construction Vehicle

DESIGNED	Sadeepth B
PAPER SIZE	A3
APPROVED BY	M. KONG
DATE	30.03.2022
SCALE	1:500
	0 5 10

CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
WORK TYPE
9.45M CONSTRUCTION VEHICLE ACCESS

FILE NAME	SHEET
AG1896-01-v02.dwg	AG08

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Victoria Street, Prospect Road and Old Canterbury Road have a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: Truck & Dog   Check Vehicle: Truck & Dog

DESIGNED	Meg Kong
PAPER SIZE	A3
APPROVED BY	M. KONG
DATE	29.03.2022
SCALE	Custom

0 10 20

CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT
TRUCK AND DOG ACCESS

FILE NAME	SHEET
AG1896-01-v02.dwg	AG03

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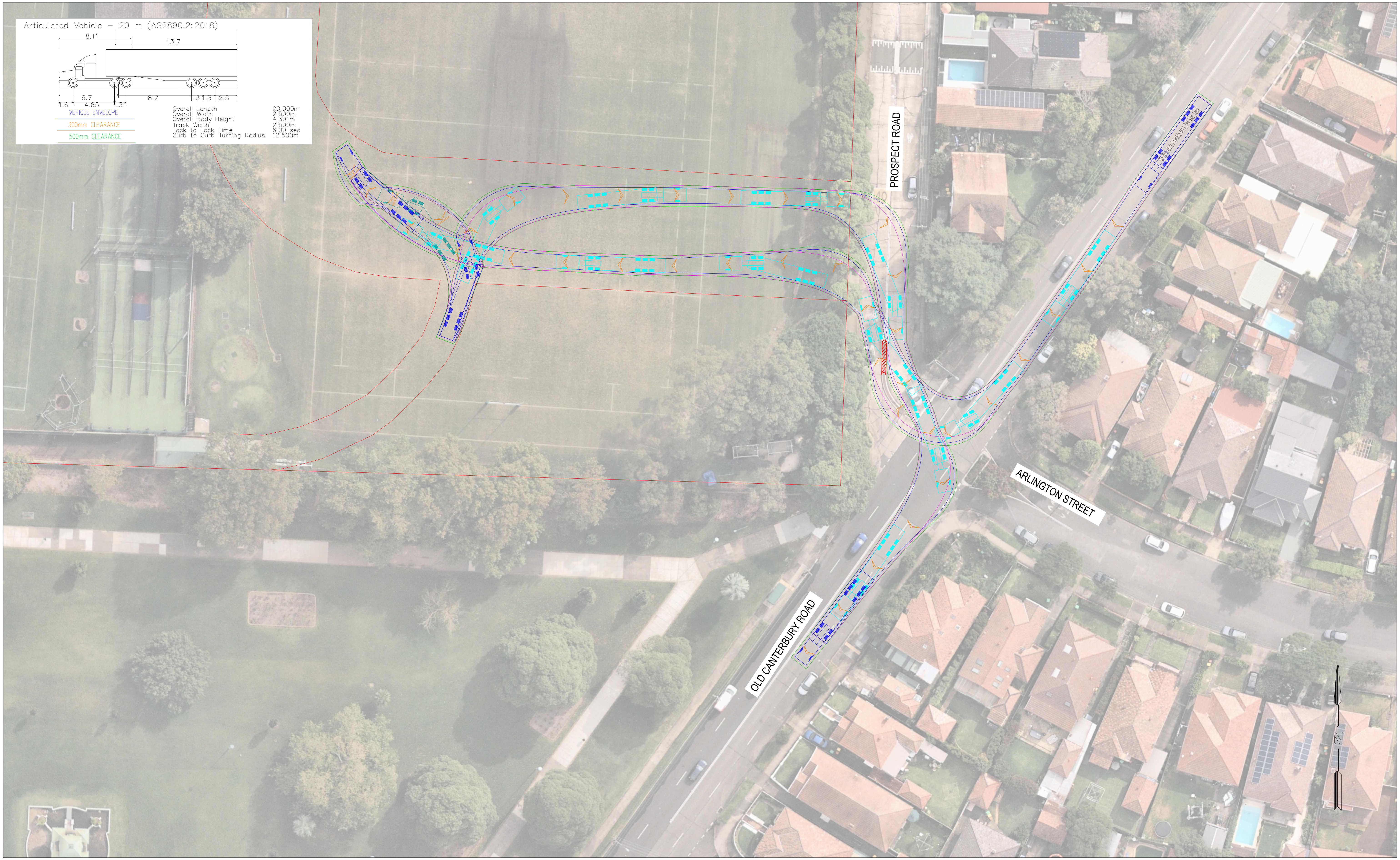
PLOT DATE: 4/05/2022 10:11:12 PM | CAD REFERENCE: C:\Users\Meg Kong\Ason Group\Ason Group Team Site - Ason SL3 (Engineer)\Projects\1800-1899\1896\Projects\Design\AG1896-01-v02.dwg | Meg Kong |



GENERAL NOTES

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Prospect Road has a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: 20.0m AV Check Vehicle: 20.0m AV

DESIGNED	PAPER SIZE
Meg Kong	A3
APPROVED BY	DATE
M. KONG	29.03.2022
SCALE	0 10 20
Custom	

CLIENT

HANSEN YUNCKEN

PROJECT

1896

119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION

SWEPT PATH ASSESSMENT

20.0M AV ACCESS

FILE NAME	SHEET
AG1896-01-v02.dwg	AG01

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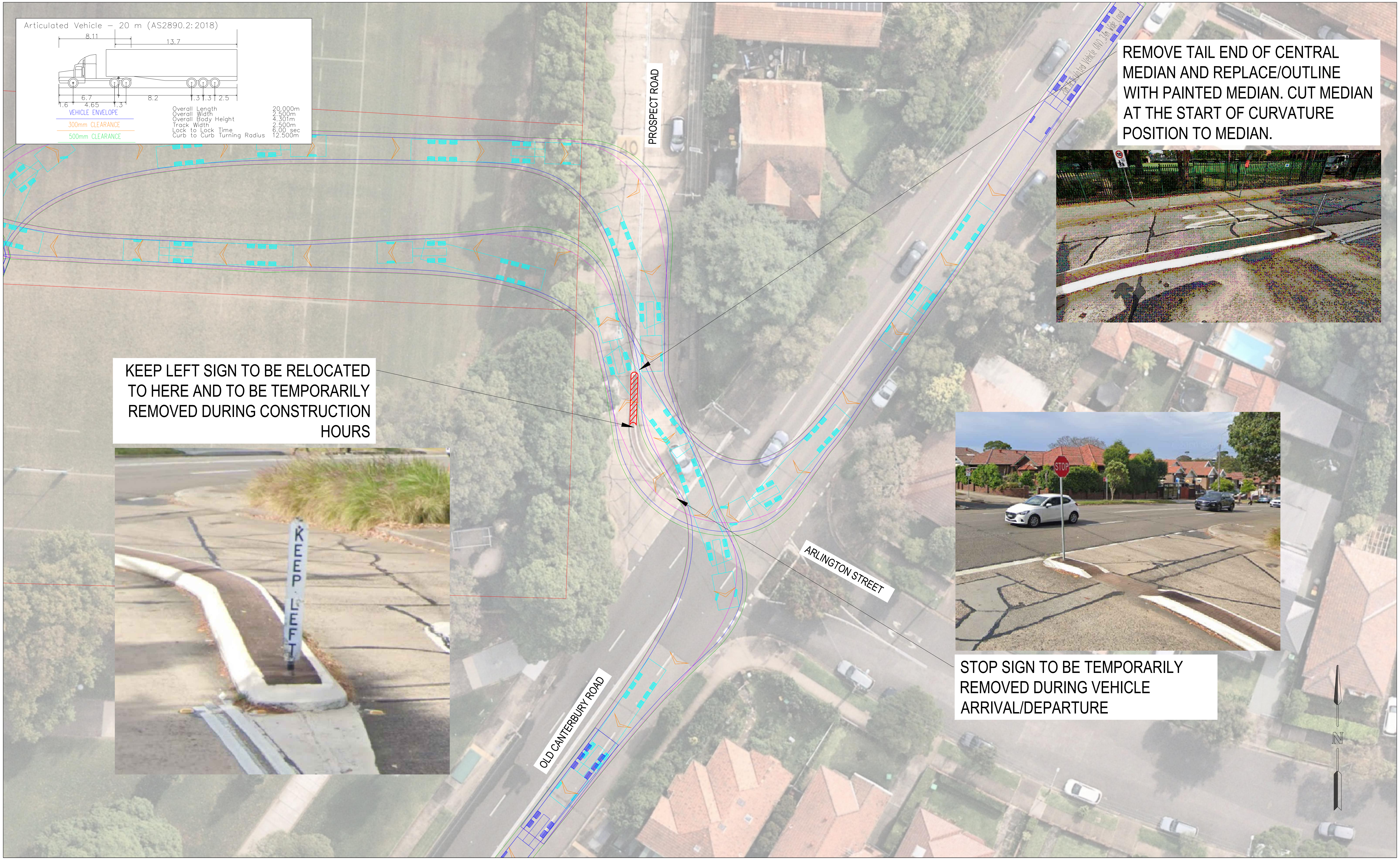

GENERAL NOTES

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Prospect Road has a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: 20.0m AV Check Vehicle: 20.0m AV

DESIGNED Meg Kong	PAPER SIZE A3	CLIENT HANSEN YUNCKEN	DOCUMENT INFORMATION SWEPT PATH ASSESSMENT
APPROVED BY M. KONG	DATE 29.03.2022	PROJECT 1896	20.0M AV ACCESS
SCALE Custom	0 10 20	119 PROSPECT ROAD, SUMMER HILL	FILE NAME AG1896-01-v02.dwg — SHEET AG01 (2)

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EXISTING SIGN POST WITH R5-400 (L&R) 'NO STOPPING' SIGN TO REMAIN.
EXISTING VEHICLE CROSSING TO REMAIN
RELOCATED R5-400 (L&R) 'NO STOPPING'
EXISTING R5-400 (L&R) 'NO STOPPING' BE RELOCATED NORTH
RELOCATED R4-6 'LOCAL TRAFFIC AREA' (50km/h) SIGN
EXISTING R4-6 'LOCAL TRAFFIC AREA' (50km/h) SIGN TO BE RELOCATED NORTH
PROPOSED RIGID PAVEMENT TO PROVIDE SMOOTH TRANSITION TO EXISTING RIGID PAVEMENT
EXISTING KERB TO BE DEMOLISED AND DISPOSED OF FROM SITE
EXISTING PLANTING AREA TO TO BE ADJUSTED TO SUIT PROPOSED WORKS
EXISTING PEDESTRIAN RAMP TO BE DEMOLISED AND DISPOSED OF FROM SITE
PROPOSED PRAM RAMP IN ACCORDANCE WITH INNER WEST COUNCIL STANDARD DRAWING F4
SAWCUT 500mm INTO EXISTING PAVEMENT AND INSTALL PROPOSED KERB IN ACCORDANCE WITH COUNCIL STANDARD R1
SIGN POST WITH W6-1, W8-25 TO BE SIGHTED APPROXIMATELY 45m PRIOR TO INTERSECTION ON APPROACH FROM NORTH.
EXISTING SIGN POST WITH R5-400 (L) 'NO STOPPING' SIGN TO REMAIN.
EXISTING SIGN POST WITH R5-400 (R) 'NO STOPPING' SIGN TO REMAIN.
PROVIDE BICYCLE PAVEMENT MARKING PS-2
CONTINUOUS YELLOW NO STOPPING LINE
SAWCUT INTO EXISTING PAVEMENT, EXISTING MEDIAN TO BE DEMOLISHED AND DISPOSED OF FROM SITE. EXISTING PAVEMENT TO BE REINSTATED TO COUNCIL STANDARD.
PROPOSED SIGNPOST WITH R2-3L 'KEEP LEFT' SIGN
EXISTING WATER STOP VALVE TO BE RELOCATED
EXISTING KERB TO BE DEMOLISED AND DISPOSED OF FROM SITE
EXISTING R1-1 STOP SIGN RELOCATED TO SIGNPOST
PAVEMENT ARROW
PROPOSED PRAM RAMP IN ACCORDANCE WITH INNER WEST COUNCIL STANDARD DRAWING F4
CONTINUOUS DIVIDING LINE
PROPOSED RELOCATION OF R1-1 STOP SIGN
EXISTING R1-1 'STOP' SIGN TO BE REMOVED AND REINSTATED WITHIN THE PROPOSED REFUGE ISLAND.
SAWCUT INTO EXISTING PAVEMENT AND INSTALL PROPOSED REFUGE ISLAND. RMS KERB SM
PROSPECT ROAD
OLD CANTERBURY ROAD
ARLINGTON STREET
BENCHMARK SSM 50176 RL44.751 AHD
46.94 SS
46.74 TEL
46.73 SS
46.80 TEL
43.98 TEL
43.96 MLID
CARRIAGEWAY
PARKING
EX FPTH
KEEP LEFT
STOP
50 LOCAL TRAFFIC AREA
NO STOPPING
SEAVIEW STREET
VICTORIA STREET
PROSPECT ROAD
HARLAND STREET
OLD CANTERBURY ROAD

LEGEND

	TRINITY GRAMMAR SCHOOL BOUNDARY
	RAISED PAVEMENT MARKINGS (RPM)
NEW	NEW CAR PARKING SPACE
	EXISTING CAR PARKING SPACE
	REMOVED CAR PARKING SPACE

NOTES:

- ALL PAVEMENT MARKING TO BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE REGULATORY SIGNS MANUAL, AS1742.2 AND AS2890.1:2004.
- ALL PAVEMENT MARKING TO BE IN ACCORDANCE WITH R.T.A. REQUIREMENTS.
- TRANSITION LINEMARKING TO SUIT EXISTING WHERE REQUIRED.
- RELOCATE/ REMOVE EXISTING SIGNS AS REQUIRED.
- REMOVE ALL REDUNDANT PAVEMENT MARKING AS REQUIRED.
- PROVIDE ADEQUATE APPROACH WARNING SIGNS DURING AND AFTER CONSTRUCTION.

KEY PLAN

SCALE: N.T.S.

1:100 1 0 1 2 3 4 5 A1
1:200 A3

REV	DESCRIPTION	DRAWN	APP'D	DATE
D	ISSUED FOR SSDA	HAL	RET	11.02.22
C	ISSUED FOR SSDA	LAM	RET	16.12.21
B	ISSUED FOR 90% COSTING	MDR	RET	01.09.21
A	ISSUED FOR 80% COSTING	MDR	RET	16.07.21

DRAWN:	MDR
DESIGNED:	RET
VERIFIED:	RET 07/07/21
APPROVED FOR TENDER:	
APPROVED FOR CONSTRUCTION:	

PMDL ARCHITECTURE INTERIORS MASTERPLANNING

ARCHITECT/CLIENT

PROJECT: TRINITY GRAMMAR SCHOOL - EXTERNAL WORKS

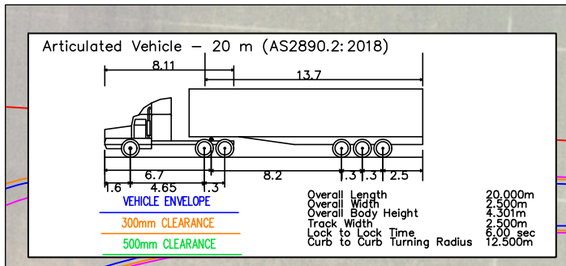
TITLE: PROSPECT RD AND OLD CANTERBURY RD INTERSECTION

Stantec

MGA mAHD

APPROVAL
NOT FOR CONSTRUCTION

SCALE @ A1	PROJECT No	DRAWING No	REV
1:100	301350145	CI-EW-400-001	D



FOR DISCUSSION

PROVIDE TEMPORARY CHEVRON INSTEAD OF RAISED MEDIAN

BUILD ISLAND WITH STOP SIGN

EXTEND KERB, VEHICLE TYRES TO REMAIN WITHIN TRAVEL LANE

GENERAL NOTES

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Aerial Image Acquired from Nearmap, dated 21 Dec 2021.
Prospect Road has a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.
Design vehicle: 20.0m AV Check Vehicle: 20.0m AV

DESIGNED Meg Kong	PAPER SIZE A3	CLIENT HANSEN YUNCKEN	DOCUMENT INFORMATION SWEPT PATH ASSESSMENT
APPROVED BY M. KONG	DATE 29.03.2022	PROJECT 1896	20.0M AV ACCESS
SCALE Custom	0 10 20	119 PROSPECT ROAD, SUMMER HILL	FILE NAME AG1896-01-v02.dwg SHEET AG01 (3)

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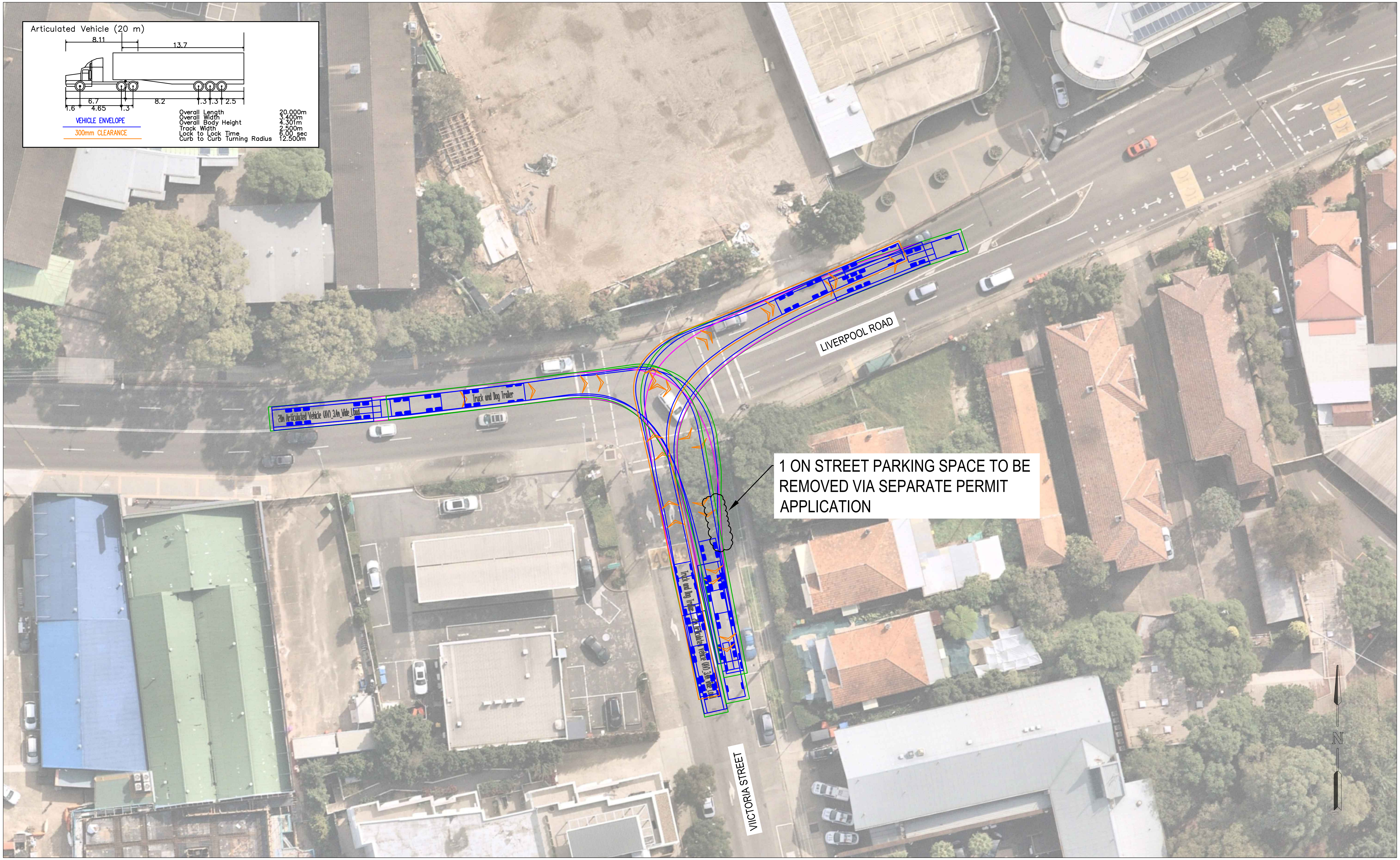
PLOT DATE: 4/05/2022 10:19:53 PM | CAD REFERENCE: C:\Users\Meg Kong\Ason Group\Ason Group Team Site - Ason SL3 (Engineer)\Projects\1800-1899\1896\Projects\Design\AG1896-01-v02.dwg | Meg Kong |



GENERAL NOTES

This drawing is provided for information purposes only and should not be used for construction.
Aerial image acquired from Nearmap, dated 03 April 2022.
Liverpool Road and Victoria Street have a posted speed limit of 60km/h and 50km/h respectively.
Swept path assessments completed at 10 km/h and 500mm clearance.
Design vehicle: 20m AV Check Vehicle: 20m AV

DESIGNED: Meg Kong	PAPER SIZE: A3
APPROVED BY: M. KONG	DATE: 04.05.2022
SCALE: 1:500	0 10 20

CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
SWEPT PATH ASSESMENT
20.0M CUSTOM AV

FILE NAME	SHEET
AG1896-03-v01.dwg	AG01

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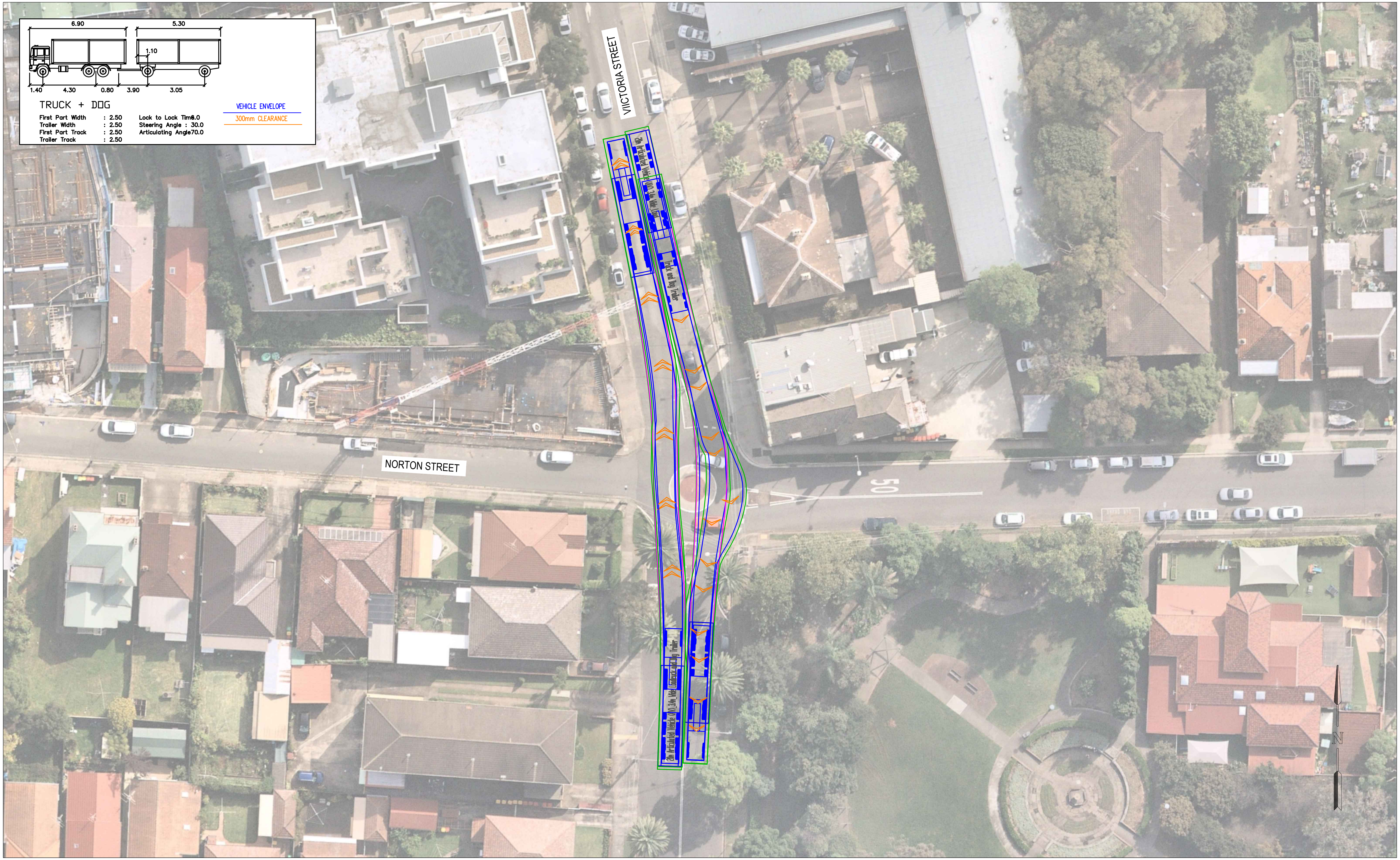
PLOT DATE: 4/05/2022 8:02:23 PM | CAD REFERENCE: C:\Users\Meg Kong\Ason Group\Ason Group Team Site - Ason SL3 (Engineer)\Projects\1800-1899\1896\Projects\Design\Issued\AG1896-03 - Swept Path For Surrounding Roads\AG1896-03-v01.dwg | Meg Kong |



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Victoria Street and Norton Street has a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 500mm clearance.
Design vehicle: 20m AV Check Vehicle: 20m AV

DESIGNED	PAPER SIZE	CLIENT	DOCUMENT INFORMATION
Meg Kong	A3	HANSEN YUNCKEN	SWEPT PATH ASSESSMENT
APPROVED BY	DATE	PROJECT	20.0M CUSTOM AV
M. KONG	04.05.2022	1896	
SCALE	0 10 20	119 PROSPECT ROAD, SUMMER HILL	FILE NAME: AG1896-03-v01.dwg
1:500			SHEET: AG02

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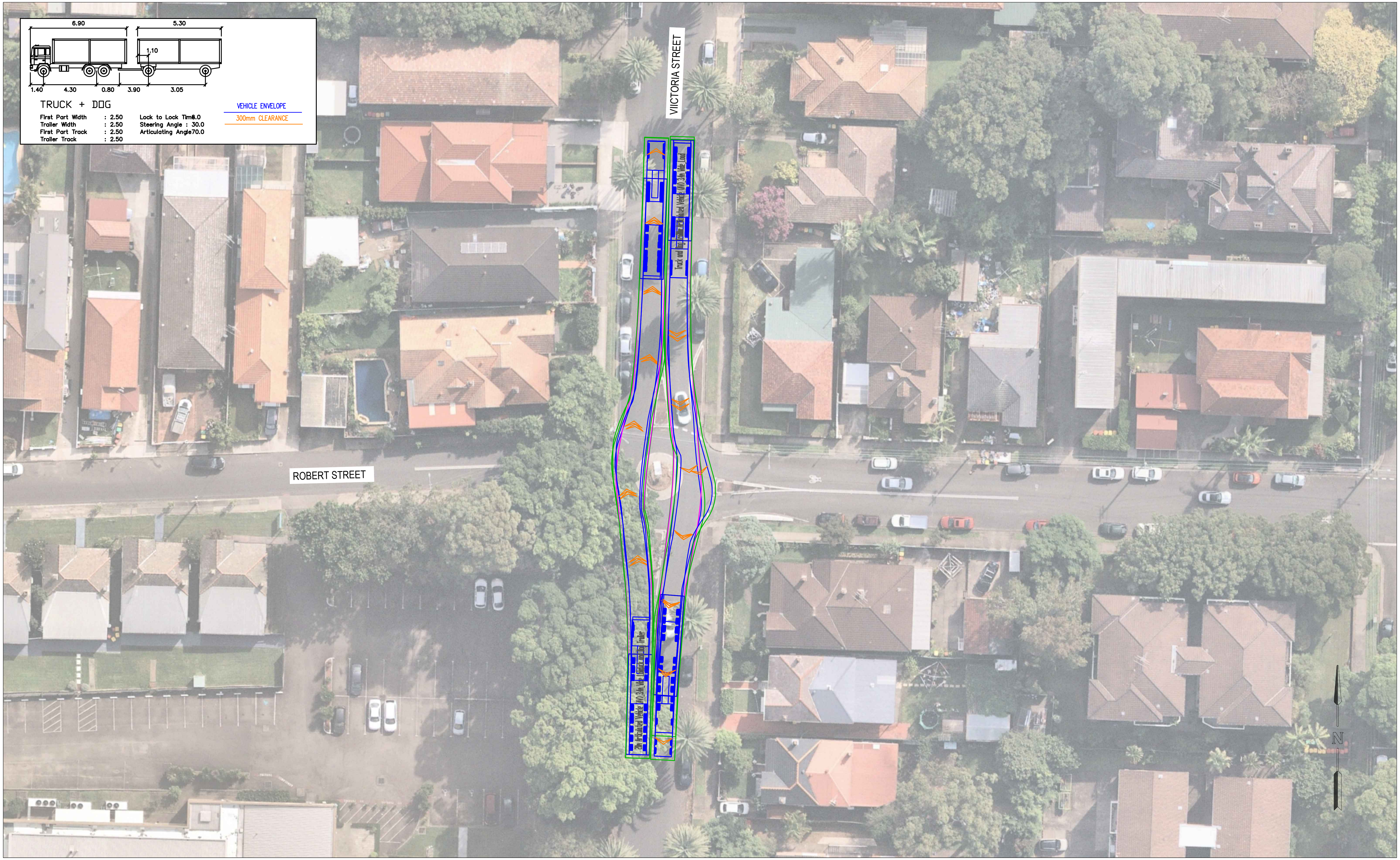

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Swept path assessments completed at 10 km/h and 500mm clearance.
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DESIGNED: Meg Kong	PAPER SIZE: A3	CLIENT: HANSEN YUNCKEN	DOCUMENT INFORMATION: SWEPT PATH ASSESSMENT
APPROVED BY: M. KONG	DATE: 04.05.2022	PROJECT: 1896	20.0M CUSTOM AV
SCALE: 1:500	0 10 20	119 PROSPECT ROAD, SUMMER HILL	FILE NAME: AG1896-03-v01.dwg / SHEET: AG03

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Design vehicle: 9.45m Vehicle   Check Vehicle: 9.45m Vehicle

DESIGNED	Meg Kong
PAPER SIZE	A3
APPROVED BY	M. KONG
DATE	04.05.2022
SCALE	Custom
	0 10 20

CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT
9.45M VEHICLE

FILE NAME	SHEET
AG1896-03-v01.dwg	AG04

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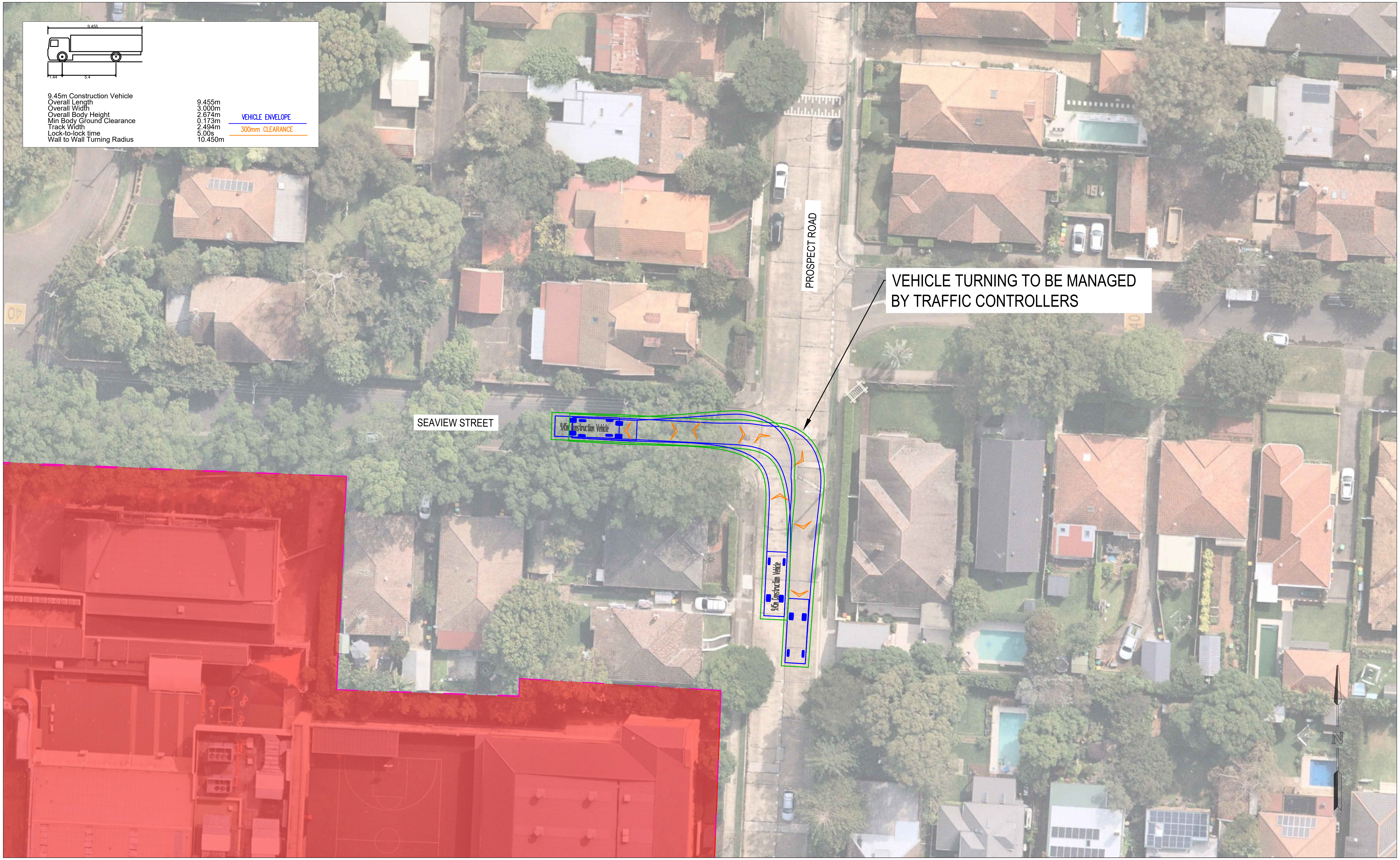

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Prospect Road and Seaview Street have a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 500mm clearance.
Design vehicle: 9.45m Vehicle Check Vehicle: 9.45m Vehicle

DESIGNED: Meg Kong	PAPER SIZE: A3	CLIENT: HANSEN YUNCKEN	DOCUMENT INFORMATION: SWEPT PATH ASSESSMENT
APPROVED BY: M. KONG	DATE: 04.05.2022	PROJECT: 1896	9.45M VEHICLE
SCALE: Custom	0 10 20	119 PROSPECT ROAD, SUMMER HILL	FILE NAME: AG1896-03-v01.dwg / SHEET: AG05

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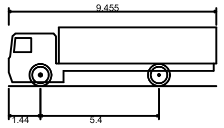
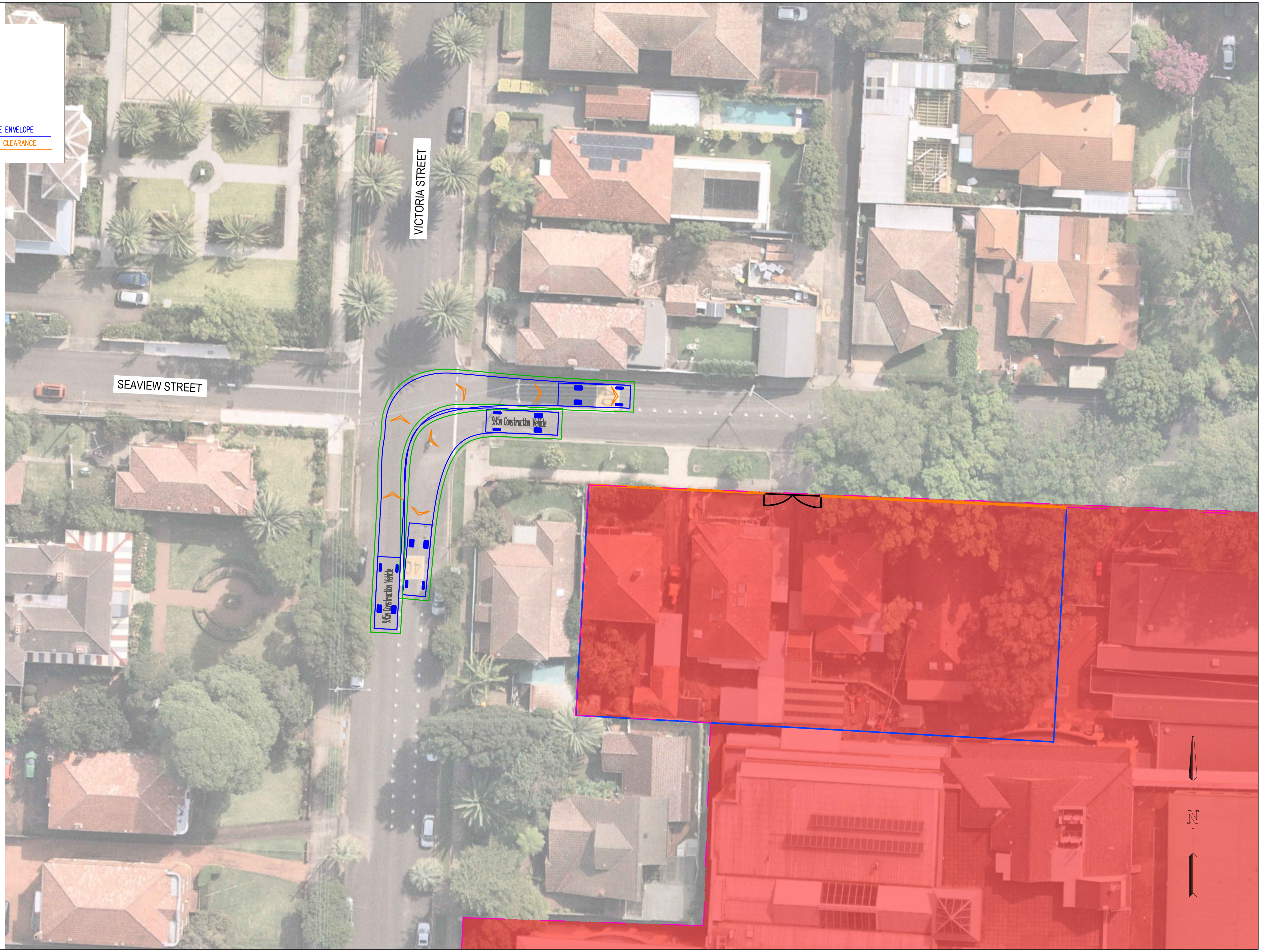


9.45m Construction Vehicle

Overall Length	9.455m
Overall Width	3.000m
Overall Body Height	2.674m
Min Body Ground Clearance	0.173m
Track Width	2.494m
Lock-to-lock time	5.00s
Wall to Wall Turning Radius	10.450m

VEHICLE ENVELOPE
300mm CLEARANCE



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Design vehicle: 9.45m Vehicle Check Vehicle: 9.45m Vehicle

DESIGNED	Meg Kong
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APPROVED BY	M. KONG
DATE	04.05.2022
SCALE	1:500

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CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT
9.45M VEHICLE

FILE NAME	SHEET
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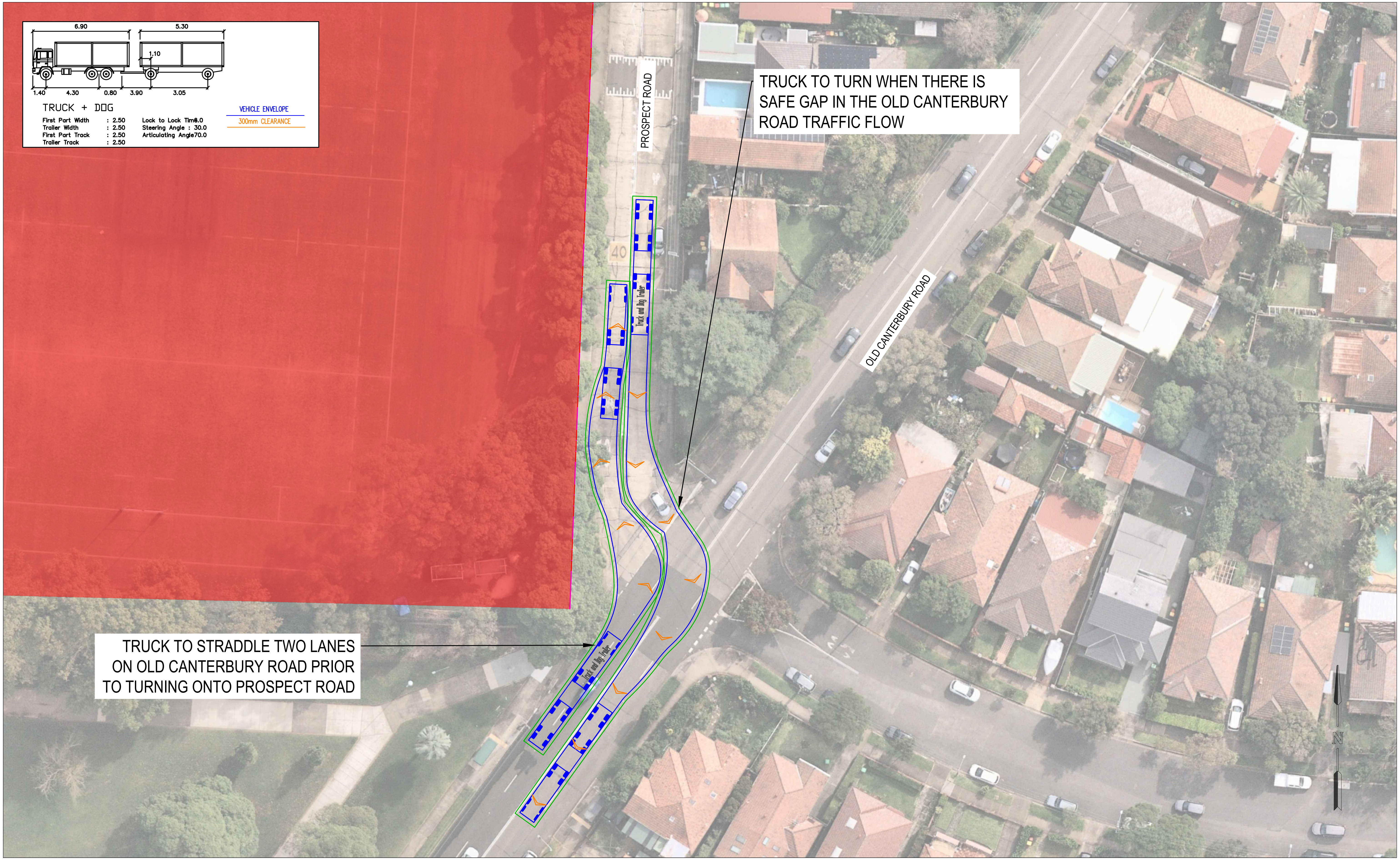

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Design vehicle: Truck and Dog Check Vehicle: Truck and Dog

DESIGNED Meg Kong	PAPER SIZE A3	CLIENT HANSEN YUNCKEN	DOCUMENT INFORMATION SWEPT PATH ASSESSMENT TRUCK AND DOG
APPROVED BY M. KONG	DATE 04.05.2022	PROJECT 1896 119 PROSPECT ROAD, SUMMER HILL	
SCALE 1:500	0 10 20		FILE NAME AG1896-03-v01.dwg / SHEET AG07

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Prospect Road and Seaview Street have a posted speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 500mm clearance.
Design vehicle: Truck and Dog Check Vehicle: Truck and Dog

DESIGNED Meg Kong	PAPER SIZE A3	CLIENT HANSEN YUNCKEN	DOCUMENT INFORMATION SWEPT PATH ASSESSMENT
APPROVED BY M. KONG	DATE 04.05.2022	PROJECT 1896	TRUCK AND DOG
SCALE 1:500	0 10 20	119 PROSPECT ROAD, SUMMER HILL	FILE NAME AG1896-03-v01.dwg
			SHEET AG08

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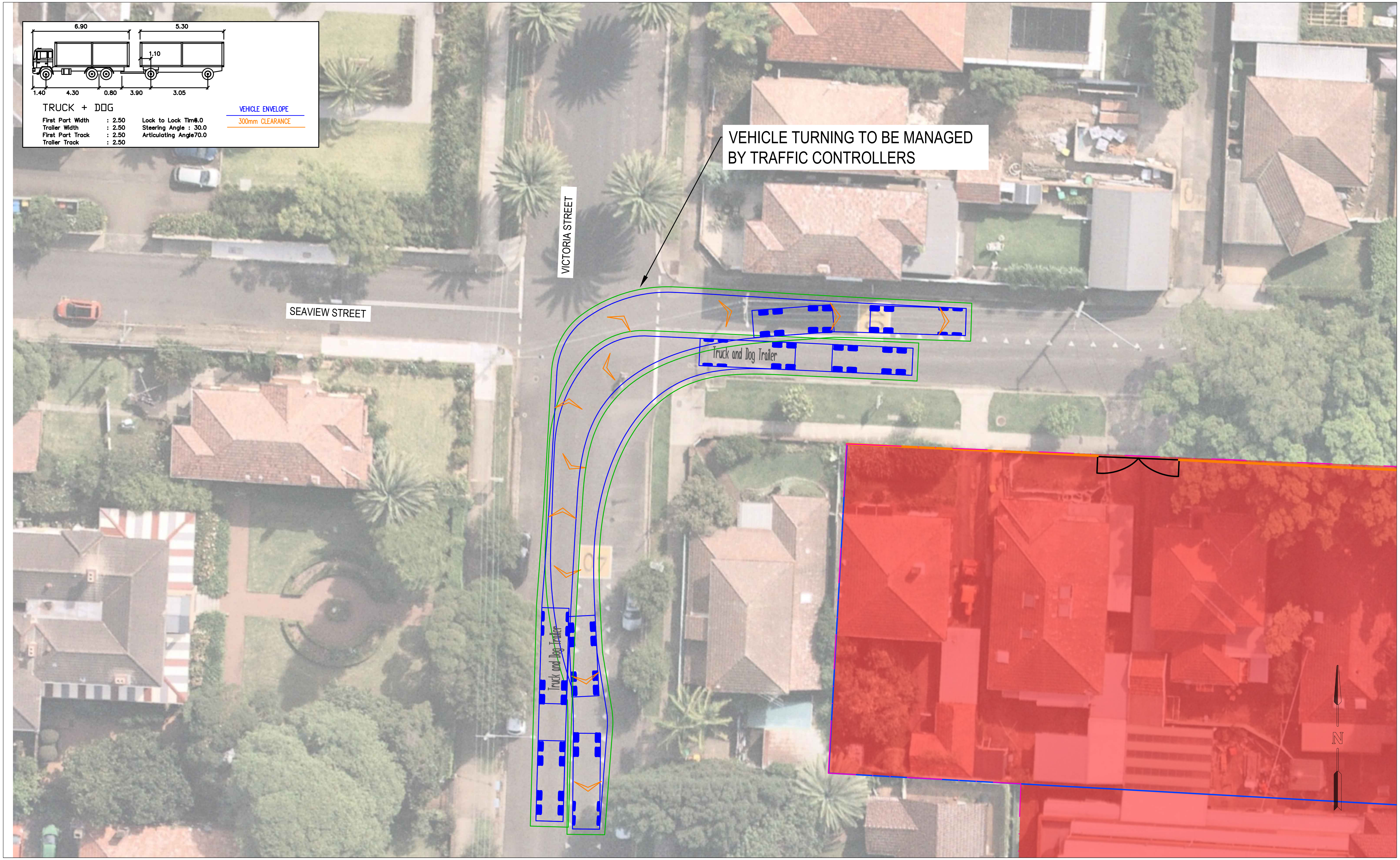

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Design vehicle: Truck and Dog Check Vehicle: Truck and Dog

DESIGNED	Meg Kong
PAPER SIZE	A3
APPROVED BY	M. KONG
DATE	04.05.2022
SCALE	Custom
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CLIENT
HANSEN YUNCKEN

PROJECT
1896
119 PROSPECT ROAD, SUMMER HILL

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT
TRUCK AND DOG

FILE NAME	SHEET
AG1896-03-v01.dwg	AG09

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Appendix F. Driver Code of Conduct

Drivers Code of Conduct

Safe Driving Policy for Trinity Grammar School Stages 1 to 2 Construction.

Objectives of the Drivers Code of conduct

- To minimise the impact of earthworks on the local and regional road network;
- To minimise conflict with other road users;
- To minimise road traffic noise; and
- To ensure truck drivers use specified heavy vehicles routes between the Site and the sub-regional road network.

Code of Conduct

All vehicle operators accessing the site must:

- Take reasonable care for his or her own personal health and safety;
- Not adversely, by way of actions or otherwise, impact on the health and safety of other persons;
- Notify their employer if they are not fit for duty prior to commencing their shift;
- Obey all applicable road rules and laws at all times;
- In the event an emergency vehicle behind your vehicle, pull over and allow the emergency vehicle to pass immediately;
- Obey the applicable driving hours in accordance with legislation and take all reasonable steps to manage their fatigue and not drive with high levels of drowsiness;
- Obey all on-site signposted speed limits and comply with directions of traffic control supervisors in relation to movements in and around temporary or fixed work areas;
- Ensure all loads are safely contained / restrained, as necessary;
- Drive over devices – located at the site's access – to vibrate off and wash off any loose material attached to heavy vehicles;
- Operate their vehicles in a safe and professional manner, with consideration for all other road users;
- Hold a current Australian State or Territory issued driver's licence;
- Notify their employer or operator immediately should the status or conditions of their driver's license change in any way;
- Comply with other applicable workplace policies, including a zero tolerance of driving while under the influence of alcohol and/or illicit drugs;
- Not use mobile phones when driving a vehicle or operating equipment. If the use of a mobile device is required, the driver shall pull over in a safe and legal location prior to the use of any mobile device;
- Advise management of any situations of which you know, or think, may present a threat to workplace health and safety;
- Drive according to prevailing conditions (such as during inclement weather) and reduce speed, if necessary; and
- Have necessary identification documentation at hand and ready to present to security staff on entry and departure from the Site, as necessary, to avoid unnecessary delays to other vehicles.

Crash or incident Procedure

- Stop your vehicle as close to it as possible to the scene, making sure you are not hindering traffic. Ensure your own safety first, then help any injured people and seek assistance immediately if required.
- Ensure the following information is noted:
  - Details of the other vehicles and registration numbers;
  - Names and addresses of the other vehicle drivers;
  - Names and addresses of witnesses; and
  - Insurers details.
- Give the following information to the involved parties:
  - Name;
  - Address; and
  - Company details
- If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.
- Ensure that the police are contacted should the following circumstances occur:
  - If there is a disagreement over the cause of the crash;
  - If there are injuries; and / or
  - If you damage property other than your own.
- As soon as reasonably practical, report all incident details to your manager.

Appendix G. Construction Worker Transportation Strategy

Trinity Grammar School, Summer Hill Campus SSD 10371 (Stages 1 and 2)

Construction Worker Transportation Strategy

119 Prospect Road, Summer Hill
4/05/2022
Ref: P1896r05

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Document Control

Project No	P1903
Project	SSD 10371 Trinity Grammar School Redevelopment, 119 Prospect Rd, Summer Hill
Client	Hansen Yuncken Pty Ltd
File Reference	P1896r01v06 Construction Worker Transportation Strategy, 119 Prospect Road, Summer Hill

Revision History

Revision No.	Date	Details	Author	Approved by
01	30/03/2022	Final	S. Bandaranayake/ M. Kong	D. Choi
02	05/04/2022	Updated Final based on HY comments	S. Bandaranayake/ M. Kong	D. Choi
03	07/04/2022	Updated Final based on CCC comments	S. Bandaranayake/ M. Kong	D. Choi
04	08/04/2022	Updated to include consultation with TfNSW and Council	S. Bandaranayake/ M. Kong	D. Choi
05	19/04/2022	Updated to address comments from Bloompark Pact and CJP	S. Bandaranayake/ M. Kong	D. Choi
06	04/05/2022	Updated to address comments from Council and TfNSW	S. Bandaranayake/ M. Kong	D. Choi

contents

contents continued

Figures

Tables

APPENDICES

1 Introduction

1.1 Overview

Ason Group has been engaged by Hansen Yuncken Pty Ltd (HY) to prepare a Construction Worker Transportation Strategy (CWTS) in relation to the construction activities associated with Stages 1 and 2 works of Trinity Grammar School, Summer Hill Campus at 119 Prospect Road, Summer Hill (the Site).

This CWTS details the measures and strategies to be undertaken during construction to minimise the effects of construction worker parking demand on the community.

This report is to be read in conjunction with the Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP).

1.2 Purpose

The site is advantaged by high frequency/capacity rail, light rail and bus services, which will be enhanced with the proposed provision of a Sydney West Metro station.

The purpose of this document is to address the relevant conditions of State Significant Development SSD-10371. The relevant Condition of Consent (D22) is reproduced below:

Prior to the commencement of construction, the Applicant must prepare and implement a Construction Worker Transportation Strategy (CWTS) in consultation with Council, to the satisfaction of the Planning Secretary. The CWTS must detail the provision of sufficient parking facilities or other travel arrangements for construction workers in order to minimise demand for construction worker parking in nearby public and residential streets or public parking facilities.

1.3 Scope and Application of Strategy

It is the intent of this Strategy to outline the management of construction worker transportation to and from the Site. In particular, the Strategy has been prepared to manage construction worker car parking to minimise demand for parking in nearby public and residential streets during the construction of the school.

Recognising the need for these procedures to adapt to changing circumstances in order to achieve the desired management of construction worker travel, the Strategy may be varied from time to time to account for the changing circumstances. Those circumstances include changes to the site, altered traffic conditions and/or off-site operational imperatives during construction.

Any changes to the Strategy shall be communicated to all construction workers, impacted community members and stakeholders.

HY will be responsible for the review and update of this Strategy when required which will be reviewed per stage of the project.

The CWTS will be monitored accordingly, and changes made if major issues arise. Council and Police/TfNSW also reserve the right to re-enter in discussions with the builder to review the CWTS if major issues arise.

2 Site Details

2.1 Site & Location

The Site is located at 119 Prospect Rd and 50-52 Seaview Street, Summer Hill, NSW 2103, and is legally known as Lot 11 DP 1171965, Lot 5 DP 15765 and Lot 6 DP 15765.

The Site is bound by Seaview Street to the north, Prospect Road to the east, Victoria Street to the west, and Yeo Park to the south. The areas surrounding the campus are primarily low-density residential. The Site is zoned as SP2 Educational Establishment under Ashfield Local Environmental Plan 2013.

The Site is located within the suburbs of Summer Hill and Ashfield, which forms part of the Inner West Local Government Area (LGA).

The Site shown relative to the surrounding development context is provided in **Figure 1.**

Figure 1: Site Location

2.2 Surrounding Road Network

The key roads in the proximity of the Site are summarised in **Table 1** and **Figure 2**.

TABLE 1: LOCAL ROAD NETWORK

Road Name	Section	Speed Limit	Parking	Traffic Volumes and Peak Times	Urban / Rural
Seaview St	Victoria St & Prospect Rd	50 km/hr, 40km/hr during school zone	Untimed Parking	2019 ADT: 2770 veh/day	Urban
Victoria St	Seaview St & Harland St	50 km/hr, 40km/hr during school zone	Untimed Parking	2019 ADT: 4835 veh/day	Urban
Prospect Rd	Seaview St & Old Canterbury Rd	50 km/hr, 40km/hr during school zone	Untimed Parking	2019 ADT: 4570 veh/day	Urban
Old Canterbury Rd	Hurlstone Ave & Elizabeth St	50 km/hr, 40km/hr during school zone	Untimed Parking	2020 ADT: 15,000 veh/day	Urban

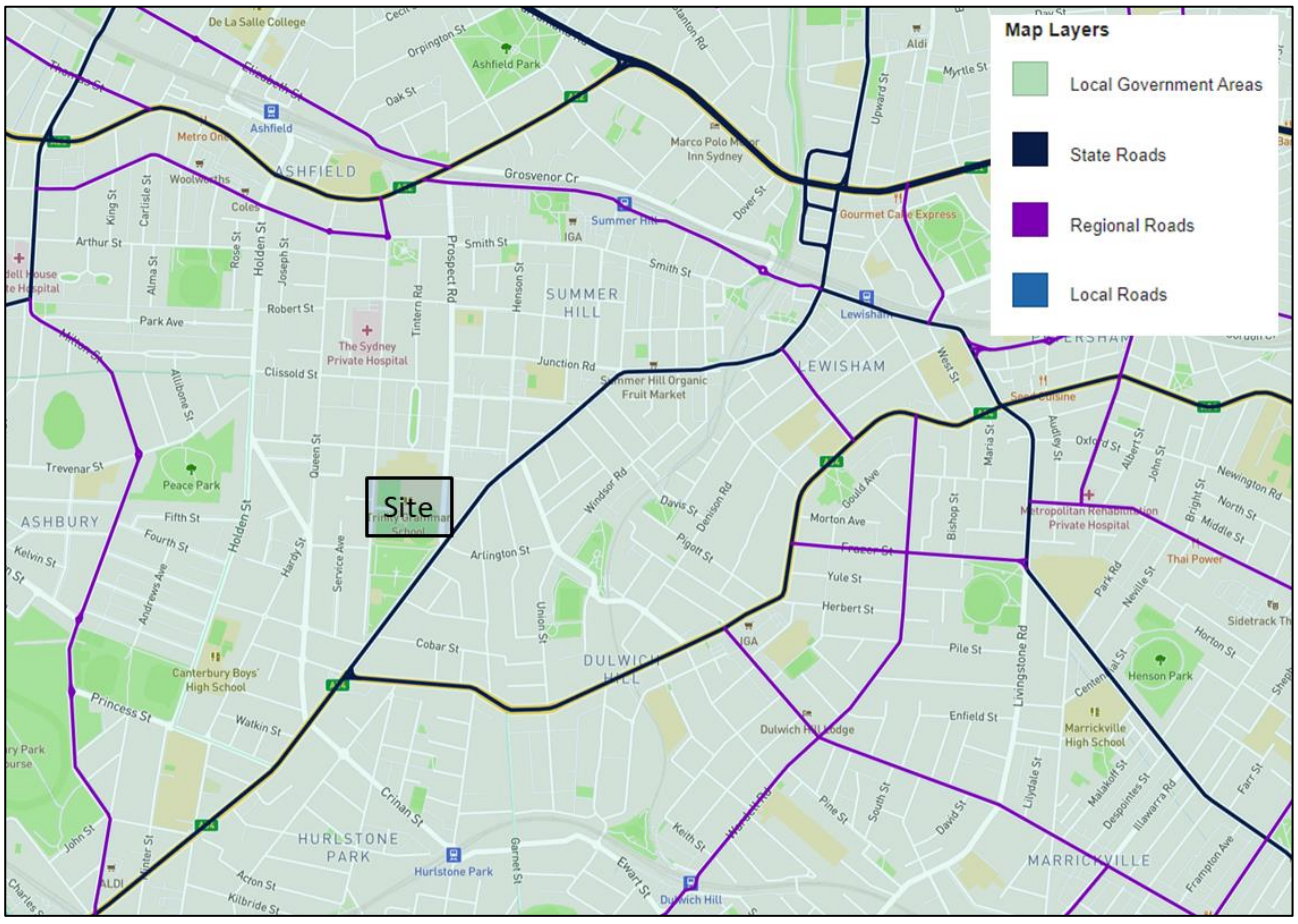

Figure 2: Road Hierarchy

2.3 Existing Public Transport

2.3.1 Train Connectivity

The Site is situated in the proximity of two existing train stations, being Summer Hill Station (approximately 1.2km), Ashfield Station (~1.4km) and Hurlstone Park (~1.6km). While Summer Hill Station provides a shorter walking distance, Ashfield and Hurlstone Park Stations provide better access with a higher train frequency and bus access from the Site.

Key serviceability details are provided in **Table 2**, with reference to **Figure 3** below.

TABLE 2: EXISTING TRAIN SERVICES

Line	Name	Frequency
T2	Inner West and Leppington Line	8-12 services per hour
T3	Bankstown Line	8-12 services per hour

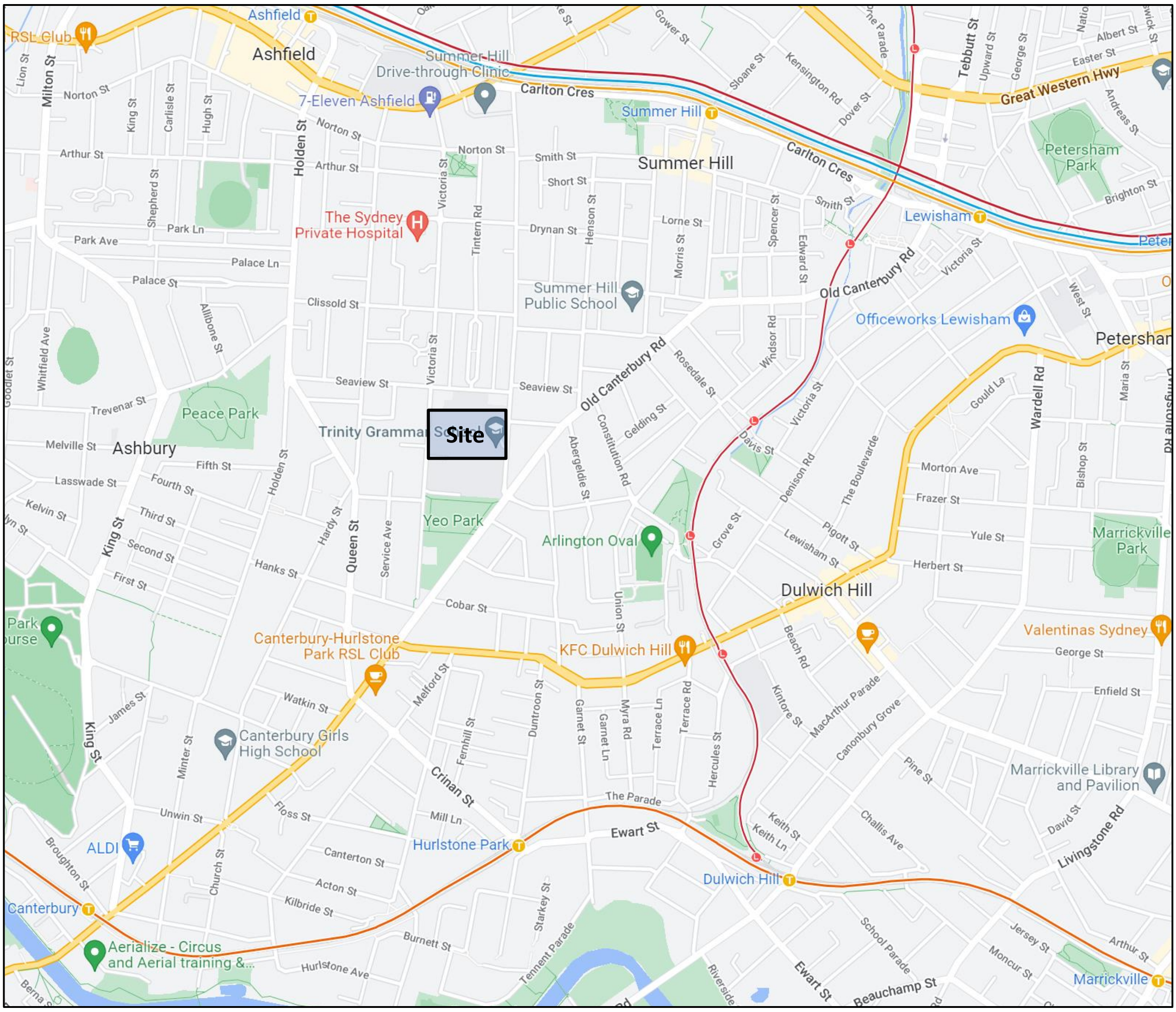

Figure 3: Train Stations

2.3.2 Light Rail Services

The school is serviced by the L1 - Dulwich Hill Light Rail Line which operates between Dulwich Hill and Sydney CBD. Arlington Station is an approximately 950m walk to the school.

Key serviceability details are provided in **Table 3**, with reference to **Figure 4** below.

TABLE 3: EXISTING LIGHT RAIL SERVICES

Line	Name	Frequency
L1	Dulwich Hill Line	4 services per hour

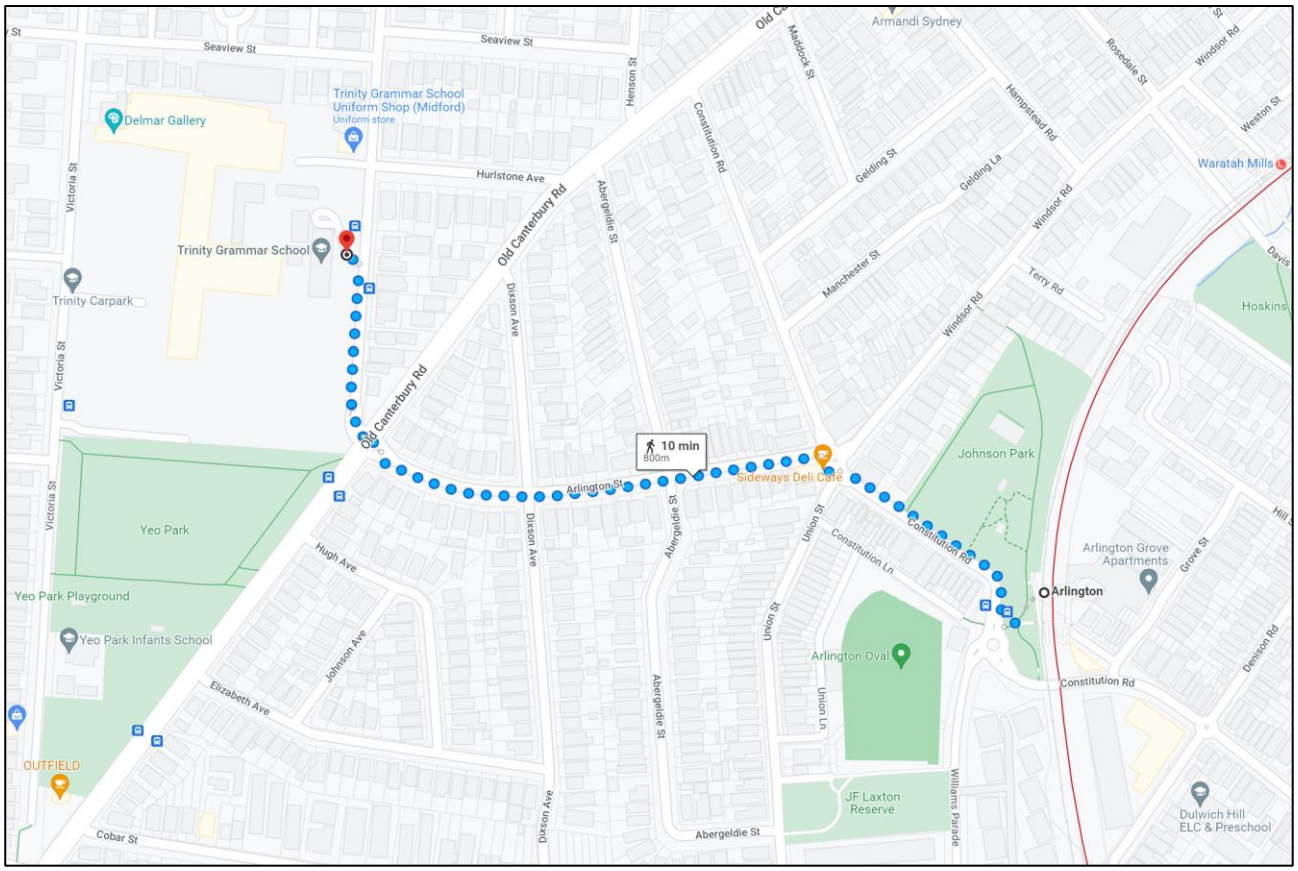

Figure 4: Proximity of the School to the Arlington Light Rail Station

2.3.3 Public Bus Services

With reference to existing public bus service connectivity for the area, immediate to the Site is a bus stop along Prospect Road. The stop is serviced by the Sydney Buses 406 bus route (Hurlstone Park to Five Dock) that travels on Seaview and Prospect Streets and provides access for a single route during the AM Peak.

Other bus routes 418, 426 and 445 are serviced by the stops on Queen Street at Armstrong Street and New Canterbury Road after/at Old Canterbury Road.

A summary of the bus routes operating in proximity to Trinity Grammar School is provided below in **Table 4** and **Figure 5.**

TABLE 4: EXISTING PUBLIC BUS CONNECTIVITY

Route	Description	Service Frequency
406	Five Dock to Hurlstone Park	Peak Periods: 3 services per hour Off-Peak: 1 service per hour
418	Kingswood – Burwood (via Mascot, Sydenham & Dulwich Hill	Peak Periods: 4 services per hour Off-Peak: 2 services per hour
428	Canterbury – City (Martin Place)	Peak Periods: 8 services per hour Off-Peak: 2 services per hour
445	Campsie – Balmain (via Leichhardt Marketplace)	Peak Periods: 8 services per hour Off-Peak: 2 services per hour

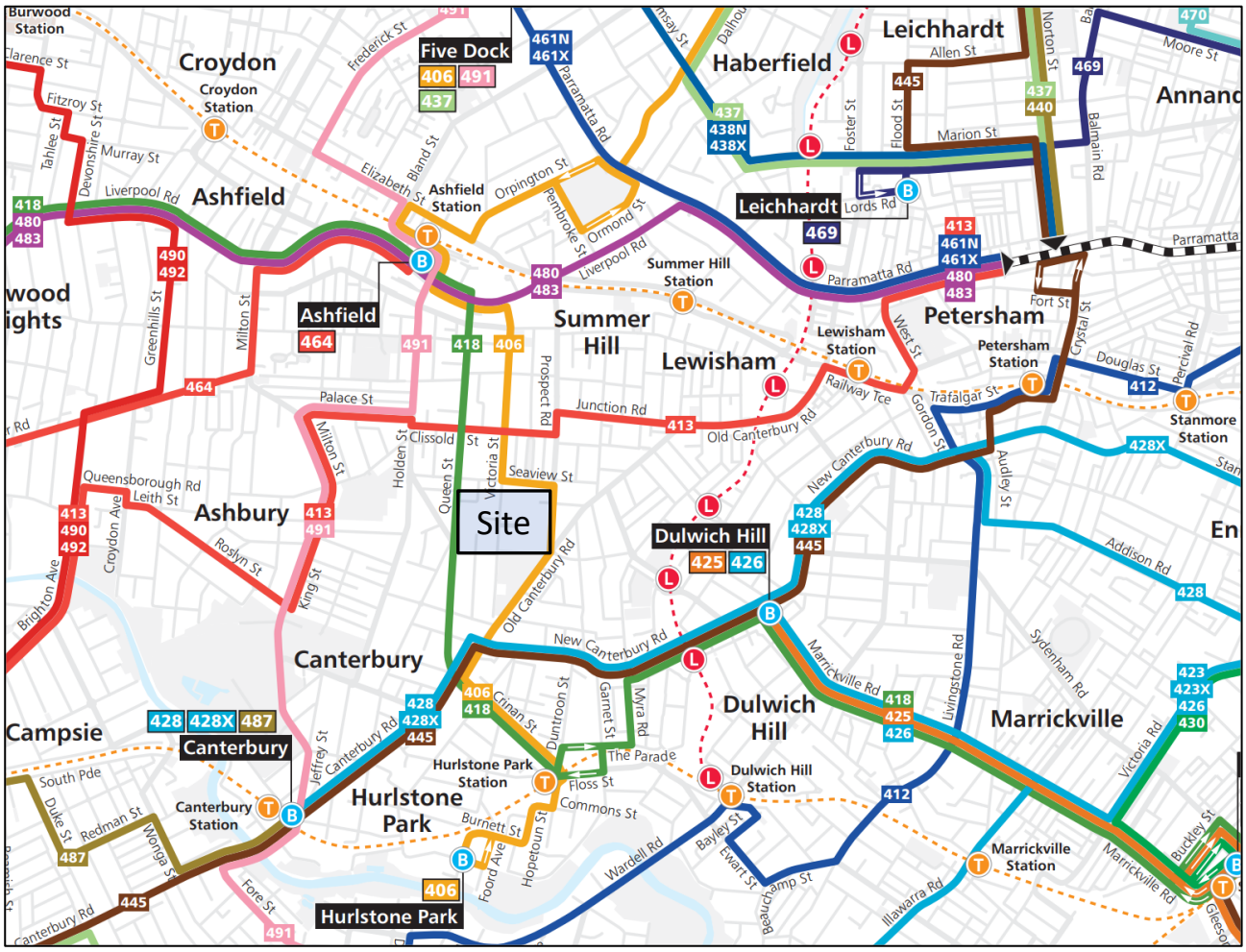

Figure 5: Existing Bus Routes in the vicinity of the Site

2.4 Future Public Transport

Hurlstone Park Station is one of 11 stations on this line to be upgraded to metro standards as part of the Sydney Metro City & Southwest project. When completed in 2024, the Metro services will run at least every four minutes in the peak providing access to Sydney's CBD, Bankstown and Tallawong. See **Figure 6**.

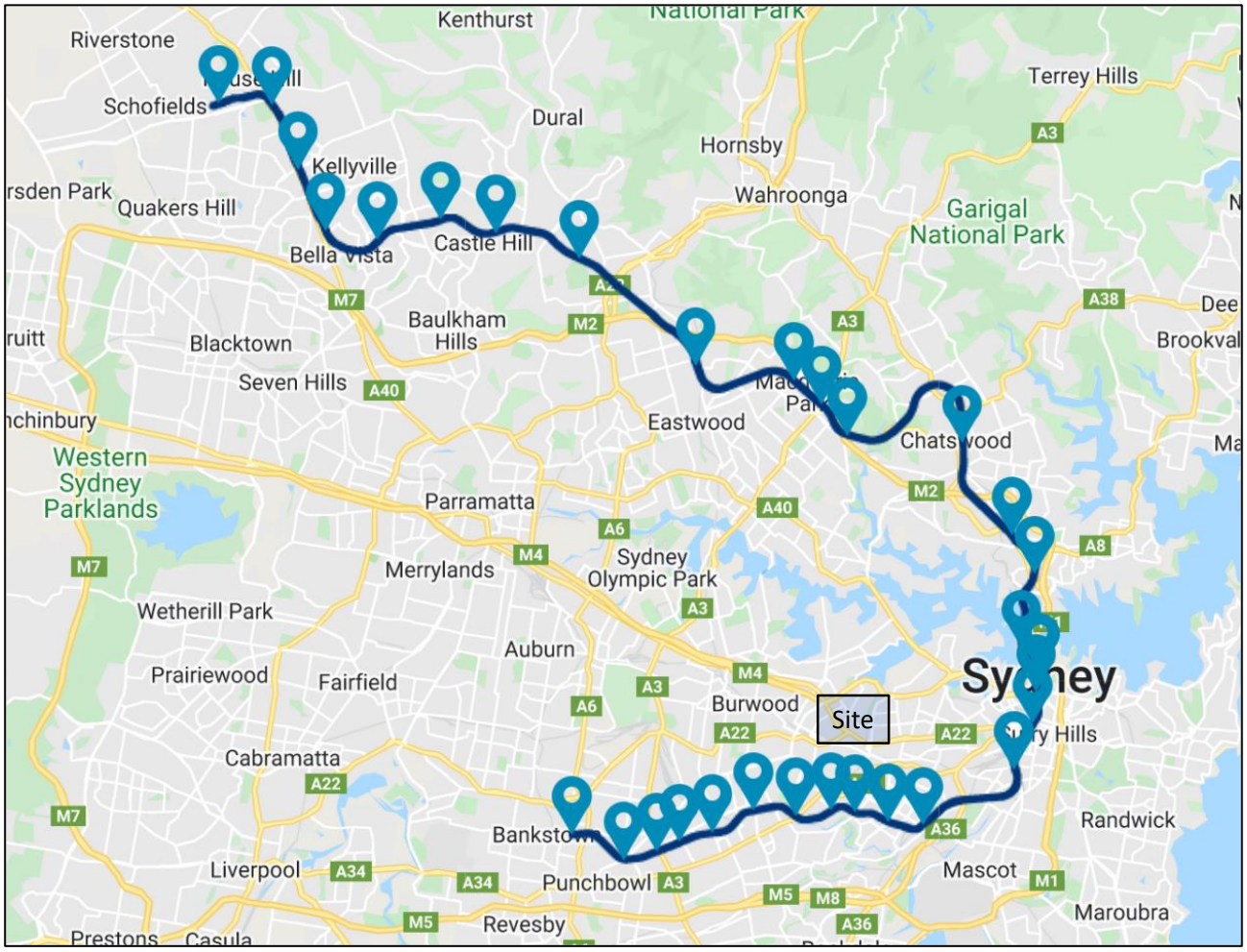

Figure 6: Existing Bus Routes in the vicinity of the Site

2.5 Existing Active Transport

2.5.1 Pedestrian Network & Connectivity

With reference to the pedestrian network, desktop studies confirm that the broader road network is accompanied by pedestrian footpaths, either on one or both sides of all streets.

Immediate to the Schools' frontage on Prospect Road, there are both raised and on-grade pedestrian crossings providing safe access to the school. To the frontage along Victoria Street, there is a pedestrian crossing with refugee islands.

2.5.2 Cycling Network

With reference to existing cycling infrastructure within the Council area, **Figure 7** below captures the extent of the Ashfield Bike Map in the proximity of the School. Surrounding the school includes a mix of shared user paths and on-road bicycle routes.

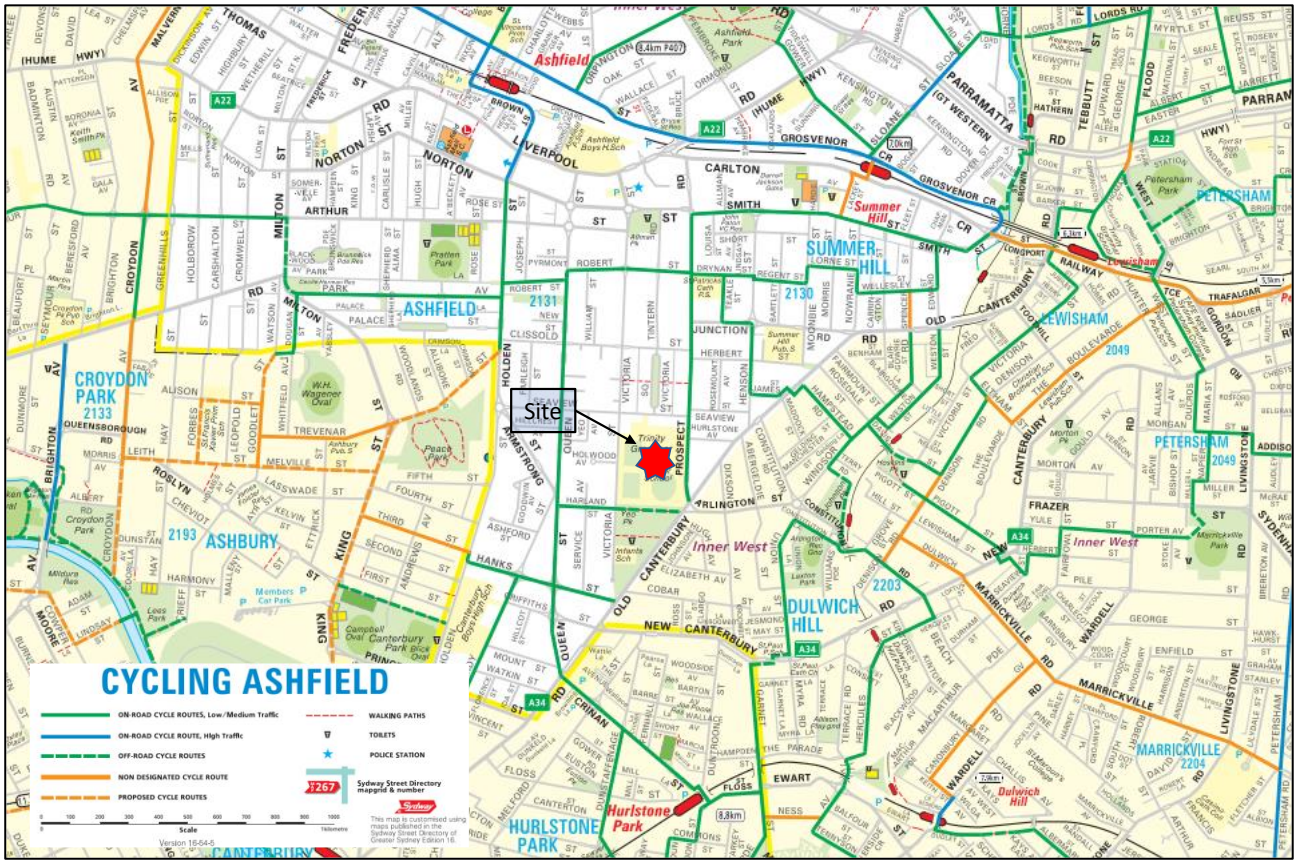

Figure 7: Ashfield Bicycle Path Network

In addition to Council's cycling map, Service NSW has a Cycleway Finder map for the locality and characterises specific bicycle routes and infrastructure by the degree of difficulty to which the route can be traversed. Based on **Figure 8** below, the school is generally surrounded by 'moderate difficulty' routes, which effectively capture on-road cycling provisions.

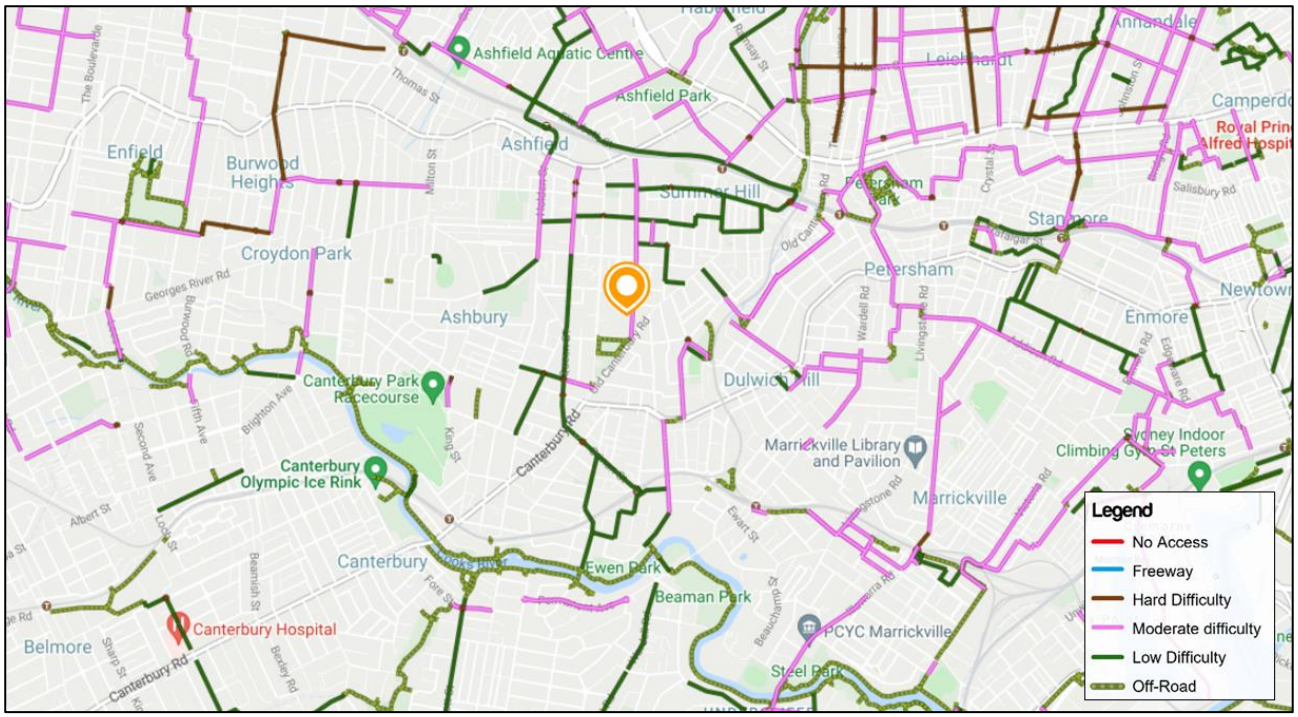

Figure 8: Service NSW Cycleway Finder Map

3 Key Management Stakeholders

3.1 HY

HY being the manager of the site has a duty of care to ensure the safety of all staff working on the Site and the surrounding community. Traffic management arrangements should be implemented to enable the orderly use of trafficable space provided within the Site and the road network surrounding it. Whilst every effort will be made to eliminate traffic safety risks, in instances where risks cannot be fully eliminated, traffic management measures are proposed to mitigate those risks.

HY shall:

- Ensure all staff is provided with sufficient training to abide by the parking strategy outlined in this plan. This includes responsibility for measures to ensure that all staff and visitors are familiar with site-specific rules through appropriate site induction procedures, including being inducted into this Construction Worker Transportation Strategy.
- Conduct all travel in a safe, professional and legal manner.
- Be familiar with and address their respective duty of care requirements in accordance with the application under the WH&S Act 2011 requirements.
- Ensure WH&S Incident logbooks are maintained and undertake necessary action(s) in relation to any reported issues.

3.2 Inner West Council (IWC)

HY has consulted with IWC in relation to the:

- site and vehicle access arrangements
- vehicle arrival and departure routes
- partial removal of the central median and stop sign at the intersection of Prospect Road/Old Canterbury Road intersection

Where and when applicable, Council shall be contacted when necessary. Council's responsibilities are largely focused on issues affecting the local community and businesses, management of the local road network and coordinating special events which may affect the availability of publicly available parking.

3.3 Transport for NSW (TfNSW)

Where and when applicable, TfNSW shall be contacted, specifically relating to any impacts to the Old Canterbury Road.

3.4 Stakeholder Consultation

Over the course of the development of this Plan, HY has consulted with key stakeholders including:

- TfNSW (CJP)
- Inner West Council
- Trinity Grammar School (represented by Bloompark Pact)
- Community Consultative Committee (CCC)

Ason Group will consult with the following stakeholders as required in the event of lane or road closures or any construction activities that will affect the bus operation:

- Bus Operators
- NSW Police
- Emergency Services

4 Construction Worker Parking

4.1 Construction Worker Numbers

The proposed number of workers per construction stage is outlined in **Table 5** below.

TABLE 5: STAGES & PHASES OF CONSTRUCTION

Stage	Timeline	Description	Worker Number
1	End-March 2022 to April 2023 (12 months)	• Installation of ATF Fencing along the western, southern and eastern site boundaries with shade cloth covering • Installation of hoarding with vinyl covering along the northern site boundary • Demolition of 4 residential dwellings (46-52 Seaview Street, Ashfield) • Prior to demolition: Access via the existing driveway of 48 & 50 Seaview Street • Post-demolition: Ingress via 46 Seaview Street driveway and egress via 52 Seaview Street driveway • Stage 1 site compound to the rear of 48 Seaview Street • Establish site compound north of existing No. 1 Oval	30 – 50 people
2	1 week after Stage 1 commencement to June 2023 (14 months)	• Installation of a gate at the existing driveway off Victoria Street to/from the existing underground carpark under Oval no. 3, as a truck entry point • Use of existing gate and driveway to/from Oval no. 3 • Construction of a new maintenance building • Construction of Oval 3 Basement Carpark • Provision of container gardening storage shelter approximately 10m wide • Widening of the connecting ramp between Oval 2 and 3 to facilitate two-way traffic • Provision of Junior School linkway • Provision of temporary school via demountables within the eastern side of the existing Oval no. 1	30 – 80 people

4.2 Construction Hours

The approved construction hours have been outlined below in **Table 6** per SSD Condition E4.

TABLE 6: HOURS OF WORK

Activity	Day	Time
Construction works (Condition E4)	Monday – Friday	7 am to 5 pm
	Saturday	8 am to 1 pm
	Sunday & Public Holidays	No Work to be carried out
Rock breaking, rock hammering, sheet piling, pile driving and similar activities (Condition E7)	Monday – Friday	9 am to 12 pm and 2 pm to 5 pm
	Saturday	9 am to 12 pm
	Sunday & Public Holidays	No Work to be carried out

Condition E5 states that construction activities may be undertaken outside of the hours in Condition E4 stated above if required:

(a) by the Police or a public authority for the delivery of vehicles, plant or materials; or

(b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or

(c) where the works are inaudible at the nearest sensitive receivers; or

(d) where a variation is approved in advance in writing by the Planning Secretary or his nominee if appropriate justification is provided for the works.

Notification of the above out-of-hours construction activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards, in accordance with Condition E6.

Requests to work outside of these types of working hours will also be submitted to HY for review and approval by the School through a Notice of Disruption (NOD) process that clearly defines the scope of works to be carried out and specific timeframes including risks assessment within a Contractors Access Form (CAF).

4.3 Construction Worker Parking

No construction worker parking will be provided on-site. The site is very accessible via public transport and public on-street parking availability is limited.

To encourage the use of public transport, an on-site secure tool storage facility would be provided by the project team to allow construction workers to drop off and securely store their tools and equipment for the project within the Site.

5 Construction Worker Parking Strategy

5.1 Travel Arrangements for Construction Workers

As detailed in Section 2, the Site is located in close proximity to existing train stations, light rail stations and bus stops with frequent services during both AM and PM peaks. As such, it is expected that the majority of the construction workers will be able to access the Site via public transport. HY will encourage workers/subcontractors to utilise public transport and carpool to/from the Site if possible.

An on-site secure tool drop-off and storage facility would be provided by HY to allow workers to drop off and securely store their tools and equipment for the project within the Site instead of bringing it to the Site on a daily basis.

Workers will be informed of appropriate tool/ equipment drop-off and storage arrangements made within site sheds and amenities and bus, light rail and train schedules/timetables via toolbox talks, pre-start face-to-face meetings, email and phone. The public transport schedules/timetables will also be provided during site induction and will be published within the sheds and lunchrooms to demonstrate alternative modes of transport available. Additionally, the site amenities will include fridges, microwaves, etc to encourage workers to drop off their lunch on-site at the start of the day and not leave the Site for lunch.

5.2 Parking Arrangements for Construction Workers

No construction worker parking will be provided on-site. On-street parking study was undertaken for the area shown below on the 22 October 2019.

The table below indicated there is ample unrestricted public on-street parking along the surrounding local roads (up to 193 spaces) and Old Canterbury Road (up to 84 spaces).

Time	Local Roads (Capacity 449) (Green)		Old Canterbury Road (Capacity 113) (Blue)	
	No.	%	No.	%
6.00 – 7.00	195	43	22	19
7.00 – 8.00	196	44	23	20
8.00 – 9.00	208	46	23	20
9.00 – 10.00	198	44	25	22
10.00 – 11.00	212	47	21	19
11.00 – 12.00	220	49	20	18
12.00 – 13.00	210	47	22	19
13.00 – 14.00	214	48	21	19
14.00 – 15.00	211	47	18	16
15.00 – 16.00	207	46	24	21
16.00 – 17.00	227	51	29	26
17.00 – 18.00	256	57	29	26
18.00 – 19.00	217	48	17	15
19.00 – 20.00	210	47	20	18
20.00 – 21.00	213	47	21	19
21.00 – 22.00	185	41	16	14

While there is surplus of on-street parking, all workers will be encouraged travel to and from the Site via public transport or carpool if possible.

In the event where construction workers are permitted to drive to site i.e., for drop-off of tools; vehicles will be directed to park in less traffic-dense streets; away from the site perimeter.

5.3 Construction Staging Impacts on On-site Campus Parking

5.3.1 Stage 1

Nill Impact.

5.3.2 Stage 2

Impact to existing staff car park (Oval 3), which is to be demolished. Parking loss is taken up by the surplus of car spaces available in the existing Jubilee car park (Oval 2) for the duration of works on Oval 3, but also supplemented by TGS car parking/transport strategies currently being finalised and implemented under the approved SSDA 10371. These include:

- Green Travel Plan:
  Mode Share

TGS are actively progressing the GTP which is inclusive of short- and long-term mode share targets, showing the ramp up towards the 10% target over 10 years (10% increase in sustainable/active transport modes). There is a robust annual Monitoring Program in place to measure and take action to stay on or above target.

- OTAMP

TGS are currently producing an Operational Transport and Access Management Plan (OTAMP) which is a condition of consent for the SSDA 10371. The OTAMP will include enabling infrastructure for EV charging stations has been incorporated in the design.

- End of Trip facilities

As part of the approved works, TGS will be implementing end of trip facilities and bike parking in stage 3 to compliment the overall transport strategy.

- Travel Access Guide (TAG)

TGS are actively progressing a TAG as part of their overall transport strategy and GTP.

- Travel Surveys

TGS are currently undertaking travel surveys at this level of detail and development of strategies as required will occur annually as part of the Monitoring Plan.

Based on the above measures, the impact of the construction activities on the School's campus carpark will be minimal.

HY will also rely on the GTP and TAG to ensure that their workers will be well informed of the public transport options to/from the Site.

In addition to the above, it should be noted that under stage 2 of the TGS approved works, there will be some augmentation/refurbishment works to the existing Jubilee Carpark (Oval 2), but ONLY at the completion of the Oval 3 Carpark works. The augmentation/refurbishment works will be implemented during low impact times for the School operations (School Holidays etc) to ensure minimal impact.

It is the intent of TGS that ALL car parking, kiss and drop construction works are completed as part of the first 2 stages of the overall project and as quickly as possible to ensure any impacts to the surrounding community are reduced and managed appropriately.

The programme allows for 2-3 weeks for the Jubilee Drive ramp works which prohibit access to the Oval 2 Carpark. These works will be undertaken during the school shutdown holidays, to ensure availability of the carpark when required.

5.4 Stakeholder Engagement

5.4.1 Pre-Submission Consultation

HY has liaised with the School, CCC, Council and TfNSW regarding construction schedules and trucks routes.

5.4.2 Stakeholder Engagement Plan and Notification

HY will continue to liaise with relevant stakeholders and will raise any potential conflict with stakeholder at the earliest time. The subsequent consultation actions are shown in Table 6.

TABLE 7: STAKEHOLDER CONSULTATION ACTIONS

Stakeholder	Action
TfNSW	HY submitted CTPMSP to stakeholder. See **Appendix A**. HY has addressed stakeholder's comments in this final CTPMSP
Inner West Council	HY submitted CTPMSP to stakeholder. See **Appendix A**. HY has addressed stakeholder's comments in this final CTPMSP.
Community Consultative Committee	HY discussed the CTPMSP in the CCC meeting on 30 March 2022 and have addressed all comments from Bloompark Pact (on behalf of the School) between 6 April 2022 and 19 April 2022. See **Appendix A**. HY has addressed stakeholder's comments in this final CTPMSP
NSW Police	HY to obtain NSW Police permit in the event of lane or road closure as required.
Emergency Services	HY to inform Emergency Services in the event of lane or road closure as required and to attend fortnightly meetings with Emergency Services if necessary
Bus Operators	HY to inform bus operators in the event of any construction activities which will affect the bus operations as required.

5.4.3 Liaison Officer

HY will assign a liaison officer to deal with any residential issues/concerns, and that HY will arrange to regularly update the community on the progress of the works. HY community engagement and communication will be maintained through the HY Bid/Marketing Team.

Tessa Vrachnos
Bid & Marketing Manager
tvrachnos@hansenyuncken.com.au
0297 707 600

HY will also continue to inform Trinity of disruptive works through the disruption notice procedure, to be passed onto the neighbouring public.

Appendix A. Consultation with TfNSW (CJP), Inner West Council and CCC

PRE-APPROVAL CONSULTATION RECORD 01

Identified Party to Consult:	Hansen Yuncken (HY) / Ason Group / Transport for NSW / Inner West Council / Bloompark / Trinity Grammar School
Consultation type:	Teleconference/Email/Microsoft Teams Meeting
When is consultation required?	Prior to construction
Why?	To meet Condition D15
When was consultation scheduled/held?	Thursday 07/04/22 Email: Ason Group to Transport for NSW Thursday 07/04/22 Email: Ason Group to Inner West Council Tuesday, 12/04/22 Meeting: HY, Bloompark Thursday 14/04/22 Email: Transport for NSW to Ason Group Thursday 14/04/22 Email: Bloompark to HY Wednesday 20/04/22 Email: Inner West Council to HY Friday 29/04/22 Email: Inner West Council to HY Tuesday 03/05/22 Meeting: Inner West Council, HY, Bloompark
When was consultation held?	Thursday 07/04/22 Email: Ason Group to Transport for NSW Thursday 07/04/22 Email: Ason Group to Inner West Council Tuesday, 12/04/22 Meeting: HY, Bloompark Thursday 14/04/22 Email: Transport for NSW to Ason Group Thursday 14/04/22 Email: Bloompark to HY Wednesday 20/04/22 Email: Inner West Council to HY Friday 29/04/22 Email: Inner West Council to HY Tuesday 03/05/22 Meeting: Inner West Council, HY, Bloompark
Identify persons and positions who were involved	Meg Kong | Principal, Traffic Management & Operations (Ason) Daniel Ngo | Project Manager TfNSW Jake Coles | Transport for NSW Representative Boris Muha | Engineer - Traffic and Parking Services (Council) Joe Bertacco | Coordinator Development Engineering (Council) Peter Brogan | Director (Bloompark) Shaun Diamond | Senior Project Manager (Bloompark) Tim Russell | Assistant Project Manager (Bloompark)
Provide the details of the consultation	Introduction to the project. Consultation with TfNSW, Inner West Council, Ason Group, Bloompark and Trinity Grammar School with regards to the development of the CTPMSP and CWTS.
What specific matters were discussed?	Background and staging of the project. Construction vehicle activity and routes. Traffic controllers/supervising personnel. Construction worker transportation. Methods of monitoring potential issues.

	School drop-off and pick up times.
What matters were resolved?	Construction truck sizes and routes. Entry/Exit to site. Machinery delivery. Traffic controller requirements. Construction worker transportation and parking.
What matters are unresolved?	None
Any remaining points of disagreement?	No

CONDITIONS D15 & D22 - RESPONSE MATRIX

No.	Comment	AG/HY Response
1	In regard to the Haulage Plan Route: **(a)** The side street connections between Victoria Street to Holden Street are too narrow to sustain safe and proper truck movements not to mention likely	Truck to arrive/depart via Seaview Street, Prospect Road, Old Canterbury Road (Main Routes) and
	(b) Victoria Street, could be looked as an alternative, provided all trucks needing to access from the west can negotiate through all intersection, e.g. roundabouts at Arthur Street and Norton Street, signals at Liverpool Road.	20m semis to to arrive via Victoria Street and Liverpool Road (Alternative Routes for 18.1m truck
	(c) The Haulage plan is to be amended to identify what size trucks are to use routes coming to/from the site from the west and east.	See Figures 7 (main routes) and 8 (alternative) of CTPMSP.
	(d) Can all dog and trailer vehicles exit out via Prospect Road-Old Canterbury road, rather than exit back out of Victoria Street? By doing so the western routes would be more limited to 9.5m and below, for construction vehicles.	Yes, under the management of traffic controllers. See Figure 7 and Appendix E of the CTPMSP.
	(e) Can 9.5m vehicles coming to the maintenance building site in Seaview Street be contained in and out via Prospect Road?	Yes, see Figure 7 of CTPMSP. See Appendix E for swept path assessments demonstrating
2	It is viewed that the machinery delivery activity via Victoria Street would only be undertaken on few (infrequent) occasions, and that these occasions be approved under separate standing plant or road occupation permit. As to when parking	See Section 3.11 of CTPMSP.
3	No construction vehicle activity shall operate in school hour drop-off and pick up times being 8-9.30am and 2.30pm-4pm, or other hours as requested by the school.	See Section 3.4 of CTPMSP - nominated hours are 7.30am to 9.00am and from 2.30 to 4pm
4	Supervised personnel at driveway crossing points for pedestrians should also be accredited traffic controllers if traffic is required to be stopped for construction vehicle access at driveways.	See Section 3.8 of CTPMSP.
5	Per our previous agreement on site it was understood that the tail end of the central median island be removed only, and that the tail end of the median be replaced and drawn out by line marking. Signs on the median be made to remove	See Section 2.7 of the CTPMSP.
6	Parking should be made available on-site for workers, staff and displaced parent/careers (when temporarily transferred from oval 2 to 3). Oval 3 carpark has a lesser capacity of parking than Oval 2. This can collectively account for a	See Section 3.5 of the CTPMSP and Section 5.3 of the CWTS
7	The CTPMSP should be monitored accordingly, and changes made if major issues arise. Council and Police/TfNSW also reserve the right to re-enter in discussions with the builder to review the CTPMSP if major issues arise.	Noted and included in Section 1.6.1 of the CTPMSP and Section 1.3 of CWTS.
8	The builder shall assign a liaison officer to deal with any residential issues/concerns, and that the builder arrange to regularly update the community on the progress of the works.	Noted and included in Section 1.6.4 of the CTPMSP and Section 5.4.3 of the CWTS.

Meg Kong

From: Joe Bertacco <Joe.Bertacco@innerwest.nsw.gov.au>
Sent: Friday, 29 April 2022 2:11 PM
To: Meg Kong
Cc: Ross Pearson; Andrew Sukkar; Wendy Zheng; Boris Muha
Subject: RE: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Hi Meg

I refer to The CTMP submitted for Trinity Grammar,

Please find below comments for discussion. It is recommended that the issues below be discussed in a TEAMS meeting next week to ensure that agreement is reached on the changes required and to aid a speedy approval. Please advise of your teams available times and I will advise of availability of Boris and I.

Comments on CTMP

1. In regard to the Haulage Plan Route-
   (a). The side street connections between Victoria Street to Holden Street are too narrow to sustain safe and proper truck movements not to mention likely complaints from residents. Seaview Street between Farleigh Street and Holden Street is 'No Entry' towards Holden Street, thereby forcing trucks to negotiate through tight intersection corners is unacceptable.
   (b). Victoria Street, could be looked as an alternative, provided all trucks needing to access from the west can negotiate through all intersection, e.g. roundabouts at Arthur Street and Norton Street, signals at Liverpool Road.
   (c) The Haulage plan is to be amended to identify what size trucks are to use routes coming to/from the site from the west and east.
   (d) Can all dog and trailer vehicles exit out via Prospect Road-Old Canterbury road, rather than exit back out of Victoria Street? By doing so the western routes would be more limited to 9.5m and below, for construction vehicles.
   (e) Can 9.5m vehicles coming to the maintenance building site in Seaview Street be contained in and out via Prospect Road?
2. It is viewed that the machinery delivery activity via Victoria Street would only be undertaken on few (infrequent) occasions, and that these occasions be approved under separate standing plant or road occupation permit. As to when parking needs to be removed temporality to the corners of Holwood Avenue and Victoria Street is unknown. Under condition of permits, residents would be informed on dates that parking needs to be removed. The Builder is responsible to appropriately cordon off parking in the area.
3. No construction vehicle activity shall operate in school hour drop-off and pick up times being 8-9.30am and 2.30pm-4pm, or other hours as requested by the school.
4. Supervised personnel at driveway crossing points for pedestrians should also be accredited traffic controllers if traffic is required to be stopped for construction vehicle access at driveways.
5. Per our previous agreement on site it was understood that the tail end of the central median island be removed only, and that the tail end of the median be replaced and drawn out by line marking. Signs on the median be made to remove and replaced at the end of the day. -*see below*. It was viewed that some of the physical island be maintained to control traffic movement around the intersection particular after hours. This will need to be clearly rediscussed based on the available swept path movements.
6. Parking should be made available on-site for workers, staff and displaced parent/careers (when temporarily transferred from oval 2 to 3). Oval 3 carpark has a lesser capacity of parking than Oval 2.

This can collectively account for a larger demand for on-street parking which would be impactive and noticeable to the residential community. It is viewed that Oval 1 and 3 can be re-configurated in use under construction to provide off-street parking.

7. The CTPMSP should be monitored accordingly and changes made if major issues arise. Council and Police/TfNSW also reserve the right to re-enter in discussions with the builder to review the CTMP if major issues arise.
8. The builder shall assign a liaison officer to deal with any residential issues/concerns, and that the builder arrange to regularly update the community on the progress of the works.

Note. Information is only descriptive, and markings may appear off-set from its actual position.

Any other additional issues we will also be raised and discussed at the meeting.

Regards

Joe Bertacco
Coordinator Development Engineering
p +61 2 9335 2225 e Joe.Bertacco@innerwest.nsw.gov.au m 0421 619 358

Council acknowledges the Traditional Custodians of these lands, the Gadigal-Wangal people of the Eora Nation.

From: Meg Kong <meg.kong@asongroup.com.au>
Sent: Wednesday, 20 April 2022 8:56 AM
To: Boris Muha <Boris.Muha@innerwest.nsw.gov.au>; Joe Bertacco <Joe.Bertacco@innerwest.nsw.gov.au>
Cc: Sasha Vuckovic <SVuckovic@hansenyuncken.com.au>; Matthew Coelho <MCoelho@hansenyuncken.com.au>; Michaella Edwards <MichaellaEdwards@hansenyuncken.com.au>; Richard Osullivan <RO'Sullivan@hansenyuncken.com.au>; Michael Gibson <MGibson@hansenyuncken.com.au>; Ross Pearson <RPearson@hansenyuncken.com.au>; Andrew Sukkar <ASukkar@hansenyuncken.com.au>; Dora Choi <dora.choi@asongroup.com.au>; Wendy Zheng <wendy.zheng@asongroup.com.au>; 'council@innerwest.nsw.gov.au'
Subject: RE: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

> Some people who received this message don't often get email from meg.kong@asongroup.com.au. Learn why this is important

Hi Boris

Hope you are well and had a good Easter break.

Just following up on the indicative timing of Council's comments.

Thank you in advance.

Kind regards

Meg Kong
Principal - Traffic Management & Operations | Ason Group

T: +61 2 9083 6601 | M: +61 424 007 141 | E: meg.kong@asongroup.com.au
A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

From: Meg Kong
Sent: Thursday, 7 April 2022 5:18 PM
To: Boris.Muha@innerwest.nsw.gov.au; Joe.Bertacco@innerwest.nsw.gov.au
Cc: Sasha Vuckovic <SVuckovic@hansenyuncken.com.au>; Matthew Coelho <MCoelho@hansenyuncken.com.au>; Michaella Edwards <MichaellaEdwards@hansenyuncken.com.au>; Richard Osullivan <RO'Sullivan@hansenyuncken.com.au>; Michael Gibson <MGibson@hansenyuncken.com.au>; Ross Pearson <RPearson@hansenyuncken.com.au>; Andrew Sukkar <ASukkar@hansenyuncken.com.au>; Dora Choi <dora.choi@asongroup.com.au>; Wendy Zheng <wendy.zheng@asongroup.com.au>; 'council@innerwest.nsw.gov.au'
Subject: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Hi Boris, Joe

Hope you are keeping well.

Condition D15(b) requires us to prepare the CTPMSP for Trinity Grammar School, Summer Hill Campus (Stages 1 and 2) works in consultation with Council.

D15. The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following:

(a) be prepared by a suitably qualified and experienced person(s);

(b) be prepared in consultation with Council, TfNSW and the CCC;

(c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services;

(d) incorporate the measures outlined in the Construction Traffic Management Plan framework submitted with the EIS;

(e) incorporate measures to minimise conflicts between the construction vehicles and ongoing operations of the school including student safety during construction periods, details of equitable, all abilities access within the site;

(f) details of alternate drop-off / pick-up and car parking arrangements during ongoing construction works within the Jubilee car park;

(g) details of alternate parking arrangements (if needed) for the staff and driving age students, during ongoing construction works within the basement (where relevant);

(h) details of on-site parking for construction vehicles and work zones on the surrounding streets, where needed and in consultation with Council; and

(i) detail heavy vehicle routes, access and parking arrangements for heavy construction vehicles.

Please download the plan from the link below:

P1896r01v03 CTPMSP_Trinity Grammar School, 119 Prospect Road, Summer Hill.pdf

Appreciate Council's review and comments. Feel free to contact me if you have any questions.

Kind regards

Meg Kong
Principal - Traffic Management & Operations | Ason Group

T: +61 2 9083 6601 | M: +61 424 007 141 | E: meg.kong@asongroup.com.au
A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

Meg Kong

From: Meg Kong
Sent: Thursday, 7 April 2022 5:18 PM
To: Boris.Muha@innerwest.nsw.gov.au; Joe.Bertacco@innerwest.nsw.gov.au
Cc: Sasha Vuckovic; Matthew Coelho; Michaella Edwards; Richard Osullivan; Michael Gibson; Ross Pearson; Andrew Sukkar; Dora Choi; Wendy Zheng; 'council@innerwest.nsw.gov.au'
Subject: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Tracking:

Recipient	Delivery	Read
Boris.Muha@innerwest.nsw.gov.au		
Joe.Bertacco@innerwest.nsw.gov.a		
Sasha Vuckovic		
Matthew Coelho		
Michaella Edwards		
Richard Osullivan		
Michael Gibson		
Ross Pearson		
Andrew Sukkar		
Dora Choi	Delivered: 7/04/2022 5:19 PM	Read: 7/04/2022 5:26 PM
Wendy Zheng	Delivered: 7/04/2022 5:19 PM	
'council@innerwest.nsw.gov.au'		

Hi Boris, Joe

Hope you are keeping well.

Condition D15(b) requires us to prepare the CTPMSP for Trinity Grammar School, Summer Hill Campus (Stages 1 and 2) works in consultation with Council.

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(d) incorporate the measures outlined in the Construction Traffic Management Plan framework submitted with the EIS;

(e) incorporate measures to minimise conflicts between the construction vehicles and ongoing operations of the school including student safety during construction periods, details of equitable, all abilities access within the site;

(f) details of alternate drop-off / pick-up and car parking arrangements during ongoing construction works within the Jubilee car park;

(g) details of alternate parking arrangements (if needed) for the staff and driving age students, during ongoing construction works within the basement (where relevant);

(h) details of on-site parking for construction vehicles and work zones on the surrounding streets, where needed and in consultation with Council; and

(i) detail heavy vehicle routes, access and parking arrangements for heavy construction vehicles.

Please download the plan from the link below:

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Appreciate Council's review and comments. Feel free to contact me if you have any questions.

Kind regards

Meg Kong
Principal - Traffic Management & Operations | Ason Group

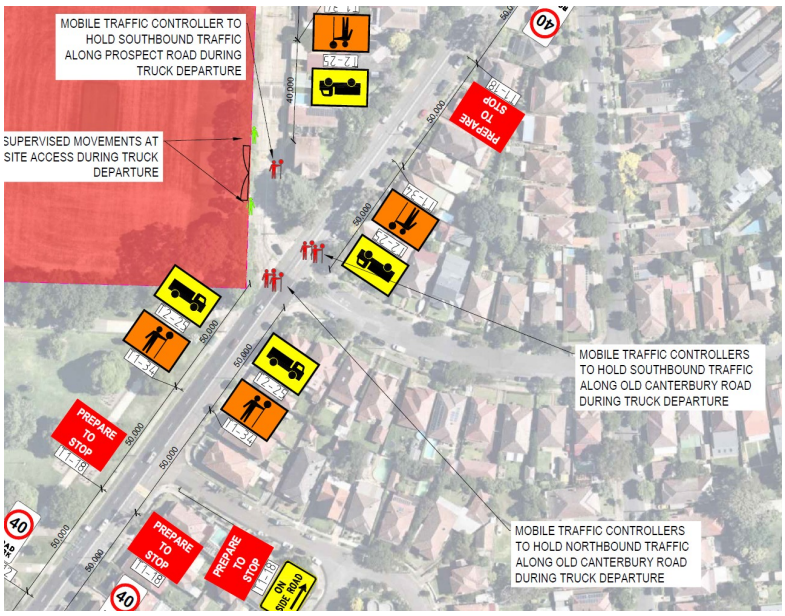
T: +61 2 9083 6601 | M: +61 424 007 141 | E: meg.kong@asongroup.com.au
A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

Meg Kong

From: Daniel Ngo <Daniel.Ngo@transport.nsw.gov.au>
Sent: Thursday, 14 April 2022 1:33 PM
To: Meg Kong
Subject: RE: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Hi Meg,

Please see our comments below for your CTMP.

Item	Reviewer Org	Reviewer Name	Document Reference	Reviewer Comment
1	CJP	D.Ngo	Appendix B	Any traffic control/devices on Old Canterbury Road is subject to further ROL applications and TfNSW approval. This TGS/ROL is unlikely to be issued for peak periods as it requires a lane closure and traffic stoppages on Old Canterbury Road.
1	CJP	D.Ngo	Appendix B	TGS shows the use of two traffic controllers stopping northbound or southbound traffic on Old Canterbury Road during truck arrivals and departures. Traffic controllers cannot hold two lanes of traffic. The use of lane closures in each direction and porta-booms to remove traffic controllers from line of traffic will be required. 

Regards,

Daniel Ngo
Project Manager
Operations
Customer Journey Planning
Transport for NSW

M 0484 374 559 **E** daniel.ngo@transport.nsw.gov.au

transport.nsw.gov.au

25 Garden Street

Eveleigh NSW 2015

Transport for NSW

From: >
Sent: Tuesday, 12 April 2022 2:16 PM
To: Jake Coles <Jake.COLES@transport.nsw.gov.au>
Subject: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Hi Jake

Hope you are keeping well.

Condition D15 requires us to prepare the CTPMSP for Trinity Grammar School, Summer Hill Campus (Stages 1 and 2) works in consultation with TfNSW.

D15. The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following:

(a) be prepared by a suitably qualified and experienced person(s);

(b) be prepared in consultation with Council, TfNSW and the CCC;

(c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services;

(d) incorporate the measures outlined in the Construction Traffic Management Plan framework submitted with the EIS;

(e) incorporate measures to minimise conflicts between the construction vehicles and ongoing operations of the school including student safety during construction periods, details of equitable, all abilities access within the site;

(f) details of alternate drop-off / pick-up and car parking arrangements during ongoing construction works within the Jubilee car park;

(g) details of alternate parking arrangements (if needed) for the staff and driving age students, during ongoing construction works within the basement (where relevant);

(h) details of on-site parking for construction vehicles and work zones on the surrounding streets, where needed and in consultation with Council; and

(i) detail heavy vehicle routes, access and parking arrangements for heavy construction vehicles.

Please download the plan from the link below:

P1896r01v03 CTPMSP_Trinity Grammar School, 119 Prospect Road, Summer Hill.pdf

Appreciate TfNSW's review and comments. Feel free to contact me if you have any questions.

Kind regards

Meg Kong
Principal - Traffic Management & Operations | Ason Group

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A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

OFFICIAL

OFFICIAL

Meg Kong

From: Meg Kong
Sent: Thursday, 7 April 2022 5:12 PM
To: Development Applications; development.CTMP.CJP@transport.nsw.gov.au; Jake Coles
Cc: Sasha Vuckovic; Matthew Coelho; Michaella Edwards; Richard Osullivan; Michael Gibson; Ross Pearson; Andrew Sukkar; Dora Choi; Wendy Zheng
Subject: SSD 10371 Condition D15: Trinity Grammar School, Summer Hill Campus - CTPMSP

Tracking:

Recipient	Delivery
Development Applications	
development.CTMP.CJP@transport.nsw.gov.au	
Jake Coles	
Sasha Vuckovic	
Matthew Coelho	
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Richard Osullivan	
Michael Gibson	
Ross Pearson	
Andrew Sukkar	
Dora Choi	Delivered: 7/04/2022 5:12 PM
Wendy Zheng	Delivered: 7/04/2022 5:12 PM

Hi Jake

Hope you are keeping well.

Condition D15 requires us to prepare the CTPMSP for Trinity Grammar School, Summer Hill Campus (Stages 1 and 2) works in consultation with TfNSW.

D15. The Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following:

(a) be prepared by a suitably qualified and experienced person(s);

(b) be prepared in consultation with Council, TfNSW and the CCC;

(c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services;

(d) incorporate the measures outlined in the Construction Traffic Management Plan framework submitted with the EIS;

(e) incorporate measures to minimise conflicts between the construction vehicles and ongoing operations of the school including student safety during construction periods, details of equitable, all abilities access within the site;

(f) details of alternate drop-off / pick-up and car parking arrangements during ongoing construction works within the Jubilee car park;

(g) details of alternate parking arrangements (if needed) for the staff and driving age students, during ongoing construction works within the basement (where relevant);

(h) details of on-site parking for construction vehicles and work zones on the surrounding streets, where needed and in consultation with Council; and

(i) detail heavy vehicle routes, access and parking arrangements for heavy construction vehicles.

Please download the plan from the link below:

P1896r01v03 CTPMSP_Trinity Grammar School, 119 Prospect Road, Summer Hill.pdf

Appreciate TfNSW's review and comments. Feel free to contact me if you have any questions.

Kind regards

Meg Kong
Principal - Traffic Management & Operations | Ason Group

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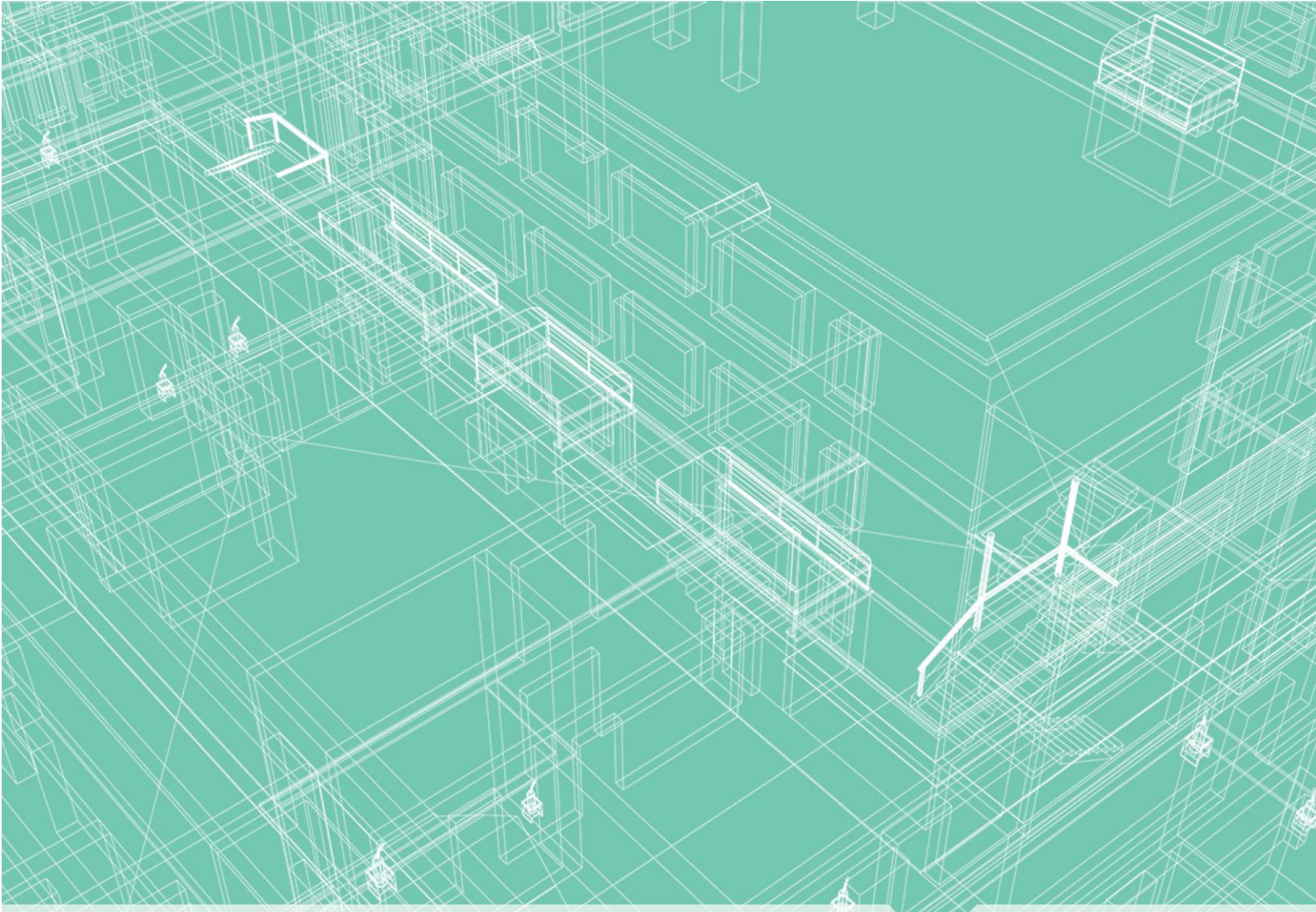
A: Suite 17.02, Level 17, 1 Castlereagh Street, Sydney NSW 2000

A.5 Construction Noise & Vibration Management Sub-Plan (CNVMSP)

In accordance with SSD Condition D13(c)



CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN

TRINITY GRAMMAR SCHOOOL – THE RENEWAL PROJECT

ACOUSTIC SERVICES

JHA

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This report is prepared for the nominated recipient only and relates to the specific scope of work and agreement between JHA and the client (the recipient). It is not to be used or relied upon by any third party for any purpose.

DOCUMENT CONTROL SHEET

Project Number	220011
Project Name	Trinity Grammar School – The Renewal Project
Description	Construction Noise and Vibration Management Plan
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	DATE						

CONTENTS

1 INTRODUCTION

1.1 OVERVIEW

This Construction Noise and Vibration Management Plan (CNVMP) has been prepared by JHA Consulting Engineers on behalf of Trinity Grammar School (TGS) to address the Condition of Consent clause D16, of the State Significant Development Application (SSD-10371) for Stages 1 and 2 of the proposed construction works of 'The Renewal Project' of the TGS Campus (the Proposal) located at 119 Prospect Road, Summer Hill, NSW.

The following documentation has been used for the preparation of this report:

- Architectural drawings of the proposed development prepared by PMDL Architects.
- Trinity Grammar School Summer Hill Campus – The Renewal Project. Noise Impact Assessment. Prepared by SLR – ref. 610.18552-R01, version: v1.1, dated 4th February 2020.
- Drawings and planning information for the proposed construction staging by Hansen Yuncken.

This document and related work have been prepared following JHA Consulting Engineers Quality and Environmental Management Systems, which are based on AS/NZS ISO 9001:2015 and ISO 14001:2015.

1.2 PURPOSE OF THE CNVMP

The purpose of this CNVMP is to ensure that noise and vibration impacts due to Construction activities are appropriately managed in accordance with relevant legislation and standards, plus protection of nearby sensitive receivers. The objectives of this acoustic assessment are:

- Comply with the Conditions of Consent as per SSD-10371.
- Identify noise sensitive receivers that will potentially be affected by the works.
- Establish the appropriate noise level and vibration criteria in accordance with the relevant standards, guidelines and legislation.
- Determine whether the relevant criteria can be achieved based on assumed construction works and plant for the noise assessments. Where applicable, provide recommendations for any necessary acoustic control measures that will need to be incorporated into the development or use in order to ensure with the assessment criteria.
- Provide recommendations for Construction Noise and Vibration Planning.

This CNVMP identifies the Contractor's obligations and the requirements to manage noise and vibration during construction such that the necessary allowances within the construction costs, programmes and work methodologies can be made. Relevant legislation, guidelines and standards are identified in this CNVMP.

1.3 NOISE AND VIBRATION ISSUES

This CNVMP addresses all works from construction works associated with the proposed development. The construction works will contribute noise and vibration emissions to the surrounding environment. Typically, this will comprise of continuous and intermittent noise and vibration from on-site construction equipment and plant equipment.

Construction noise associated with the project may include airborne and ground-borne noise impacts as follows:

- Airborne Noise: Proposed construction works will generate noise that will propagate through the air. Airborne noise generated by external construction activities is likely to impact on surrounding sensitive receivers.

- Ground-borne noise and vibration impacts: Construction and piling works have the potential to generate noise and vibration that propagates through the ground and building structural elements which is then radiated by vibrating wall and floor surfaces of nearby sensitive receivers.

1.4 RESPONSIBILITIES

The Main Contractor must be responsible for ensuring that the noise and vibration from activities carried out on site are minimised as far as practical.

The Main Contractor is responsible for:

- Ensuring that any site noise and vibration plus any complaints, are monitored, investigated, managed and controlled in accordance with the recommendations provided in this plan.
- Ensuring procurement documents specify any particular requirements in relation to the management of noise and vibration.
- Ensuring all works are undertaken in accordance with the requirements of the contract documents and this plan.
- Ensuring all project personnel and sub-contractors employed are aware of their responsibilities in regard to the management of noise and vibration during construction and assume the responsibilities assigned to them within the plan.
- Monitoring and managing noise and vibration impacts on sensitive receivers, in accordance with the requirements of the relevant guidelines and standards.
- Consulting with the occupants of surrounding buildings to inform them of the nature of the construction works, to determine any specific noise and vibration sensitivity they may have and to negotiate respite times during noisier works.

2 DESCRIPTION OF THE PROPOSAL

2.1 SITE DETAILS

Summer Hill is a suburb of Sydney, in the Local Government Area of the Inner West Council, approximately at 7km west of the Sydney CBD. The site is located at 119 Prospect Road, Summer Hill, NSW 2130. The site is legally described as Lot 11 in DP1171965.

This CNVMP addresses Stages 1 and 2 of the project which consist of the following works:

Stage 1:

- Establish site compounds and access and egress points;
- Demolish 46-52 Seaview Street;
- Excavation of 46-52 Seaview Street;

Stage 2a:

- Construct new maintenance building;
- Excavation of Oval 3;
- Commence construction of Oval 3 basement carpark.

Figure 1 shows the location of Stage 1 and 2 construction works.

Figure 1: Location of construction works (red dotted line and yellow shadow) during Stage 1 and 2 and TGS site (blue line).

2.2 NOISE SENSITIVE RECEIVER DETAILS

The surrounding area is mainly single and two storey detached houses being the land uses residential and recreational, apart from the educational receiver being TGS itself.

The surrounding noise sensitive receivers have been grouped into Noise Catchment Areas (NCAs) as follows:

- *NCA 1 – North*: Residential along Seaview Street.
- *NCA 2 – East:* Residential along Prospect Road.
- *NCA 3 – South-East*: Residential along Old Canterbury Road.
- *NCA 4 – South*: Recreational Area of Yeo Park.
- *NCA 5 – West*: Residential along Victoria Street.
- *NCA 6 – North-West*: Residential along Seaview Street.
- *NCA 7 – West:* 142 Victoria Street and 54 Seaview Street.
- *NCA 8* – Trinity Grammar School.

Figure 2 shows the TGS site (blue line), construction locations (red dotted line with yellow shadow), residential receivers (green shadow), recreational receiver (purple shadow), educational receiver (orange label) and approximate locations of unattended noise monitoring by SLR (red squares, L1 etc).

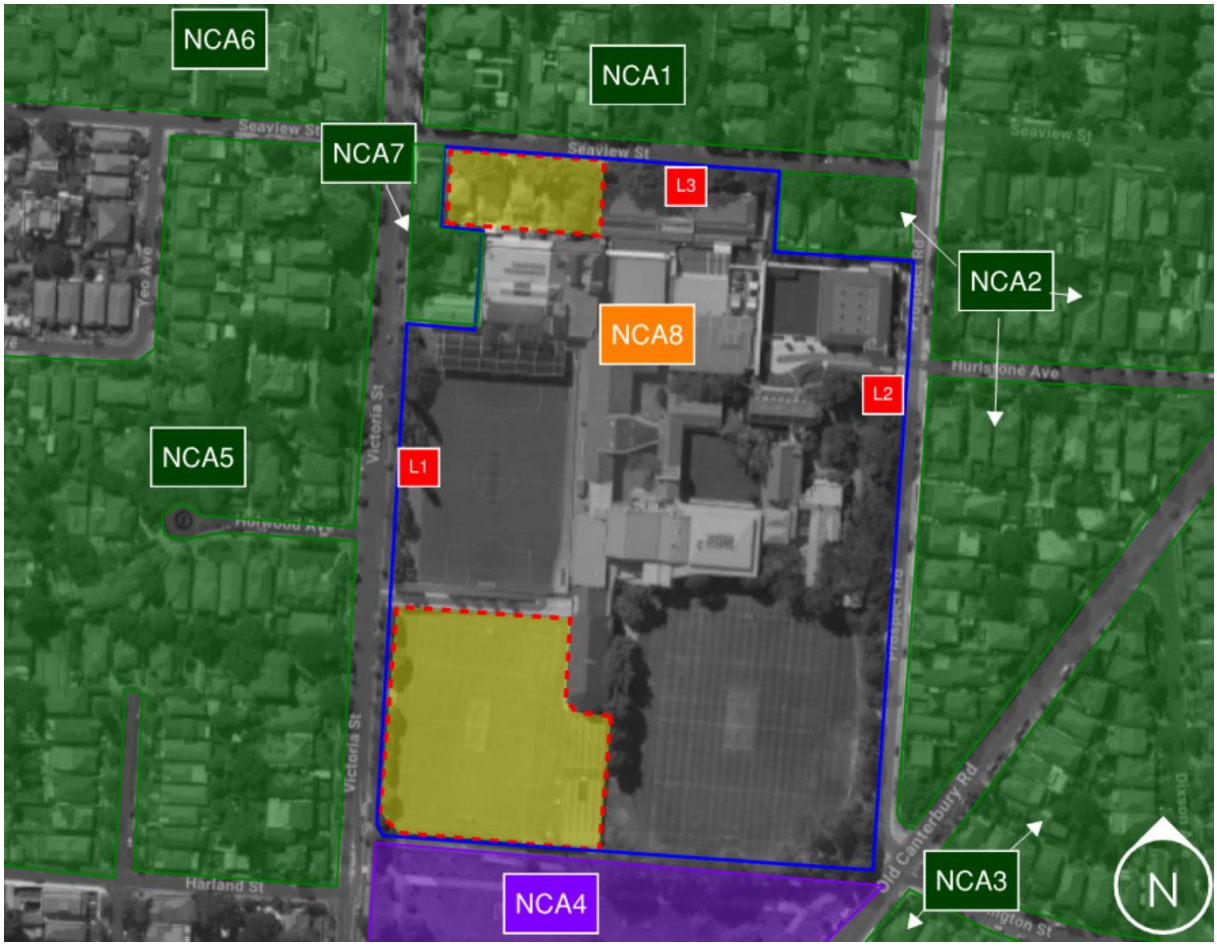


Figure 2: Aerial view of TGS site (blue line), construction areas (red dotted line), surrounding noise sensitive receivers and approximate unattended monitoring locations.

Refer to Table 1 for the details of the nearest noise sensitive receivers around the construction site, including the type of noise receiver, address, and approximate distances from the construction boundary to the receivers' boundaries.

Sensitive Receiver	*Receiver Type*	*Address of neatest receiver*	*Approx. distance, m*
NCA 1	Residential	138 Victoria Street	15
NCA 2	Residential	30 Seaview Street	95
NCA 3	Residential	47 Arlington Street	100
NCA 4	Recreational	Yeo Park	10
NCA 5	Residential	175-179 Victoria Street	15
NCA 6	Residential	137 Victoria Street	35
NCA 7	Residential	54 Seaview	< 5
NCA 8	Educational	Trinity Grammar School	< 5

Table 1: Receivers surrounding the construction sites and the approximate distances from boundaries.

It is noted that if noise and vibration impacts associated with the proposed development are controlled at the nearest sensitive receivers, then compliance with the recommended criteria at all noise sensitive receivers should be achieved.

3 SITE MEASUREMENTS

Noise survey information has been retrieved from the Noise and Vibration Impact Assessment prepared by SLR[1]. As per SLR, long-term noise monitoring was carried out from Thursday 14th February to Thursday 21st February 2019 at three monitoring locations. Additional unattended and attended noise monitoring were conducted again at the same locations between Wednesday 30th October and Friday 8th November 2019. Location of the unattended noise monitoring is shown in Figure 2.

Details of the long-term noise monitoring results are detailed in Section 3 of the SLR's Noise Impact Assessment Report and Table 2 below shows the RBLs measured for locations around the site.

Location	*L_{A90} Background Noise Levels, dB(A)*			*$L_{Aeq,period}$ Noise Levels, dB(A)*		
	Day 0700-1800	*Evening 1800-2200*	*Night 2200-0700*	*Day 0700-1800*	*Evening 1800-2200*	*Night 2200-0700*
Location 1 – Victoria St.	44	41	35	64	58	53
Location 2 – Seaview St	42	40	35	59	57	53
Location 3 – Prospect Rd	43	42	34	60	57	52

Table 2: Results of long-term noise.

[1]Trinity Grammar School Summer Hill Campus – The Renewal Project. Noise Impact Assessment, by SLR. Ref: 610.18552-R01-v1.1, dated 04/02/2020.

4 NOISE AND VIBRATION CRITERIA

4.1 RELEVANT CODES AND STANDARDS

In preparing this CNVMP, the following documentation including legislation, codes, standards and guidelines have been considered:

- Regulatory Framework:
  - Environmental Planning and Assessment (EP&A) Act 1979.
  - Protection of the Environmental Operations (POEO) Act 1997.
- Construction Noise and Vibration
  - Development Conditions of Consent (SSD-10371).
  - NSW Department of Environment and Climate Change (DECC) *'Interim Construction Noise Guideline'* (ICNG) 2009.
  - NSW DECC Assessing Vibration: A Technical Guideline 2006.
  - NSW Transport Roads & Maritime Services (RMS) *'Construction Noise and Vibration Guideline'* 2016.
  - Australian Standard AS 2436:2010 *'Acoustics – Guide to Noise Control on Construction, Maintenance & Demolition Sites'*.
  - British Standards Institution BS 6472:2008 *'Evaluation of human exposure to vibration in buildings (1 to 80 Hz)'*.
  - British Standards Institution BS 7385.2:1993 *'Evaluation and Measurement for Vibration in Buildings. Guide to Damage Levels from Ground-borne Vibration'*.

4.2 REGULATORY FRAMEWORK

4.2.1 ENVIRONMENTAL PLANNING AND ASSESSMENT (EP&A) ACT 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) provides the regulatory framework for the protection of the environment in NSW. The EP&A Act is relevantly about planning matters and ensuring that "environmental impact" associated with the proposed development is properly considered and reasonable before granting development consent to develop.

The assessment of "environmental impact" relies upon the identification of acceptable noise criteria which may be defined in a Development Control Plan, or derived from principles using guidelines like NSW EPA Noise Policy for Industry (NPI 2017) or Noise Guide for Local Government (NGLG 2013).

4.2.2 PROTECTION OF THE ENVIRONMENTAL OPERATIONS (POEO) ACT 1997

The Protection of the Environment Operations (POEO) Act 1997 has the objective to protect, restore and enhance the quality of the NSW environment. Abatement of noise pollution is underpinned by the definition of "offensive noise" as follows:

"...

(a) that, by reason of its level, nature, character or quality, or the time at which it is made, or any other circumstances:

> *(i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or*

(ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or

(b) that is of a level, nature, character or quality prescribed by the regulations or that is made at a time, or in other circumstances, prescribed by the regulations.

…"

Noise Guide for Local Government (NGLG) 2013, provides a consideration checklist to determine an "offensive noise".

4.3 DEVELOPMENT CONDITIONS OF CONSENT (SSD-10371)

Development conditions of consent (SSD-10371) states the following:

"…

D16. The Construction Noise and Vibration Management Sub-Plan must address, but not be limited to, the following:

- *(a) be prepared by a suitably qualified and experienced noise expert;*
- *(b) describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009);*
- *(c) incorporate the acoustic mitigation measures recommended in the Noise and Impact Assessment prepared by SLR dated 4 February 2020, and where appropriate incorporate the provision of hoardings to minimise impacts;*
- *(d) assess the vibration impacts and detail the vibration management measures and strategies, including ensuring safe working distances for vibration plant outlined in the Noise and Impact Assessment prepared by SLR dated 4 February 2020;*
- *(e) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;*
- *(f) include strategies that have been developed with the community for managing high noise generating works;*
- *(g) describe the community consultation undertaken to develop the strategies in condition D16(f);*
- *(h) describe the methods of managing noise within the site when construction works are ongoing with school operations to ensure appropriate acoustic amenity of the students and staff of the school;*
- *(i) describe the scheduling of high noise generating works within the site to ensure acoustic amenity of the students (such as scheduling construction works outside of the exam times);*
- *(j) include a complaints management system that would be implemented for the duration of the construction; and*
- *(k) include a program to monitor and report on the impacts and environmental performance of the development and the effectiveness of the management measures in accordance with Condition D16(d).*

…"

"…Construction Hours

E4. Construction, including the delivery of materials to and from the site, may only be carried out between the following hours:

- *(a) between 7am and 5pm, Mondays to Fridays inclusive; and*
- *(b) between 8am and 1pm, Saturdays.*

(c) No work may be carried out on Sundays or public holidays.

E5. Construction activities may be undertaken outside of the hours in condition E4 if required:

(a) by the Police or a public authority for the delivery of vehicles, plant or materials; or
(b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or
(c) where the works are inaudible at the nearest sensitive receivers; or
(d) where a variation is approved in advance in writing by the Planning Secretary or her nominee if appropriate justification is provided for the works.

E6. Notification of such construction activities as referenced in Condition E5 must be given to affected residents before undertaking the activities or as soon as is practical afterwards.

E7. Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours:

(a) 9am to 12pm, Monday to Friday;
(b) 2pm to 5pm Monday to Friday; and
(c) 9am to 12pm, Saturday. …"

"… Construction Noise Limits

E12. The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures identified in the approved CNVMP.

E13. The Applicant must ensure construction vehicles (including concrete agitator trucks) do not arrive at the site or surrounding residential precincts outside of the construction hours of work outlined under condition E4.

E14. The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use of 'quackers' to ensure noise impacts on surrounding noise sensitive receivers are minimised.

Vibration Criteria

E15. Vibration caused by construction at any residence or structure outside the site must be limited to:

(a) for structural damage, the latest version of DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures (German Institute for Standardisation, 1999); and
(b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: a technical guideline (DEC, 2006) (as may be updated or replaced from time to time).

E16. Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in condition E15.

E17. The limits in conditions E15 and E16 apply unless otherwise outlined in a Construction Noise and Vibration Management Plan, approved as part of the CEMP required by condition D13 of this consent.

…"

4.4 NSW INTERIM CONSTRUCTION NOISE GUIDELINE

The noise criteria in this section are for guidance only and do not form part of any legal obligation on the part of the project proponent. However, compliance with these criteria is considered best practice.

The ICNG suggest construction noise management levels that may minimise the likelihood of annoyance being caused to noise sensitive residential receivers depending on the duration of works. The Noise Management Levels (NMLs) for long-term duration works are as follows for residential receivers:

Time of Day	*NML $L_{Aeq,15min}$*	*How to Apply*
ICNG Criteria for Recommended Standard Hours: Mon-Fri 7am-6pm Sat 8am-1pm No work on Sundays or public holidays	Noise affected: RBL + 10dB	The noise affected level represents the point above which there may be some community reaction to noise. ▪ Where predicted or measured $L_{Aeq,15min}$ is greater that the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. ▪ The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly noise affected: 75dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise. ▪ Where noise is above this level, the relevant authority may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: 1. Times identified by the community when they are less sensitive to noise. 2. If the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
ICNG Criteria for Outside Recommended Standard Hours *Refer to approved hours from the Consent Conditions*	Noise affected: RBL + 5dB	▪ A strong justification would typically be required for work outside the recommended standard hours. ▪ The proponent should apply all feasible and reasonable work practices to meet the noise affected level. ▪ Where all feasible and reasonable practices have been applied and noise is more than 5dB(A) above the noise affected level, the proponent should negotiate with the community.

Table 3: ICNG construction airborne noise criteria for residential receivers surrounding the construction site.

In order to establish the airborne construction noise criteria, noise levels from the unattended noise monitoring have been used for the noise sensitive receivers – refer to Section 3. Table 4 below summarises the airborne construction noise criteria for most affected noise sensitive receivers surrounding the site.

Sensitive Receiver		*Airborne Construction Noise Criteria, L_{Aeq} dB(A)*	
		Within Standard Hours	*Outside Standard Hours*
NCA 1 / NCA 6 / NCA 7 (R2 Low Density Residential)	Noise affected	52	47
	Highly noise affected	75	---
NCA 2, NCA 3 (R2 Low Density Residential)	Noise affected	53	48
	Highly noise affected	75	---
NCA 4 (RE1 Active Recreation)	When in use	65	---
NCA 5 (R2 Low Density Residential)	Noise affected	54	49
	Highly noise affected	75	---
NCA 8 (Educational)	When in use - External	55	---

Table 4: ICNG construction airborne noise criteria for noise sensitive receivers surrounding the site.

The ICNG recommends internal ground-borne noise maximum levels at residences affected by nearby construction activities. Ground-borne noise is noise generated by vibration transmitted through the ground into a structure and can be more noticeable than airborne noise for some sensitive receivers. The ground-borne noise levels presented below from the ICNG are for residential receivers during evening and night-time periods only, and assessed at the centre of the most affected habitable room. The objective of these criteria is to protect the amenity and sleep of people when they are at home.

- Evening: $L_{Aeq,15min}$ 40dB(A) (internal)
- Night: $L_{Aeq,15min}$ 35dB(A) (internal)

No assessments of ground borne noise are has been conducted as no out of hours work is proposed to occur during evening time and night time.

4.5 VIBRATION CRITERIA

There are two items that shall be considered in the assessment of vibration impacts from construction works. These include vibration impacts in terms of human comfort and building damage.

4.5.1 HUMAN COMFORT

The Department of Environment and Climate Change (DECC) developed the document *'Assessing Vibration: A Technical Guideline'* in February 2006 to assist in preventing people from exposure to excessive vibration levels within buildings. It is based on the guidelines contained in BS 6472.1:2008 *'Guide to evaluation of human exposure to vibration in buildings – Vibration sources other than blasting'*. The guideline does not however address vibration induced damage to structures or structure-borne noise effects.

Vibration and its associated effects are usually classified as follows:

- *Continuous vibration*. An uninterrupted vibration for a defined period. This type of vibration is assessed on the basis of weighted root-mean-squared (rms) acceleration values.
- *Impulsive vibration*. A vibration which has a rapid build up to a peak followed by a damped decay that may or may not involve several cycles of vibration (depending on the frequency and damping).

- *Intermittent vibration*. An interrupted periodic vibration of continuous or repeated periods of impulsive vibration, or continuous vibration that varies significantly in amplitude. This type of vibration is assessed on the basis of Vibration Dose Values (VDV).

Vibration criteria for continuous and impulsive vibration are presented in Table 5, in terms of vibration velocity levels. The values are assessed for the most critical frequency range (higher than 8 Hz assuming sinusoidal motion). When assessing intermittent vibration comprising a number of events, it is recommended that the Vibration Dose Value (VDV) is used Table 6 shows the acceptable VDV values for intermittent vibration.

Receiver Type	*Time*	*RMS velocity, mm/s [dB ref 10^{-6}mm/s]*			
		Continuous Vibration		*Impulsive Vibration*	
		Preferred	*Maximum*	*Preferred*	*Maximum*
Residences	Day-time	0.20 [106 dB]	0.40 [112 dB]	6.00 [136 dB]	12.00 [142 dB]
	Night-time	0.14 [103 dB]	0.28 [109 dB]	2.00 [126 dB]	4.00 [132 dB]
Offices, schools, educational and worship	When in use	0.40 [112dB]	0.80 [118dB]	13 [142dB]	26 [148dB]

Table 5: Continuous and impulsive vibration criteria applicable to the site. Note: Day-time is 07:00am to 10:00pm and night-time is 10:00pm to 07:00am.

Place	*Time*	*Vibration Dose Values, $m/s^{1.75}$*	
		Preferred	*Maximum*
Residences	Day-time	0.20	0.40
	Night-time	0.13	0.26
Offices, schools, educational and worship	When in use	0.40	0.80

Table 6: Intermittent vibration criteria applicable to the site.

4.5.2 STRUCTURAL BUILDING DAMAGE

Ground vibration from construction activities can damage surrounding buildings or structures. For occupied buildings, the vibration criteria given in previous section for Human Comfort shall generally form the limiting vibration criteria for the Project.

For unoccupied buildings, or during periods where the buildings are unoccupied, the vibration criteria for building damage suggested by German Standard DIN 4150.3:2016 *'Vibration in Buildings – Effects on Structures'* are to be adopted. Guideline values from DIN 4150.3:2016 are presented in Table 7.

Structural type	*Vibration velocity, mm/s (Peak Particle Velocity - PPV)*				
	Foundation			*Plane of floor uppermost full storey in horizontal direction*	*Floor slabs, vertical direction*
	1Hz to 10Hz	*10Hz to 50Hz*	*50Hz to 100Hz*	*All frequencies*	*All frequencies*
Type 1: Buildings used for commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40	20
Type 2: Residential buildings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20	15	20
Type 3: Structures that because of their particular sensitivity to vibration, cannot be classified under Type 1 and 2 and are of great intrinsic value (e.g., heritage buildings)	3	3 to 8	8 to 10	8	20

Table 7: DIN 4150.3:2016 Guideline values of vibration velocity (PPV) for evaluating the effects of short-term vibration

5 CONSTRUCTION ACTIVITIES

A construction noise and vibration assessment has been carried out based on the following information supplied by the Main Contractor which includes construction phases and potential plant. The Main Contractor will be responsible for preparing a Works Plan and Schedule which include all relevant noise and vibration information.

5.1 DESCRIPTION OF WORKS

Refer to Table 8 for the stages of work as provided by the Contractor that have been assessed, and which construction activities will occur during those stages.

Stage of Works	*Construction Activities*
Demolition	Demolition of existing buildings
Excavation	Excavation and earth movement
General Construction Works	Transportation, modular assembly and internal works

Table 8: Stages of work.

5.2 PROPOSED CONSTRUCTION WORKING HOURS

Section 4.3 of this report contains the constructions hours defined in the development conditions of consent.

5.3 TYPICAL EQUIPMENT AND NOISE LEVELS

In accordance with the information provided and general construction methodology and to assess the potential noise and vibration impacts during works from a quantitative point of view, the construction noise sources for the works occurring during the project and the associated equipment noise levels are listed in Table 9.

Sound power levels are based on the databases published by Australian Standard 2436:2010 '*Guide to Noise Control on Construction, Maintenance & Demolition Sites*', Roads and Maritime Services '*Construction Noise and Vibration Guideline*' and the UK Department for Environmental, Food and Rural Affairs (DEFRA).

Stage of works	*Item*	*Typical Sound Power Level L_{WAeq} (dB ref 1pW)*	*Typical Sound Pressure Level L_{Aeq} at 10m (dB ref 20µPa)*
Demolition	Excavator with hammer	116	88
	Excavator with bucket 20Tn	104	76
	Rigid Truck	105	77
	Truck 20Tn	104	76
	Franna Crane 25Tn	99	71
Excavation	Excavator with bucket 20Tn	104	76
	Franna Crane 25Tn	99	71
	Mobile Crane 55Tn	101	73
	Bored Piling rig	112	84
General Construction	Truck 20Tn	104	76
	Franna Crane 25Tn	99	71
	Hand tools	99	71

Table 9: Anticipated maximum airborne noise levels for equipment / plant used during the different Stages 1 and 2 of the works.

6 CONSTRUCTION NOISE AND VIBRATION ASSESSMENT

A construction noise and vibration assessment has been carried out based on the proposed plant and machinery throughout the works associated with the stages as per Section 5.

6.1 ASSESSMENT METHODOLOGY

An assessment of the likely noise and vibration impacts of the assumed stage of works on the most affected receiver catchments surrounding the site has been carried out. The assessment has considered the following:

- Construction activities considered in the noise impact are detailed in Section 5.1.
- Proposed construction hours as per Section 4.3 – Development Conditions of Consent.
- Typical noise source levels considered in the noise impact are detailed in Section 5.3.
- Project specific noise and vibration criteria at sensitive receivers as outlined in Section 4.
- Assuming a typical 2.4m high solid hoarding is installed as per Figure 3.
- The predictions consider continuous operation of the construction plant over the 15-minute assessment period plus a range of distances from the site boundaries.

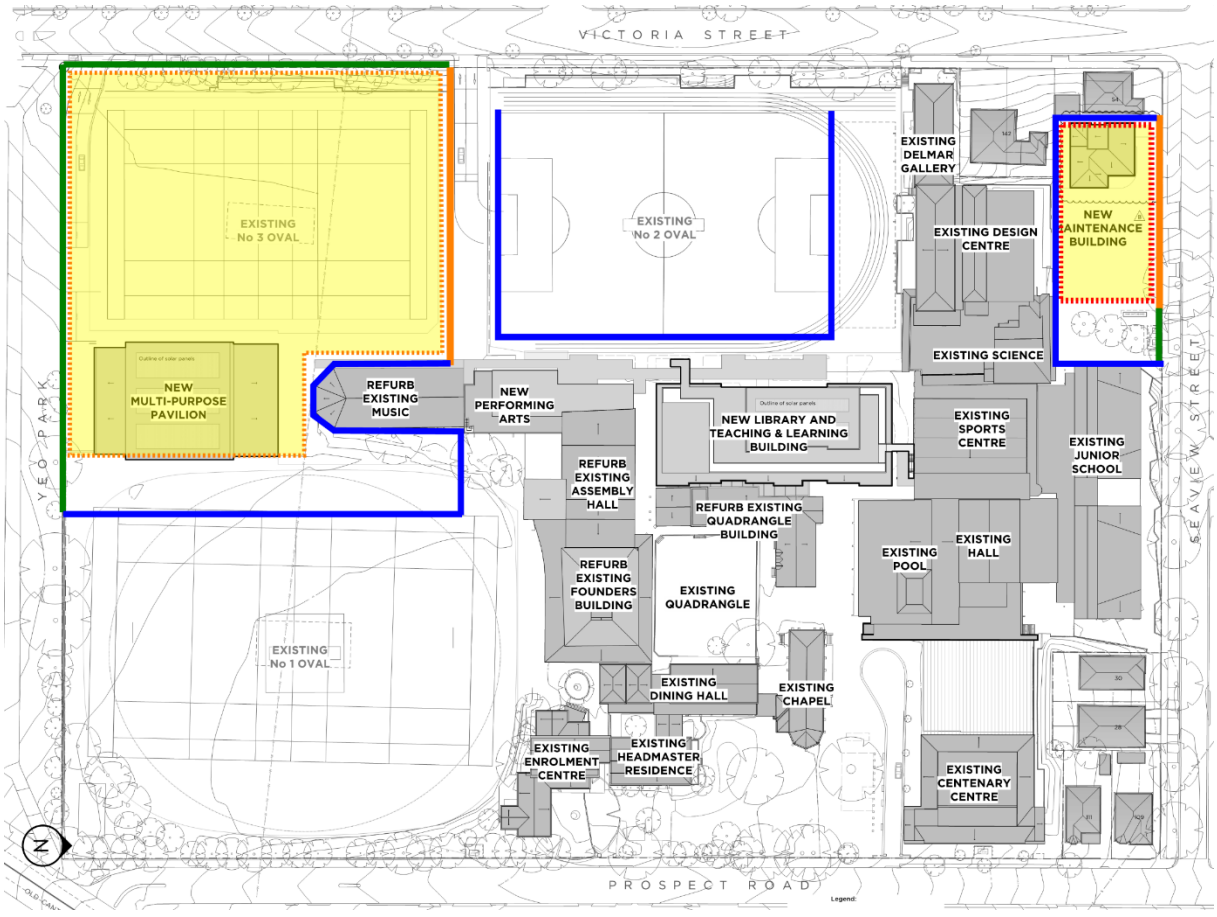


Figure 3: Proposed 2.4m solid hoarding with vynal covering (orange line), existing 1.8m fencing with banner mesh covering (green line), 1.8m ATF fencing with shade cloth covering (blue line) and construction areas (yellow shading with red-dotted line).

It should be noted that the predicted noise levels generated during the construction works may vary depending on many factors including:

- Final selection of plant and equipment which could differ from the plant presented in Table 9.
- Exact location of equipment and plant on site – relative to the noise sensitive receivers.
- Shielding of noise provided by hoardings on and around the site.

6.2 NOISE ASSESSMENT

The predicted noise levels for the stages of work detailed in Table 8 are presented in the following Sections.

The predictions are split into two areas; north and south, as the two construction zones are far apart and will affect different NCAs. The northern construction site will have a greater effect on NCA 1, 2, 6 and 7, while the southern construction site will have a greater effect on NCA 3, 4 and 5. NCA 8 – TGS will be included in both areas.

These predicted noise levels are typically representative of the worst case 15 minutes that it would be expected. The predicted noise levels at receiver locations are calculated to 1.5m above ground level, at the most affected point externally to each receiver that has been identified as the most affected. The predictions include a near and far result due to plant moving around the site.

The ICNG requires, and it is usual practice, to predict the reasonable worst-case noise level. For construction-type activities this will typically be when plant is operating close to an assessment location. However, it shall be considered that on larger construction sites (such as this one) where plant moves around, noise will not be at the reasonable worst-case noise level throughout the entire duration of the activity: it will be lower when the plant is further away. Therefore, it can be stated that noise levels will be lower at times throughout the construction activity.

6.2.1 DEMOLITION

Table 10 and Table 11 show the predicted range of sound pressure levels at the boundary of the nearest noise sensitive receivers due to the construction plant for the proposed demolition works. Allowances have been made for distance attenuation and shielding.

Northern Site

Item	*Typical Noise Level L_{WA} dB*	*Predicted Noise Levels $L_{Aeq,15min}$, dB(A) (re. 20µPa)*				
		NCA 1 Residential	*NCA 2 Residential*	*NCA 6 Residential*	*NCA 7 Residential*	*NCA 8 Educational*
Excavator with hammer*	116	63 – 66	58 – 60	59 – 63	73 - 85	73 - 85
Excavator with bucket 20Tn	104	55 – 58	50 – 52	51 – 55	65 – 77	65 – 77
Rigid Truck	105	56 – 59	51 – 53	52 – 56	66 – 78	66 – 78
Truck 20Tn	104	55 – 58	50 – 52	51 – 55	65 – 77	65 – 77
Franna Crane 25Tn	99	50 - 53	46 - 47	47 - 51	60 – 73	60 – 73
Total	117	65 – 68	60 - 61	61 - 65	75 - 87	75 - 87

Table 10: Predicted airborne noise levels for the proposed demolition works at the nearest noise receivers at Northern site. *Excavator with hammer modelled at 40% use within 15-minute period.

Results show that predicted noise levels from demolition activities are expected to exceed the NMLs (orange font) for all Receivers NCA when works will be carried out in close proximity to the boundaries of the receivers. Highly Affected Noise level exceedances (red font) are expected for Receiver NCA 7 during all demolition activities except the Franna Crane when works will be carried out in close proximity to the boundaries of the receiver.

The predicted exceedance of the NMLs in the surrounding receivers triggers the Contractor to apply all reasonable and feasible work practices to minimise the noise as much as possible, and community consultation, as per the requirements of the NSW ICNG. Refer to Section 7 for details.

The predicted exceedance of the Highly Affected Noise level triggers the proponent to apply time mitigation practices – i.e respite periods – to minimise noise when construction plant is in use – particularly the excavator with hammer – and use community consultation, as per the requirements of the ICNG. Refer to Section 7 for details.

Southern Site

Item	*Typical Noise Level L_{WA} dB*	*Predicted Noise Levels $L_{Aeq,15min}$, dB(A) (re. 20μPa)*			
		NCA 3 Residential	*NCA 4 Recreational*	*NCA 5 Residential*	*NCA 8 Educational*
Excavator with hammer*	116	56 – 59	63 – 72	63 – 71	66 – 85
Excavator with bucket 20Tn	104	48 – 51	55 – 64	55 – 63	58 – 77
Rigid Truck	105	49 – 52	56 – 65	56 – 64	59 – 78
Truck 20Tn	104	48 – 51	55 – 64	55 – 63	58 – 77
Franna Crane 25Tn	99	44 - 47	51 - 60	51 - 58	53 - 73
Total	117	58 - 61	65 – 74	65 – 73	68 - 87

Table 11: Predicted airborne noise levels for the proposed demolition works at the nearest noise receivers at Southern site. *Excavator with hammer modelled at 40% use within 15-minute period.

Results show that predicted noise levels from the excavator with hammer are expected to exceed the NMLs (orange font) for all Receivers NCA when works will be carried out in close proximity to the boundaries of the receivers. Predicted noise levels from all other demolition activities are also expected to exceed the NMLs for Receivers NCA 5 and 8.

The predicted exceedance of the NMLs in the surrounding receivers triggers the Contractor to apply all reasonable and feasible work practices to minimise the noise as much as possible, and community consultation, as per the requirements of the NSW ICNG. Refer to Section 7 for details.

Even though the predicted noise levels are not Highly Affected for the residential receivers, we recommend adapting the same respite periods as the predicted noise levels to the educational receiver, particularly for the excavator with hammer, which are exceeding 75dB(A). Refer to Section 7 for details.

6.2.2 EXCAVATION

Table 12 and Table 13 show the predicted range of sound pressure levels at the boundary of the nearest noise sensitive receivers due to the construction plant for the proposed excavation works. Allowances have been made for distance attenuation and shielding.

Northern Site

Item	*Typical Noise Level L_{WA} dB*	*Predicted Noise Levels $L_{Aeq,15min}$, dB(A) (re. 20µPa)*				
		NCA 1 Residential	*NCA 2 Residential*	*NCA 6 Residential*	*NCA 7 Residential*	*NCA 8 Educational*
Excavator with bucket 20Tn	104	55 – 58	50 - 52	53 – 55	56 – 77	56 – 77
Franna Crane 25Tn	99	50 – 53	46 – 47	48 – 51	60 – 73	60 – 73
Mobile Crane 55Tn	101	52 – 55	47 – 49	49- 52	62 – 74	62 – 74
Bored Piling rig*	112	59 – 62	55 - 56	57 - 60	70 - 82	70 - 82
Total	113	61 - 64	57 - 58	59 - 62	72 - 84	72 - 84

Table 12: Predicted airborne noise levels for the proposed excavation works at the nearest noise receivers at the Northern site. *Bored Piling rig modelled at 40% use within 15-minute period.

Results show that predicted excavation noise levels are expected to exceed the NMLs (orange font) for all Receivers NCA when works will be carried out in close proximity to the boundaries of the receivers. Highly Affected Noise level exceedances (red font) are expected for NCA 7 during the use of the bored piling rig and excavator with bucket when works will be carried out in close proximity to the boundaries of the receiver.

The predicted exceedance of the NMLs in the surrounding receivers triggers the proponent to apply all reasonable and feasible work practices to minimise the noise as much as possible, and community consultation, as per the requirements of the NSW ICNG. Refer to Section 7 for details.

The predicted exceedance of the Highly Affected Noise level triggers the proponent to apply time mitigation practices – i.e respite periods – to minimise noise when this plant is in use – particularly the bored piling rig – and use community consultation, as per the requirements of the ICNG. Refer to Section 7 for details.

Southern Site

Item	Typical Noise Level L_{WA} dB	Predicted Noise Levels $L_{Aeq,15min}$, dB(A) (re. 20μPa)			
		NCA 3 Residential	NCA 4 Recreational	NCA 5 Residential	NCA 8 Educational
Excavator with bucket 20Tn	104	53 – 56	55 – 64	55 – 63	58 – 77
Franna Crane 25Tn	99	49 – 52	51 – 60	51 – 58	53 – 73
Mobile Crane 55Tn	101	50 – 53	52 – 61	53 – 60	55 – 74
Bored Piling rig*	112	58 - 61	60 - 69	60 – 67	63 - 82
Total	113	60 – 63	62 – 71	62 – 69	65 - 84

Table 13: Predicted airborne noise levels for the proposed excavation works at the nearest noise receivers at the Southern site. *Bored Piling rig modelled at 40% use within 15-minute period.

Results show that predicted noise levels from excavation activities are expected to exceed the NMLs (orange font) for all Receivers NCA when works will be carried out in close proximity to the boundaries of the receivers.

The predicted exceedance of the NMLs in the surrounding receivers triggers the proponent to apply all reasonable and feasible work practices to minimise the noise as much as possible, and community consultation, as per the requirements of the NSW ICNG. Refer to Section 7 for details.

Even though the predicted noise levels are not Highly Affected for the residential receivers, we recommend adapting the same respite periods as the predicted noise levels to the educational receiver, particularly for the bored piling rig, which are exceeding 75dB(A). Refer to Section 7 for details.

6.2.3 GENERAL CONSTRUCTION WORKS

Table 14 and Table 15 show the predicted range of sound pressure levels at the boundary of the nearest noise sensitive receivers due to the construction plant for the proposed construction works. Allowances have been made for distance attenuation and shielding.

Northern Site

Item	Typical Noise Level L_{WA} dB	Predicted Noise Levels $L_{Aeq,15min}$, dB(A) (re. 20μPa)				
		NCA 1 Residential	NCA 2 Residential	NCA 6 Residential	NCA 7 Residential	NCA 8 Educational
Truck 20Tn	104	55 – 58	50 – 52	52 – 55	65 – 77	65 – 77
Franna Crane 25Tn	99	50 – 53	45 – 47	47 – 51	60 – 72	60 – 72
Hand tools	99	50 - 53	45 – 47	47 – 51	60 - 72	60 - 72
Total	106	56 – 60	52 – 54	54 – 57	67 – 79	67 - 79

Table 14: Predicted airborne noise levels for the proposed general construction works at the nearest noise receivers at the Northern site.

Results show that predicted construction noise levels are expected to exceed the NMLs (orange font) for all Receivers NCA when works will be carried out in close proximity to the boundaries of the receivers. Highly Affected Noise level exceedances (red font) are expected for Receiver NCA 7 during the 20Tn truck activities when works will be carried out in close proximity to the boundaries of the receiver.

The predicted exceedance of the NMLs in the surrounding receivers triggers the proponent to apply all reasonable and feasible work practices to minimise the noise as much as possible, and community consultation, as per the requirements of the NSW ICNG. Refer to Section 7 for details.

The predicted exceedance of the Highly Affected Noise level triggers the proponent to apply time mitigation practices – i.e respite periods – to minimise noise when this plant is in use – particularly the 20Tn truck – and use community consultation, as per the requirements of the ICNG. Refer to Section 7 for details.

Southern Site

Item	*Typical Noise Level L_{WA} dB*	*Predicted Noise Levels $L_{Aeq,15min}$, dB(A) (re. 20μPa)*			
		NCA 3 Residential	*NCA 4 Recreational*	*NCA 5 Residential*	*NCA 8 Educational*
Truck 20Tn	104	53 – 56	55 – 64	55 – 63	58 - 77
Franna Crane 25Tn	99	48 – 51	50 – 59	50 – 58	53 – 72
Hand tools	99	48 - 51	50 - 59	50 - 58	53 - 72
Total	106	55 - 58	57 - 66	57 - 65	60 - 79

Table 15: Predicted airborne noise levels for the proposed general construction works at the nearest noise receivers at the Southern site.

Results show that predicted construction noise levels are expected to exceed the NMLs (orange font) for all Receivers NCA when works will be carried out in close proximity to the boundaries of the receivers.

The predicted exceedance of the NMLs in the surrounding receivers triggers the proponent to apply all reasonable and feasible work practices to minimise the noise as much as possible, and community consultation, as per the requirements of the NSW ICNG. Refer to Section 7 for details.

Even though the predicted noise levels are not Highly Affected for the residential receivers, we recommend adapting the same respite periods as the predicted noise levels to the educational receiver for the 20Tn truck, which are exceeding 75dB(A). Refer to Section 7 for details.

6.3 VIBRATION ASSESSMENT

The vibration intensive plant used during the construction works has the potential to impact adjacent sensitive receivers. In order to assess the construction vibration impact due to heavy construction plant, the NSW RMS *'Construction Noise and Vibration Guideline'* provides safe working distances for vibration intensive plant and are quoted for both 'cosmetic' damage (in accordance with BS 7385.2:1993) and human comfort (in accordance with DEC's *'Assessing Vibration: A Technical Guideline'*). These levels have been corrected such that safe working distances can be provided for DIN4150 vibration limits for dwellings, which are a lower criteria than BS7385. The recommended safe working distances are provided in Table 16 for expected equipment.

Plant Item	*Description*	*Structural Damage DIN4150*	*Human Response*
Small Hydraulic Hammer	5-12 Tonne	8m	7m
Medium Hydraulic Hammer	12-18 Tonne	28m	23m
Pile Boring	<800mm	8m	4m

Table 16: Recommended minimum working distances for vibration intensive plant from sensitive receivers.

The minimum working distances are indicative and will vary depending on the particular item of plant and local geotechnical conditions. They apply to damage of typical buildings under typical geotechnical conditions.

In relation to human comfort (response), the minimum working distances in Table 16 relate to intermittent vibration (VDV parameter) as for most construction activities, vibration emissions are intermittent in nature. Where the predicted vibration levels will exceed the human comfort objectives, the procedures Section 7.3.2 are to be followed in order to mitigate the potential impacts at sensitive receivers.

If the contractor has concerns for the disruptions at the nearest sensitive receivers due to vibration intensive plant use, it is recommended that prior to the commencement of the works, to undertake a preliminary vibration survey on each key vibration generating activity / equipment.

7 SITE SPECIFIC NOISE AND VIBRATION CONTROL RECOMMENDATIONS

This section of the Construction Noise and Vibration Planning provides general recommendations only and provides applicable criteria together with best noise and vibration control practices to be observed during the proposed works.

Any noise from construction activities to be carried out on site must not result in *'offensive noise'* to any noise sensitive receiver. To this end, the Contractor employed to undertake the construction works is responsible for ensuring that any site noise and, in particular, any complaints shall be monitored, investigated, managed and controlled.

7.1 ACOUSTIC SCREENING

Acoustic screening shall be provided during all phases of the construction works covered in this report at the locations shown in Figure 3. The acoustic screening should be 2.4m high acoustic screen (Class A hoarding or equivalent) and constructed from minimum 17mm thick plywood plus minimise any air gaps.

7.2 RESPITE PERIODS

Respite periods are defined by the development conditions of consent E7 – refer to Section 4.3. They should generally be implemented into the work methodology in order to reduce the impact onto the surrounding NCA's, as detailed in Section 7.7. High noise generating activities such as rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours:

- 9:00am to 12:00pm, Monday to Friday;
- 2:00pm to 5:00pm Monday to Friday; and
- 9:00am to 12:00pm, Saturday.

Based on the predicted exceedances of the Highly Affected Noise levels, the proponent shall apply time mitigation practices – i.e respite periods – to minimise noise when this plant is in use – particularly the excavator with hammer and bored piling rig, and use community consultation, as per the requirements of the ICNG.

7.3 GENERAL CONTROLS FOR NOISE AND VIBRATION

According to DECC's ICNG and AS2436:2010 *'Guide to Noise Control on Construction, Maintenance & Demolition Sites'*, the following techniques could be applied to minimize the spread of noise and vibration to the nearest sensitive receivers.

7.3.1 NOISE

If a process that generates significant noise levels cannot be avoided, the amount of noise reaching the receiver should be minimised. Two ways of achieving this are to either increase the distance between the noise source and the receiver or to introduce noise reduction measures such as screens.

Physical methods to reduce the transmission of noise between the site works and residences, or other sensitive land uses, are generally suited to works where there is longer-term exposure to the noise. Practices that will reduce noise from the site include:

- Increasing the distance between noise sources and sensitive receivers.
- Reducing the line-of-sight noise transmission to residences or other sensitive land uses.

- Constructing barriers that are part of the project design early in the project to introduce the mitigation of site noise.
- Installing purpose built noise barriers and enclosures.

7.3.2 VIBRATION

Vibration can be more difficult to control than noise, and there are few generalizations that can be made about its control. It should be kept in mind that vibration may cause disturbance by causing structures to vibrate and radiate noise in addition to perceptible movement. Impulsive vibration can, in some cases, provide a trigger mechanism that could result in the failure of building components that had previously been in a stable state.

During the erection of new structures, some vibrations (transmitted through the existing structures nearby the demolition sites) are expected, being more of a concern for the surrounding sensitive receivers.

It can also trigger annoyance being elevated into action by occupants of exposed buildings, and should therefore be included in the planning of communication with impacted communities. It should be remembered that failures, sometimes catastrophic, can occur as a result of conditions not directly connected with the transmission of vibrations, e.g. the removal of supports from retaining structures to facilitate site access.

Where site activities may affect existing structures, a thorough engineering appraisal should be made at the planning stage.

General principles of seeking minimal vibration at receiving structures should be followed in the first instance. Predictions of vibration levels likely to occur at sensitive receivers are recommended when they are relatively close, depending on the magnitude of the source of the vibration or the distance associated. Relatively simple prediction methods are available in texts, codes of practice or other standards, however it is preferable to measure and assess site transmission and propagation characteristics between source and receiver locations.

Guidance for measures available for the mitigation of vibration transmitted can be sought in more detailed standards, such as BS5228.2:2009 *'Code of practice for noise and vibration control on construction and open sites. Vibration'* or policy documents, such as the NSW DEC *'Assessing Vibration: A technical guideline'*.

Identifying the strategy best suited to the control of vibration follows a similar approach to that of noise avoidance, control at the source, control along the propagation path, control at the receiver, or a combination of these. It is noted that vibration sources can include stationary plants (pumps and compressors), portable plants (jackhammers and pavement vibrators), mobile plants, pile-drivers, tunneling machines and activities, and blasting, amongst others. Unusual ground conditions, such as a high water-table, can also cause a difference to expected or predicted results, especially when considering the noise propagated from piling.

7.4 UNIVERSAL WORK PRACTICES

To minimise construction noise complaints due to preventable activities at any time of the day, the following work practices shall be considered:

- Regularly train workers and contractors (such as a toolbox talks) to use equipment in ways to minimise noise.
- Ensure site managers periodically check the site and nearby residences and other sensitive land use for noise problems so that solutions can be quickly applied.

- Include in tenders, employment contracts, subcontractor agreements and work method statements clauses that require minimisation of noise and compliance with directions from management to minimise noise.
- Avoid the use of radios or stereos outdoors where neighbours can be affected.
- Avoid shouting, and minimise talking loudly and slamming vehicle doors.
- Keep truck drivers informed of designated vehicle routes, parking locations, acceptable delivery hours or other relevant practices.
- Develop a one-page summary of approval or consent conditions that relate to relevant work practices, and pin it to a noticeboard so that all site operators can quickly reference noise information.
- Workers may at times need to discuss or negotiate practices with their managers.
- Schedule high noise generating works outside of exam time to ensure the acoustic amenity of students.

For work practices during night-time, the following shall be considered:

- Avoid the use of equipment which generates impulsive noise.
- Minimise the need for reversing or movement alarms.
- Avoid dropping materials from a height.
- Avoid metal-to-metal contact on equipment.
- Schedule truck movements to avoid residential streets if possible.
- Avoid mobile plant clustering near residences and other sensitive land uses.
- Ensure periods of respite are provided in the case of unavoidable maximum noise level events.

7.5 CONSULTATION AND NOTIFICATION

The community is more likely to be understanding and accepting of noise if the information provided is frank, does not attempt to understate the likely noise level, and if commitments are firmly adhered to. Community Consultation shall be as per EIS requirements and this has been addressed before the preparation of this CNVMP.

Recommended actions before and during construction are as per the endorsed Community Consultation Strategy Document – refer to Appendix A.

7.6 MANAGING NOISE LEVELS AND MAINTENANCE PROGRAM FOR PLANT AND EQUIPMENT

In terms of both cost and results, controlling noise at the source is one of the most effective methods of minimising the noise impacts from any construction activities. Recommendations for managing noise levels from plant and equipment are as follows:

- Use quieter methods:
  - Examine and implement, where feasible and reasonable, alternatives to rock-breaking work methods, such as hydraulic splitters for rock and concrete, hydraulic jaw crushers, chemical rock and concrete splitting, and controlled blasting such as penetrating cone fracture. The suitability of alternative methods should be considered on a case-by-case basis.
  - Use alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric controlled units where feasible and reasonable. Where there is no electricity supply, use an electrical generator located away from residences.

- Use quieter equipment:
  - Examine different types of machines that perform the same function and compare the noise level data to select the least noisy machine. For example, rubber wheeled tractors can be less noisy than steel tracked tractors.
  - Noise labels are required by NSW legislation for pavement breakers, mobile compressors, chainsaws and mobile garbage compactors. These noise labels can be used to assist in selecting less noisy plant.
  - Pneumatic equipment is traditionally a problem – select super silenced compressors, silenced jackhammers and damped bits where possible.
  - When renting, select quieter items of plant and equipment where feasible and reasonable.
  - When purchasing, select, where feasible and reasonable, the most effective mufflers, enclosures and low-noise tool bits and blades. Always seek the manufacturer's advice before making modifications to plant to reduce noise.
- Operate plant in a quiet and efficient manner:
  - Reduce throttle setting and turn off equipment when not being used.
  - Examine and implement, where feasible and reasonable, the option of reducing noise from metal chutes and bins by placing damping material in the bin.

The Contractor shall prepare and implement a regular plant and equipment use and maintenance program. This is to ensure that 'noisy' equipment or tools are not used. This program should ensure that the contractor will:

- Regularly inspect and maintain equipment to ensure it is in good working order. Also check the condition of mufflers.
- Equipment must not be operated until it is maintained or repaired, where maintenance or repair would address the annoying character of noise identified.
- For machines with enclosures, check that doors and door seals are in good working order and that the doors close properly against the seals.
- Return any hired equipment that is causing noise that is not typical for the equipment – the increased noise may indicate the need for repair.
- Ensure air lines on pneumatic equipment do not leak.

7.7 WORKS TIMING RESTRICTIONS AND SCHEDULING

Works should be carried out during periods specified by the approved Construction Hours outlined in the Conditions of Consent – see Section 4.3. Scheduling noisy work during periods when people are least affected reduces noise impact on those. Recommendations for work scheduling are as follows:

- Provide respite periods.
- Schedule activities to minimise noise impacts.
  - Organise work to be undertaken during the recommended standard hours where possible.
  - When works outside the recommended standard hours are planned, avoid scheduling on Sundays or public holidays.
  - Schedule work when neighbours are not present (for example, commercial neighbours).

- Schedule noisy activities around times of high background noise (local road traffic or when other local noise sources are active) where possible to provide masking or to reduce the amount that the construction noise intrudes above the background.
- Consult with affected neighbours about scheduling activities to minimise noise impacts.

- Organise deliveries and access.
  - Nominate an off-site truck parking area, away from residences, for trucks arriving prior to gates opening.
  - Amalgamated loads can lead to less noise and congestion in nearby streets.
  - Optimise the number of vehicle trips to and from the site – movements can be organised to amalgamate loads rather than using a number of vehicles with smaller loads.
  - Inform, and consult where possible, the potentially noise-affected residences or other sensitive land uses of designated access routes to and from site, and make drivers aware of nominated vehicle routes.
  - Schedule deliveries to nominated hours only.

7.8 ADDITIONAL NOISE AND VIBRATION CONTROLS

There will likely be times or situations when construction works exceed the stated criteria at the nearest receivers, particularly when works occur in the areas closer to the receiver(s). Therefore, all feasible and reasonable noise control measures should be considered.

If, during construction, an item of equipment exceeds either the noise criteria at any location or the equipment noise level limits, the following noise control measures, together with construction best practices presented in this Section shall be considered to minimise the noise and vibration impacts of the project on the surrounding noise sensitive receivers:

- Schedule noisy activities to occur outside of the most sensitive times of the day for each nominated receiver. For example, the residential receivers are likely to be more sensitive to noise before 8am and after 6pm.
- Consider implementing equipment specific temporary screening for noisy equipment, or other noise control measures recommended in Appendix C of AS2436:2010. This will most likely apply to noisier hand-held items such as jack-hammers and circular saws.
- Locate specific activities such as carpentry areas (use of circular saws, etc.) to internal spaces or where shielding is provided by existing structures or temporary screening.
- Limit the number of trucks and heavy vehicles on site at any given time through scheduling deliveries at differing times.
- Traffic rules should be prepared to minimise the noise impact on the community.
- When loading and unloading trucks, adopt best practice noise management strategies to avoid materials being dropped from height.
- Avoid unnecessary idling of trucks and equipment. Vehicles and equipment to be turned off when not in use.
- Ensure that any miscellaneous equipment (extraction fans, hand tools, etc.) not specifically identified in this plan incorporates silencing/shielding equipment as required to meet the noise criteria.

If the measured construction vibration levels exceed the appropriate criteria during the works, one or more of the following measures should be taken:

- Modifications to construction equipment used.
- Modifications to methods of construction.
- Rescheduling of activities to less sensitive times.

If the measures given cannot be implemented or have no effect on noise or vibration levels or impact generated, a review of the criteria should be undertaken and the noise and vibration strategy amended.

7.9 MONITORING PROGRAM

Noise and vibration monitoring will be done on a complaint-only basis. Where a noise or vibration compliant is received, the Main Contractor will investigate the source of the complaint. If necessary, the Main Contractor will produce a noise / vibration monitoring report to close out the complaint. Noise and vibration monitoring should be performed inside the premises of the affected property and on site adjacent to the affected receivers.

Monitoring is to be undertaken by an experienced noise and vibration monitoring professional or an acoustic consultant. The results of any noise or vibration monitoring are to be provided to the relevant party or person in a timely manner allowing the builder to address the issue and respond to the complaints.

Noise and vibration monitoring can take two forms:

- Short-term monitoring: Short-term monitoring consists of attended monitoring when critical stages of the construction are occurring. This normally provides real-time assistance and guidance to the sub-contractor on site letting them know when the noise and vibration criteria are exceeded allowing the selection of alternative method on construction or equipment selection in order to minimise noise and vibration impacts.
- Long-term monitoring: Similarly long-term monitoring uses noise and vibration loggers providing real-time alerts to the builder / site manager when the noise and vibration criteria are exceeded. Typically, the noise and vibration loggers stay on site for a period of several months for the critical construction stages of the project. Sometimes the period of construction noise and vibration monitoring is dictated by the local authorities through the Conditions of Consent if applicable.

Both methodologies are complementary and normally used simultaneously providing a significant of amount of data via the long-term monitoring but also providing information on the sources of noise and vibration generating exceedances via the short-term or attended monitoring.

The following may be included in a noise monitoring report:

- The type of monitoring conducted (for example, at a particular project stage or following complaints) and a brief statement of the measurement method.
- The noise / vibration conditions on the consent / licence, or the relevant noise management objectives.
- Descriptions of the nearest affected residences and other sensitive land uses or, in the case of complaints, description of the complainant location and complaint.
- Plan or diagram showing the location of the monitoring and the noise generating works.
- Description of the instrumentation used.
- Name and relevant qualifications or professional memberships of monitoring personnel.

- The weather conditions during monitoring.
- The time(s) and duration(s) of monitoring, including dates – in the case of complaints.
- A clear description of the construction activities taking place during the monitoring.
- The results of monitoring at each monitoring location, including a comparison with the consent conditions or relevant noise management objectives.
- A clear statement outlining the project's compliance or non-compliance with the conditions or objectives.
- Where the monitored level is higher than the conditions or objectives, the reasons for non-compliance should be stated, strategies for minimising noise identified and stated, and the appropriate actions to implement the strategies.

7.10 WORKERS' TRAINING AND AWARENESS

The Contractor shall provide all project personnel and subcontractors with training on the environmental obligations through project inductions, toolbox talks, and through Safety Works Methods (SWMs).

All Project work personnel and subcontractors shall undergo a general project induction prior to commencing work. This should include a noise component to reinforce the importance of noise issues and the measures that will be implemented to protect the environment.

All inductions shall be carried out by the site manager, or his designate in the site office as appropriate. During the induction, each contractor / worker shall be taken around the site to ensure they are fully aware of the exclusion zones and site-specific environment.

Site inductions and daily SWMs and toolbox talks will highlight the specific environmental requirements and activities being undertaken at each work area which will include relevant noise management matters.

7.11 OCCUPATIONAL HEALTH AND SAFETY

In addition to potential noise and vibration impacts on the community and structures, construction noise and vibration can also have an adverse impact upon the health of workers. It is important that Contractors adopt noise management strategies to prevent or minimise worker exposure to excessive noise and vibration. Such measures will also assist in reducing noise and vibration impacts on the surrounding community.

The National Occupational Health and Safety Commission (NOHSC) recommends a maximum acceptable workplace noise exposure level of 85dB(A) ($L_{Aeq,8h}$) for an eight-hour time period.

Personnel involved in operations should be issued with ear plugs or ear muffs which must be used whenever noise levels interfere with normal speech when individuals are standing at a distance of 1m from each other, or when the $L_{Aeq,8hr}$ exceeds 85dB(A).

Signs should be erected and made visible at the entry to all areas where noise levels will exceed 85dB(A).

7.12 CONSTRUCTION TRAFFIC ROUTES

The contractor shall establish and implement traffic routes for deliveries to the site, which minimise the noise impact on surrounding noise sensitive receivers as best possible.

Deliveries will be scheduled and distributed to ensure avoidance of congestion to surrounding roads networks and within the precinct. Materials handling will be conducted within the construction site perimeter reducing any impacts on traffic flows within the area.

8 CONCLUSIONS

A construction noise and vibration assessment has been carried out for the proposed works for Stages 1 and 2 of the Trinity Grammar School 'The Renewal Project' in Summer Hill. This report addresses the Condition of Consent D16 of the State Significant Development Application SSD-10371.

In particular, this report identifies the Contractor's obligations and the requirements to manage noise and vibration during construction such that Contractor can make the necessary allowances within the construction costs, programmes and work methodologies.

The responsibilities of all stakeholders are identified and a framework for the management of noise and vibration during construction works is provided.

This report establishes relevant noise level criteria, details the acoustic assessment and provides comments and recommendations for the proposed development.

Potential construction noise and vibration impacts on the surroundings have been presented in this report and recommendations based on the relevant guidelines are provided. It is expected that the predicted exceedance of the NMLs in the surrounding receivers triggers the proponent to apply all reasonable and feasible work practices to minimise the noise as much as possible, and community consultation, as per the requirements of the NSW ICNG. Refer to Section 7 for details.

As per the noise assessment in Section 6.2, noise levels from certain construction activities - excavator with hammer, bored piling rig, excavator with bucket, rigid truck and 20Tn truck - are predicted to exceed 75dB(A) for the residential receivers and the TGS. Therefore, the proponent shall apply time-mitigation practices - i.e. respite periods – to minimise noise when this plant is in use plus use of community consultation as per the requirements of the ICNG. Refer to Section 7 for details.

For each of the work stages and associated plant, assuming that they are exceeding the noise level criteria, the noise control measures presented in Section 7 shall be considered and implemented wherever reasonable and feasible in order to minimise any potential noise impact. Operation time restrictions shall be applied to 'noisy' construction plant to minimise noise impact to the nearest sensitive receivers.

The information presented in this report shall be reviewed if any modifications to selection of equipment / machinery, construction methodologies and modifications to the works construction program.

Based on the information presented in this report, relevant objectives will be satisfied and therefore approval is recommended to be granted.

APPENDIX A: COMMUNITY COMMUNICATION STRATEGY

Reimagining education for the next 30 years

TRINITY GRAMMAR SCHOOL

The Renewal Project | Summer Hill

Community Communication Strategy

TRINITY
GRAMMAR SCHOOL

Contents

1. About this Document

This Community Communication Strategy (CCS) has been developed to:

- Successfully consider and manage stakeholder and community expectations as integral to the successful delivery of the project.
- Keep all stakeholders regularly informed about the project.
- Set out procedures and mechanisms to enable and manage feedback, enquiries, and complaints in relation to the project.
- Address SSD condition D7

This Community Consultation Strategy (CCS) will be implemented through the construction phase of the project, and for 12 months following construction completion, in acknowledgement of SSD condition G6.

CCS objectives and review

Trinity Grammar School is committed to

- engaging constructively with the community
- striving for positive community outcomes throughout the project
- meeting SSD requirements

The CCS will be revised regularly to address any changes in the project management process, comments and feedback by relevant stakeholders, and any changes identified because of continuous improvement undertakings.

Table 1: List of SSD requirements and where they are addressed in the CCS

State Significant Development Requirements D7	Where The CCS Addresses This Requirement
identify relevant stakeholders to be consulted during the design and construction phases	Page 6
set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the development	Page 8
provide for the formation of community-based forums, if required, that focus on key environmental management issues for the development	Page 8
Develop a complaints/grievances mechanism: • through which the community can provide feedback to the Applicant and report any complaints; • through which the Applicant will respond to enquiries, complaints or feedback; and • to resolve any issues and mediate any disputes that may arise in relation to construction of the development	Page 10
include specific requirements around traffic, noise and vibration, visual impacts, amenity, flora and fauna, soil and water, contamination and heritage.	Produced by the Contractor and sits within their Construction Management Plan (CMP). The relevant excerpts will be added for inclusion in the CCS once produced by the Contractor.

Table 2: Acknowledgement of SSD requirements D6

State Significant Development Requirements D6	Procedure and Mechanism
Prior to the commencement of construction, a Community Consultative Committee (CCC) must be established for the development in accordance with the Department's Community Consultative Committee Guideline: State Significant Projects (2019). The CCC must begin to exercise functions in accordance with such Guidelines before the commencement of construction and continue to do so for a minimum of five years following the completion of construction or other timeframe agreed by the Planning Secretary.	Advertising for participants, and creation of CCC commenced; the CCC will begin to exercise its functions before the commencement of construction and will continue to do so for a minimum of five years following the completion of construction or other timeframe agreed by the Planning Secretary.

Table 3: Acknowledgement of SSD requirements B25

State Significant Development Requirements B25	Procedure and Mechanism
B25a items i-iv Make the information, documents as per conditions publicly available on website, up-to-date and publicly available for 12 months after commencement of operations, including: i. the documents referred to in condition B2 of this consent; ii. all current statutory approvals for the development; iii. all approved strategies, plans and programs required under the conditions of this consent	On dedicated website pages
B25a items iv-vi iv. Regular reporting on the environmental performance of the development in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent; v. a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; vi. a summary of the current stage and progress of the development;	Via news articles and updates on dedicated website pages – see page 8 of CCS
B25a items vii-x and B25b vii. contact details to enquire about the development or to make a complaint; viii. a complaints register, updated monthly; ix. audit reports prepared as part of any independent audit of the development and the Applicant's response to the recommendations in any audit report; x. any other matter required by the· Planning Secretary; and xi. keep such information up to date, to the satisfaction of the Planning Secretary, and publicly available for 12 months after the commencement of operations.	See page 10 of CCS

2. Context

Founded in 1913, Trinity Grammar School has always been about growing 'the complete man'. An Anglican School, governed by a Council (appointed by ordinance of the Diocese of Sydney) its aim is to provide boys with a thoroughly Christian education in mind, body and spirit.

The Renewal Project is a major **development of the Summer Hill campus**, part of a planning process to reimagine education for the next 20-30 years at Trinity Grammar School.

Plans include:

- A new 5-storey building at the heart of the campus, a focal point for teaching and learning activities to challenge, encourage and develop our students. It will be nestled between the existing Assembly Hall, School of Music, Sports Centre and North Quad Building and will replace a mostly 2-storey building, known as 'New School', (though built in 1982), that is currently at this location.
- The Assembly Hall, School of Music, and North Quad Building, along with the Library, Drama Centre and Founder's Building, will all in stages enjoy some refurbishments as part of this development.
- Increasing the space available onsite for traffic queuing and drop-off-pick up arrangements, as well as additional car-parking
- Improved east-west and north-south linkages across the school grounds, and enhanced outdoor spaces for the Junior School
- More accessible connections between the Junior School, car park, ovals, a new reception point, a multipurpose space and basketball court
- The historic precinct around the Quadrangle and War Memorial Chapel will be preserved and enhanced, making this an even more inviting gathering space for students

Construction is scheduled to start on: (awaiting dates to be confirmed). To be updated in the CCS once supplied.

3. Stakeholder Identification

The stakeholder list below summarises who will be consulted and when during the design and construction phase via ongoing face to face meetings, communications collateral, and digital engagement methods.

Table 4: List of stakeholders

Stakeholders	Interest and involvement
Capacity-building approach	Construction impacts such as noise and dust Truck movements during construction Increased traffic and congestion on nearby streets Local traffic and pedestrian safety Tree removal/ clearing Impact on water views Impact on property
Adjoining residents	Construction impacts such as noise and dust Truck movements during construction Increased traffic and congestion on nearby streets Local traffic and pedestrian safety Changed traffic conditions
Local residents	Impacts on traffic Potential security impacts
Community organisations	Successful project delivery and operation Impact on local community and businesses Prompt, accurate and effective issues/risk management and stakeholder engagement
Local members of parliament Ms (Jo) Joanna Elizabeth HAYLEN, BA MP (Summer Hill)	Successful project delivery and operation Construction, traffic and pedestrian impacts Site health and safety
Government agencies and peak bodies Transport NSW NSW Department of Planning and Environment NSW Environmental Protection Authority Sydney Water	
Local council	
School community	Construction impacts such as noise and dust Truck movements during construction Increased traffic and congestion on nearby streets Local traffic and pedestrian safety Tree removal/ clearing Impact on property Impact on learning environment

4. Engagement Approach

The key consideration in delivering successful outcomes for this project is to make it as easy as possible for anyone with an interest to find out what is going on. In practice, the communications approach across all levels of engagement will involve:

- Using uncomplicated language
- Taking a proactive approach to engagement
- Encouraging and educating whenever necessary
- Engaging broadly including with individuals and groups that fall into harder to reach categories
- Providing a range of opportunities and methods for engagement
- Being transparent
- Explaining the objectives and outcomes of planning and engagement processes.

In addition to engagement with Government Departments and Agencies and Council, two distinct streams of engagement will continue for the project as follows:

- School community, and
- Broader local community, and particularly adjoining neighbours.

This allows:

- School-centric involvement from school communities (including students, parents/caregivers, staff) unencumbered by broader community issues, and
- Broad community involvement unencumbered by school community wants and needs. Broad community stakeholders include local residents, neighbours and community organisations.

General community feedback

Members of the general public impacted by the construction phase are able to enquire and register any complaints regarding environmental impacts via the following channels:

- **1300 number** that is published on all communications material, including project site signage **(1300 012 483)**
- **Project specific email address** that is published on all communications material, including project site signage (renewalproject@trinity.nsw.edu.au)
- **Project mailing address** that is published on all communications material, including project site signage (Renewal Project Enquiries, PO Box 174 Summer Hill NSW 2130)
- Numerous tools and techniques will be used to keep stakeholders and the local community involved as summarised below.

Project high level milestones during the delivery phase include:

- Site establishment/early works including demolition
- Commencement of main works construction including excavation
- Completion of staged works and formal ‘openings’ of such.
- Project completion
- First day of school following project completion
- Official opening

Information procedures and mechanisms

Procedures and Mechanisms	Description	Frequency
Community information line	• Number 1300 012 483 is published on all communication materials and is managed by the Head of Community Engagement. • All enquiries that are received are logged in our complaints and enquiries register. • Once resolved, a summary of the conversation is updated in the register.	Throughout the life of the project and accessible for 12 months post completion
Community contact cards	• These are business card size with all the project contact information. • The project team/ contractors are instructed to hand out contact cards to stakeholders and community members enquiring about the project. • Directs all enquiries, comments and complaints through to the phone number and project email and mail addresses	Throughout the life of the project and available 12 months post completion
Complaints and enquiries register	Interactions, decisions and feedback from stakeholders are captured, and monthly reports generated.	Throughout the life of the project and updated for 12 months post completion
Door knocks	Provide timely notification to adjoining residents of upcoming construction works, changes to pedestrian and traffic movements, expected impacts and proposed mitigation. Provide written information of construction activity and contact details.	As required prior to periods of construction impacts
Face-to-face meetings/briefings	Activities include meeting, briefings and “walking the site” to engage directly with key stakeholders, directly impacted residents and business owners and the wider community	As required
FAQs	Set of approved answers provided in response to frequently asked questions. Used as part of relevant stakeholder and community communication tools. These are updated as required,and included on the website.	
Information sessions/ community forum	Held at a key milestone or contentious period, as required. All liaison summarised and loaded on the complaints and enquiries register.	As required
News posts	Regular (monthly) news feed posts providing updated information on project scope, benefits, construction progress, achievement of project milestones and other project related issues of interest. Via website page.	Monthly
Works Notifications	Works notification are used to communicate specific information/ impacts about the project. Distributed via letterbox drop to local residents and via the school community prior to construction activities or other milestones throughout the life of the project.	As required according to the construction programme
Project email address	Provide stakeholders and the community an email address linking direct to the project team: renewalproject@trinity.nsw.edu.au Email address published on all communications materials.	Throughout the life of the project
Project mailing address	Provide stakeholders and the community a mailing address linking direct to the project team: Renewal Project Enquiries, PO Box 174 Summer Hill NSW 2130 Mailing address published on all communications materials.	Throughout the life of the project
Trinity Grammar School website	Information about the project is available on trinity.nsw.edu.au/about-us/our-facilities/renewal-project	Updated at least monthly and is live for at least 12 months post completion of the project

5. Engagement Delivery Timeline

Project phase/ milestone	Target audiences	Indicative timeline	Proposed communications tactics
Installation of temporary classrooms	School community Local community and residents	MM DD – MM DD TBD	• Notification • Door knocks • News posts
Demolition	School community Local community and residents	MM DD – MM DD	• Notification • Door knocks • News posts
Construction Start of works Periods of higher impact – dust, noise, traffic, vibrations	School community Local community and residents	MM DD – MM DD TBD	• Advertising as required • Works notifications as required • News posts/project updates as required • FAQs updated regularly • Information session/s • Door knocks • Website updates
Handover and opening of new facilities	School community Local community and residents	MM DD – MM DD TBD	• Welcome pack for school community • Thank you pack for local community • Website update • Video tour
Post-opening	All	12 months post completion	• Website remains live • Project signage remains installed • 1300 phone, email and mail still active, and complaints and enquiries register still maintained

6. Enquiry, incident and/or complaint management process

Trinity Grammar School has specialist communications staff and a community engagement office to manage enquiries and complaints in a timely and responsive manner.

A complaint is defined as in regards to construction impacts – such as – safety, dust, noise, traffic, congestion, loss of parking, contamination, loss of amenity, hours of work, property damage, property access, service disruption, conduct or behaviour of construction workers, other environmental impacts, unplanned or uncommunicated disruption to the school.

If a phone call, email or face- to- face complaint is received during construction, they must be logged in the complaints and enquiries register, actively managed, closed out and resolved by within 24-48 hours.

As per our planning approval conditions, a complaints register is updated monthly; the ability to register a complaint is publicly available on the project's website page on the Trinity website.

If the complainant is not satisfied with the response provided, the process will involve a secondary review of their complaint with the Trinity Renewal Project Director.

If a complaint cannot be resolved by Trinity to the satisfaction of the complainant, we will advise them to contact the NSW Ombudsman - https://www.ombo.nsw.gov.au/complaints or the Department of Planning and Environment's Compliance Team - https://www.planning.nsw.gov.au/Assess-and- Regulate/About-compliance/Lodge-a-compliance-complaint

Disputes involving compensation or rectification

Trinity Grammar School is committed to working with the school and broader community to address concerns as they arise.

Where disputes arise that involve compensation or rectification, the process for resolving community enquiries and complaints will be followed to investigate the dispute.

Depending upon the results of the investigation, Trinity Grammar School may seek legal advice before proceeding.

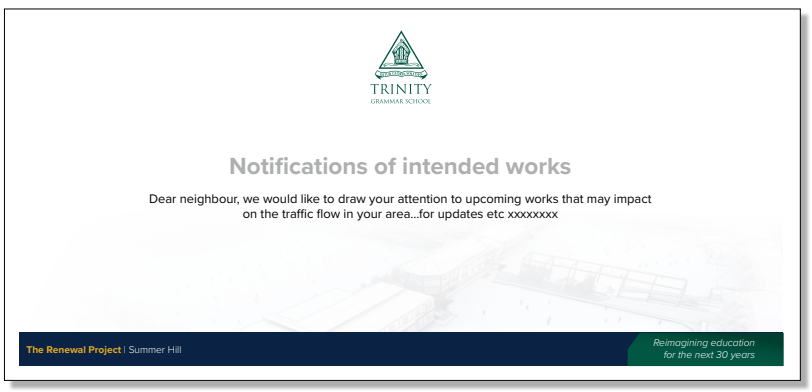
Timeframe for responding to enquiries and complaints

The table below summarises timeframes for responding to enquiries and complaints, through each correspondence method:

Complaint	Acknowledgement times	Response times
Phone call during business hours	At time of call – and agree with caller estimated timeframe for resolution	Complaint to be closed out within 48 hours. If not possible, continue contact, escalate as required and resolve within 7 business days
Phone call after hours	Within two (2) hours of receiving message upon returning to office	Following acknowledgement, complaint to be closed out within 48 hours. If not possible, continue contact, escalate as required and resolve within 7 business days.
Email during business hours	At time of email (automatic response)	Complaint to be closed out within 48 hours. If not possible, continue contact, escalate internally as required and resolve within 7 business days.
Email outside of business hours	At time of email (automatic response)	Complaint to be closed out within 48 hours (once return to business hours). If not possible, continue contact, escalate internally as required and resolve within 7 business days.
Interaction/Enquiry	**Acknowledgement times**	**Response times**
Phone call during business hours	At time of call – and agree with caller estimated timeframe for response.	Interaction to be logged and closed out within 7 business days.
Phone call after hours	Within two (2) hours of receiving message upon returning to office	Interaction to be logged and closed out within 7 business days.
Email during business hours	At time of email (automatic response)	Interaction to be logged and closed out within 7 business days.
Email outside of business hours	At time of email (automatic response).	Interaction to be logged and closed out within 7 business days.
Letter	N/A	Interaction to be logged and closed out within 10 business days following receipt.

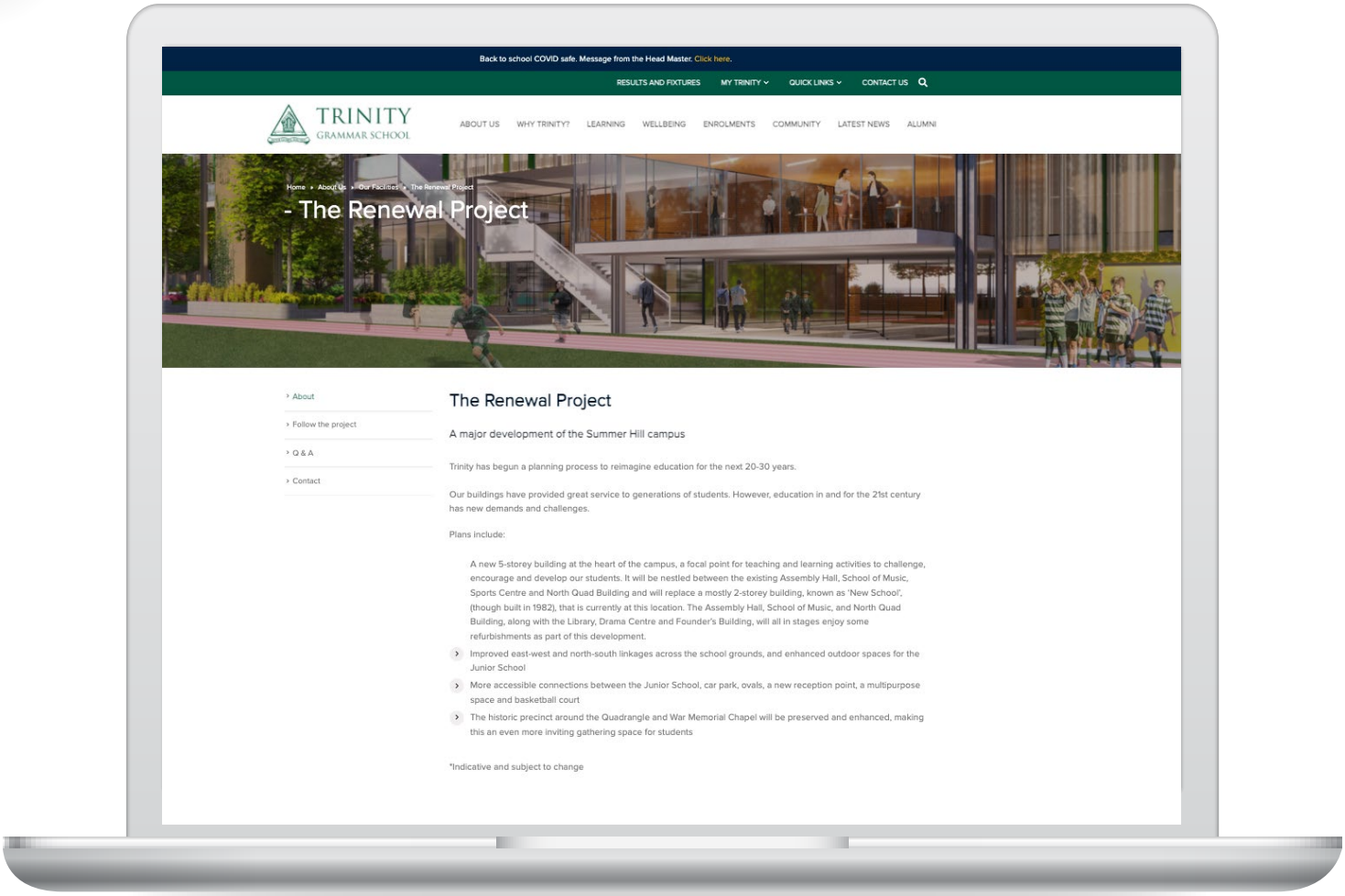
Appendix

Sample of information cards and letterbox drop collateral



Appendix | continued

Sample of website page with news, article feed and FAQ section.



A.6 Construction Soil and Water Management Sub-Plan (CSWMSP)

In accordance with SSD Condition D13(d)

Trinity Grammar School Stage 1 & 2

Construction Soil and Water Management Report

Prepared for:	**Hansen Yunken**
Date:	**31 March 2022**
Prepared by:	**Miqueas Moreno**
Ref:	**301350145**

Stantec Australia Pty Ltd
Level 6, Building B, 207 Pacific Highway, St Leonards NSW 2065
Tel: +61 2 8484 7000 Web: www.stantec.com

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Stantec

Revision

Site Address:	119 Prospect Road, Summer Hill NSW, 2131
Real Property Description:	Lot 34, DP5430
Proposed Development:	Mixed use development
Client:	Hansen Yunken
Local Authority	Inner West Council
Authority Reference #:	SSD-10371
Stantec Reference:	3013-CSWMP_001

Renata Tracey CPEng NER

Civil Section Manager

Stantec Australia Pty Ltd

Revision	Date	Comment	Prepared By	Approved By
001	31.03.22	ISSUE FOR CONSTRUCTION CERTIFICATE	MMM	RET

Contents

1. Introduction

Stantec have been commissioned by Hansen Yunken to prepare this Construction Soil and Water Management Plan (SWMP) in support of the SSDA for the proposed development for 'Trinity Grammar School', located at 119 Prospect Road, Summer Hill NSW, 2131.

This SWMP illustrates that the proposed development complies with the conditions set out by Development Consent condition D18, Inner West Council policies, *Australian Rainfall and Runoff 2019*, Australian Standards, *Landcom Managing Urban Stormwater* and best engineering practices.

2. Site Description

2.1 Site Locality

The proposed development forms part of the site with the following property details:

Site Address:	119 Prospect Road, Summer Hill NSW, 2131
Real Property Description:	Lot 34 DP5430
Development Area:	65,500m² (6.55Ha)

The overall site is bounded by:

- Seaview Street to the North
- Prospect Road to the East
- Victoria Street to the West
- Yeo Park to the South

2.2 Topography

The local topography around the site shows that the site primarily falls West to North-East. The high point of the site is located to the West of the boundary at a level of RL 52m AHD, and the low point located along the North-East boundary at a level of RL 42m AHD.

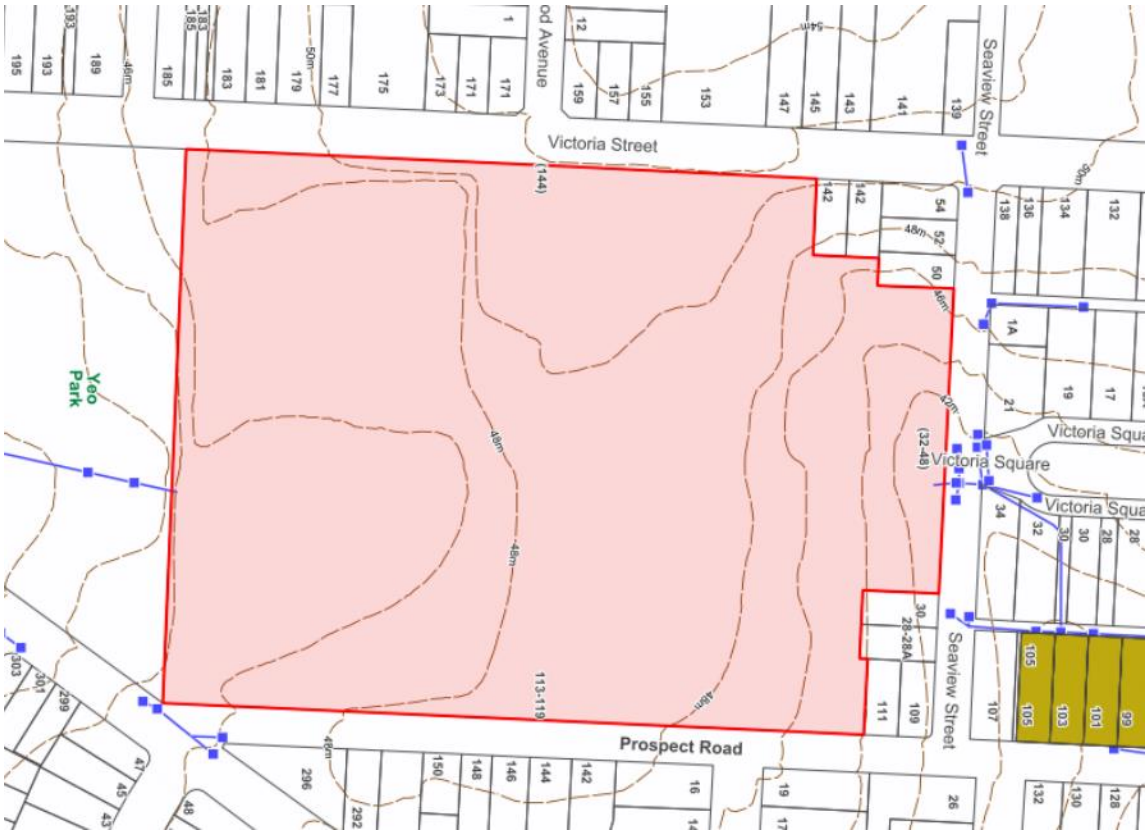


Figure 1: Site Topography and Drainage Map. Source Inner West Council (2019)

2.3 Existing Site Characteristics

The Trinity Grammar School (TGS) site consists of an existing developed education campus containing sports fields, on-grade and underground carparks, circulation roadways and driveways, external landscaped and hardstand areas, and various buildings used for education, administration, and operations purposes.

For the existing site characteristics, refer to **Figure 1** below.

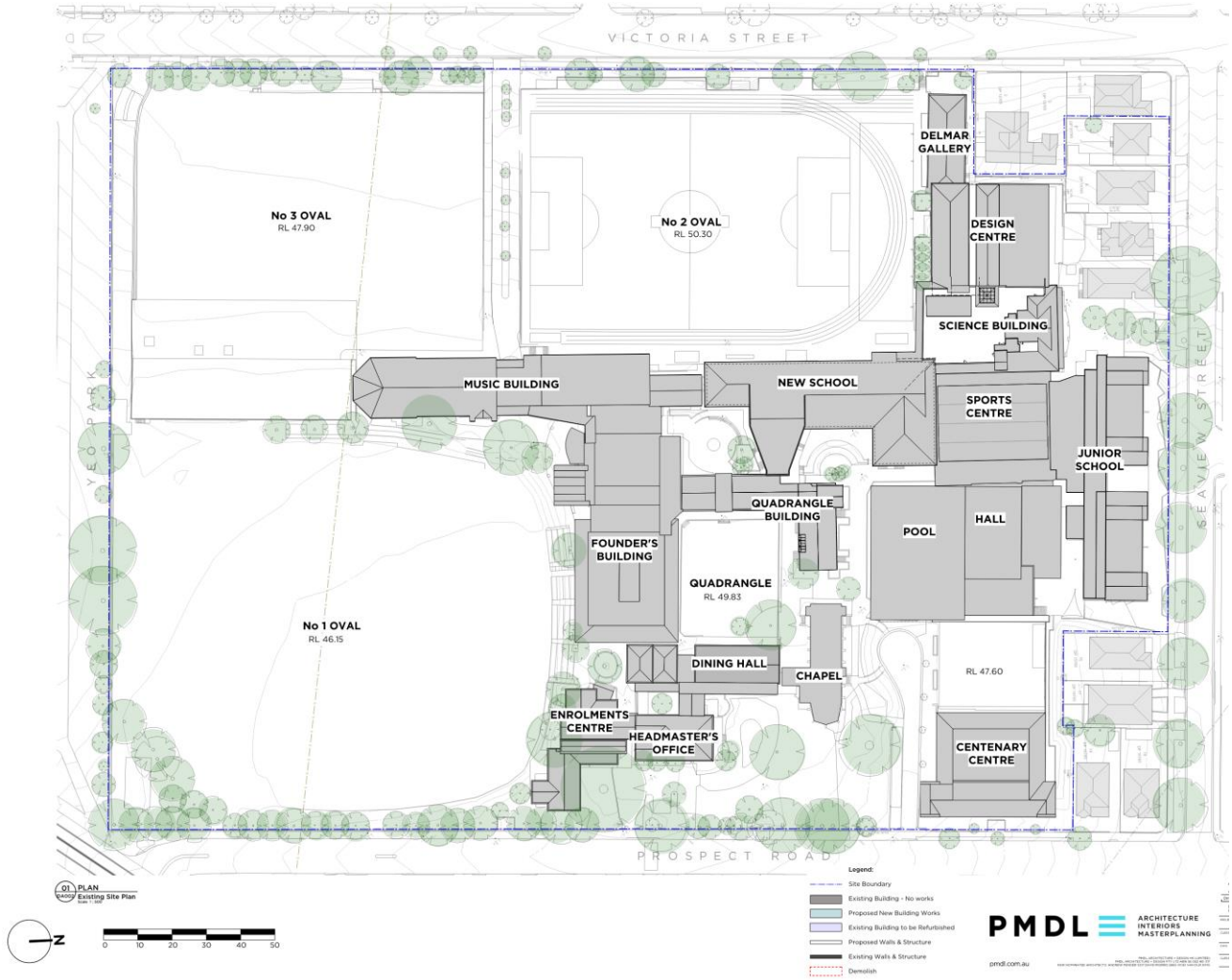


Figure 2: Existing Site

The total existing site area of the school campus is calculated to be approximately 65,500m^2 by topographic survey, including the residential properties at No. 46 - 52 Seaview Street, which have been acquired by TGS but are yet to be re-developed and incorporated into the campus.

2.4 Proposed Development

The re-development of the Trinity Grammar School campus will involve the following elements:

- New “Teaching & Learning” building
- Renewal and refurbishment of existing teaching and learning facilities

- Increasing the footprint of an existing carpark under the south-western sports field (Oval 3) and connection to the existing underground carpark under the north-western sports field (Oval 2)
- New multipurpose pavilion between Ovals 1 and 3
- Demolition of school-owned residences at 46, 48, 50 and 52 Seaview Street and provision of maintenance building and delivery facilities
- Improvement and extension to Junior School outdoor teaching, assembly, and recreational area
- Other general refurbishments / improvements to pedestrian links across the school grounds and between levels, including more accessible connections between the Junior School, ovals, and car park

The subject report refers to the proposed renewal project associated in particular with Stages 1 and 2 works as shown in **Figure 2** below.

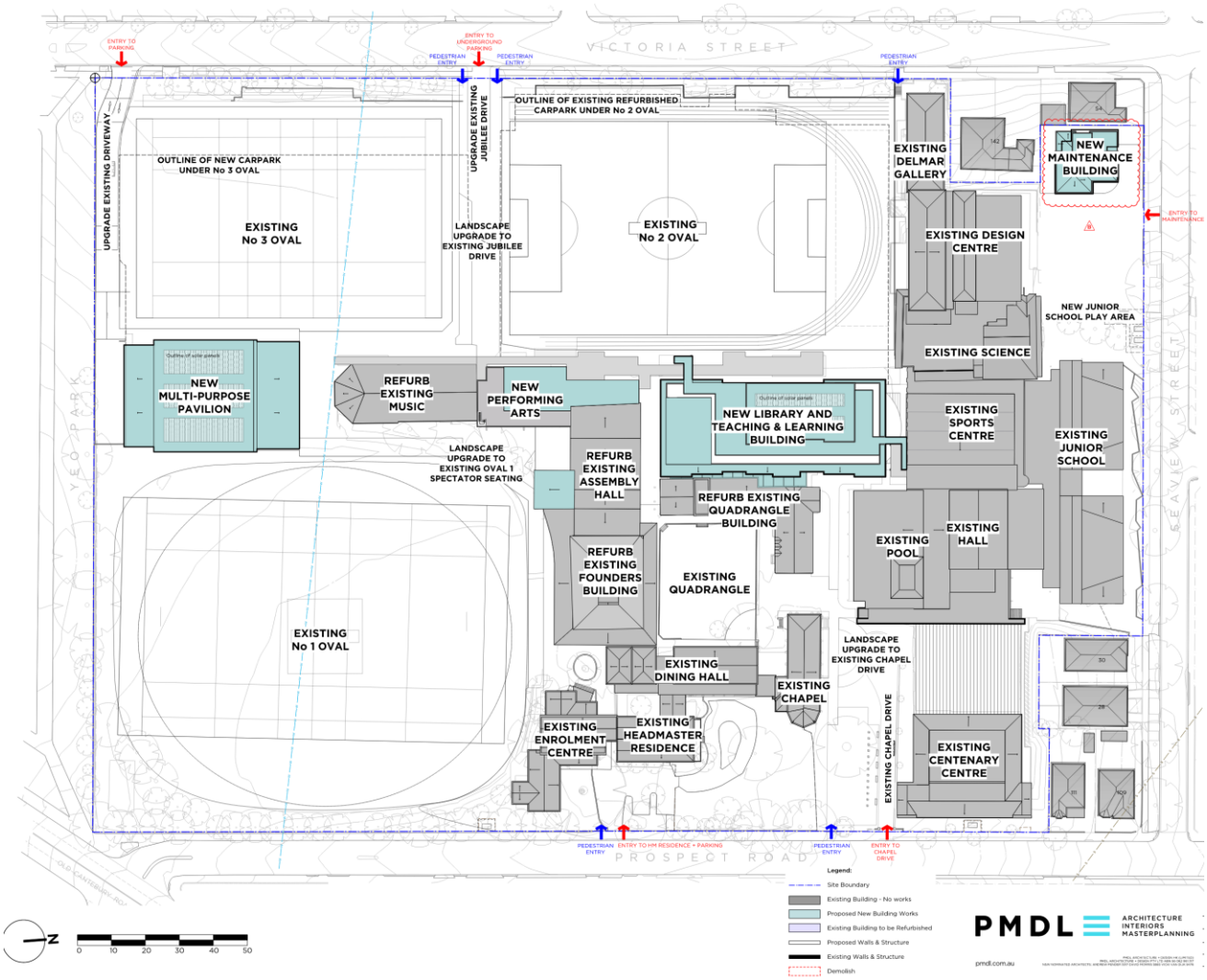


Figure 3: Proposed Works Stage 1 & 2

The site and proposed design are considered to meet objectives of the project in accordance with the SSD-10371 Responsibility Matrix.

3. Relevant Policies, Standards and Documents

The following listed policies, standards and guidelines are referenced to ensure relevant stormwater design and management requirements are met:

- Bureau of Meteorology IFD data - sourced from http://www.bom.gov.au
- Marrickville DCP 2011 Part 2 - General Provisions, being the following:
    i. 2.17 Water Sensitive Urban Design
    ii. 2.22 Flood Management
    iii. 2.25 Stormwater Management
- Former Marrickville Council Area - Stormwater and On-Site Detention Code
- Former Marrickville Council Area - Water Sensitive Urban Design Reference Guideline
- Ashfield Council Area DCP 2016- Chapter C Sustainability
- Australian Rainfall & Runoff- A guide to Flood Estimation 2016
- AS3500 parts 0-5: 2013 Plumbing and Drainage
- Landcom Managing Urban Stormwater - Soils and Construction Volume 1 2004 (“Blue Book”)
- NSW Floodplain Development Manual 2005
- Guidelines for development adjoining land and water managed by the Office of Environment and Heritage (OEH, 2013)
- NSW Department of Education (DoE) Educational Facilities Standards and Guidelines (EFSG)
- ACOR Trinity Grammar School - The Renewal Project Stormwater Management and WSUD Report 2020

4. Compliance with Conditions of Consent

A summary of the relevant requirements of the SSD-10371 conditions of consent are provided below for clarity. This Matrix, provided by the client, outlines requirements for the developmental site. Condition D18 has been addressed.

Condition D18

The Application must prepare a Construction Soil and Water Management Plan (SWMP) and the plan must address, but not be limited to the following:

a) Be prepared by a suitably qualified expert, in consultation with Council

Refer to Revision Page

b) Describe all erosion and sediment controls to be implemented during construction, as a minimum, in accordance with the publication Managing Urban Stormwater: Soil & Construction (4th edition, Landcom 2004) commonly referred to as the 'Blue Book'

Refer to Sediment and Erosion Control Plans (Appendix A: Sediment and Erosion Control Plans)

c) Provide a plan of how all construction works will be managed in a wet-weather events (i.e. storage of equipment, stabilisation of the site)

Refer to Sediment and Erosion Control Plans (Appendix A: Sediment and Erosion Control Plans)

d) Detail all off-site flows from the site

Refer to Section 5.5: Off-site Flow Management

e) Describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events, including, but not limited to 1 in 1-year ARI, 1 in 5-year ARI

Refer to Section 5.5: Off-site Flow Management

5. Construction Soil and Water Management

5.1 Water Quality

Landcom Managing Urban Stormwater - Soils and Construction 2004 ('Blue Book') contains erosion, sediment and waste control measures that are required to mitigate the impacts of land disturbance activities on soils, landforms and receiving waters, including:

- Reduce pollution to downstream areas and receiving waters
- Reduce land degradation
- Raise awareness of ecologically sustainable development (ESD) principles and their application to the development
- Minimise the area of soil disturbed and exposed to erosion
- Conserve topsoil for later site rehabilitation / revegetation
- Control water flow from the top of, and through, the development area
- Rehabilitate disturbed lands quickly
- Maintain soil and water management measures appropriately during the construction phase

Chapter 2 of the Blue Book states that a Soil and Water Management Plan (SWMP) should be prepared for all development works where more than 2,500sqm of land is distributed.

Section 9.3 of the Blue Book states that all SWMPs should include relevant calculations of capacities for any sediment basins and other structures. These calculations should be:

- Based on an assessment of site-specific data
- Account for the pollution potential of the site
- Consider the sensitivity of receiving waters and other ESD matters

5.2 Flood Impact Assessment

In accordance with Ashfield DCP (2017) Section 2A Part *3 Flood Hazard and Schedule 2 Flood Control Lot Map*, the TGS site has not been identified as a flood control lot. A snapshot of the Flood Control Lot Map for the TGS site is shown below.

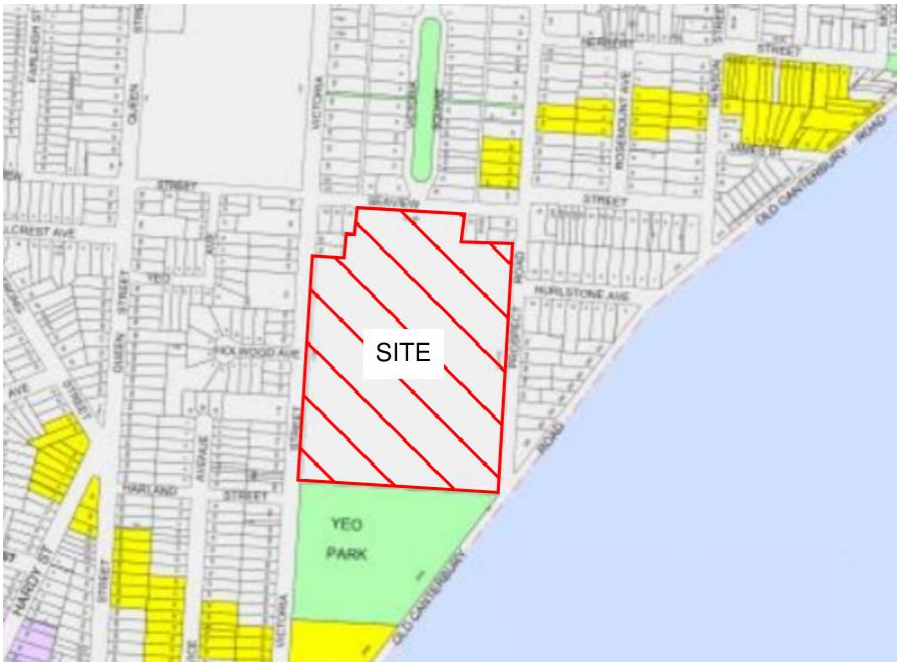


Figure 4: Flood Control Lot Map for TGS Site (Inner West Council, 2017)

Also, as per ACOR Trinity Grammar School - The Renewal Project Stormwater Management and WSUD Report 2020 the site has been described as not subject to flooding.

5.3 Soil and Water Management Plan

An Erosion and Sediment Control Plan (ESCP) has been prepared in accordance with Landcom Managing Urban Stormwater m- Soils and Construction 2004, included in Appendix A. The Soil and Water Management Plan (SWMP) details the following control measures during construction to ensure large portions of sediments are contained to prevent runoff:

- Sediment diverting measures to minimise sediment in Council's stormwater drainage networks (i.e. sandbags and/ or geo-textile filter fabric protecting existing and proposed drainage pits)
- Overland flow
- Indicative temporary stockpile locations
- Sediment control fencing location and extents
- Covering and revegetating disturbed areas (as soon as practicable & as required to prevent sediment laden runoff from leaving the site)
- Provision of a temporary sediment basin (noting that provision of a sediment basin is not strictly required, as potential soil loss is less than 150m^3/ year in accordance with 'Blue Book' guidelines).

It is noted that the site foreman is to monitor the weather forecast and, when high chance of rain is forecasted, cover stockpiles and locate machinery / equipment in areas to prevent sediment laden runoff from leaving the site.

5.4 Site Constrains and Characteristics

Sites with areas of disturbance larger than 2,500m^2 warrant the calculation and construction of a sediment basin, as well as an SWMP addressing soil erosion and sediment pollution. In response to the before mentioned, the site has been divided considering construction staging, runoff and discharge direction in four areas as shown on figure 3. Given the characteristics of the site and project, it is noted that a sediment basin will be only applicable for the denoted Area S2-2.

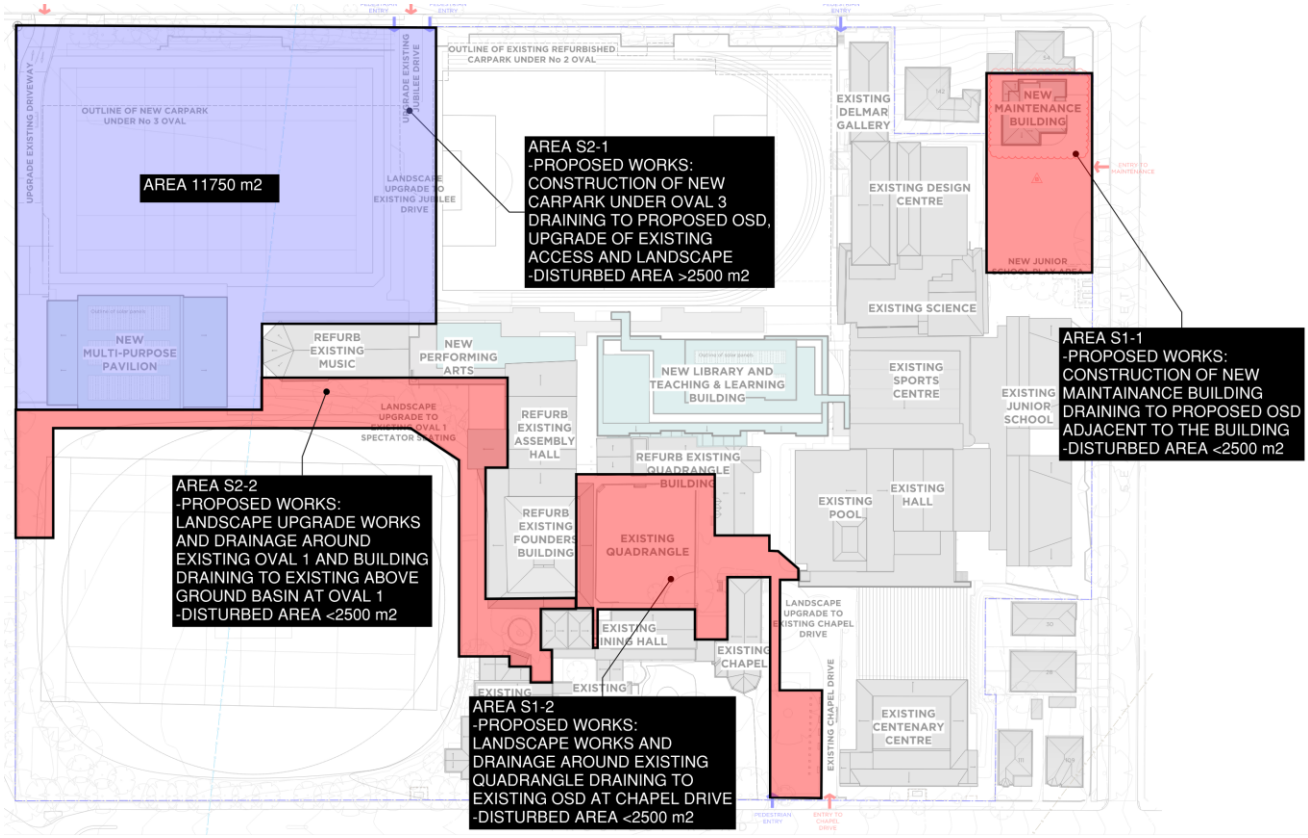


Figure 5: Site Areas Demarcation

Site constraints were calculated using the "Standard Calculation" spreadsheets to size sediment basins, see **Appendix B**. The settling zone volume for Type D soils was calculated to provide capacity to contain all runoff expected from up to the y-percentile rainfall event. The construction site constraints and characteristics criteria are identified in **Table 1** below:

Table 1: Site constraints and characteristics

Constraint/ Opportunity	Value
Rainfall erosivity	Moderate (R-factor= 2,630)
Slope gradients	Moderate (up to 10%)
Potential erosion hazard	Low (from Figure 4.6 in Blue Book)
Rainfall Zone	Zone 1
Soil texture group	Type D
Percent Dispersible (subsoil)	Assumed >10% dispersible
Runoff coefficient	0.5 adopted
Disturbed site area	11,750m^2 (includes B1 hardstand, B3, and OSD Bypass)

Based on the calculated R-factor of 2,630, slope gradients less than 10% falls below the A-line in Figure 4.6 of the Blue Book is classified as low erosion hazard.

It is noted that the 85th percentile has been adopted for the design rainfall depth as earthworks are anticipated to take place over a period of 6 months or more. Protection for battered areas is to be implemented by the contractor as portions of the site are intended to be unvegetated for an extended amount of time (i.e. > 6 months).

5.4.1 Calculations

A summary of the results calculated is summarized in Table 2 (refer to Appendix 2 for further detail):

Table 2: Calculation results summary

Catchment/ Site	Soil Catchment Area (ha)	Settling Zone Volume (m^3)	Sediment Storage Volume (m^3)	Total Basin Volume (m^3)
1	1.175	186	93	279

5.5 Off-site Flow Management

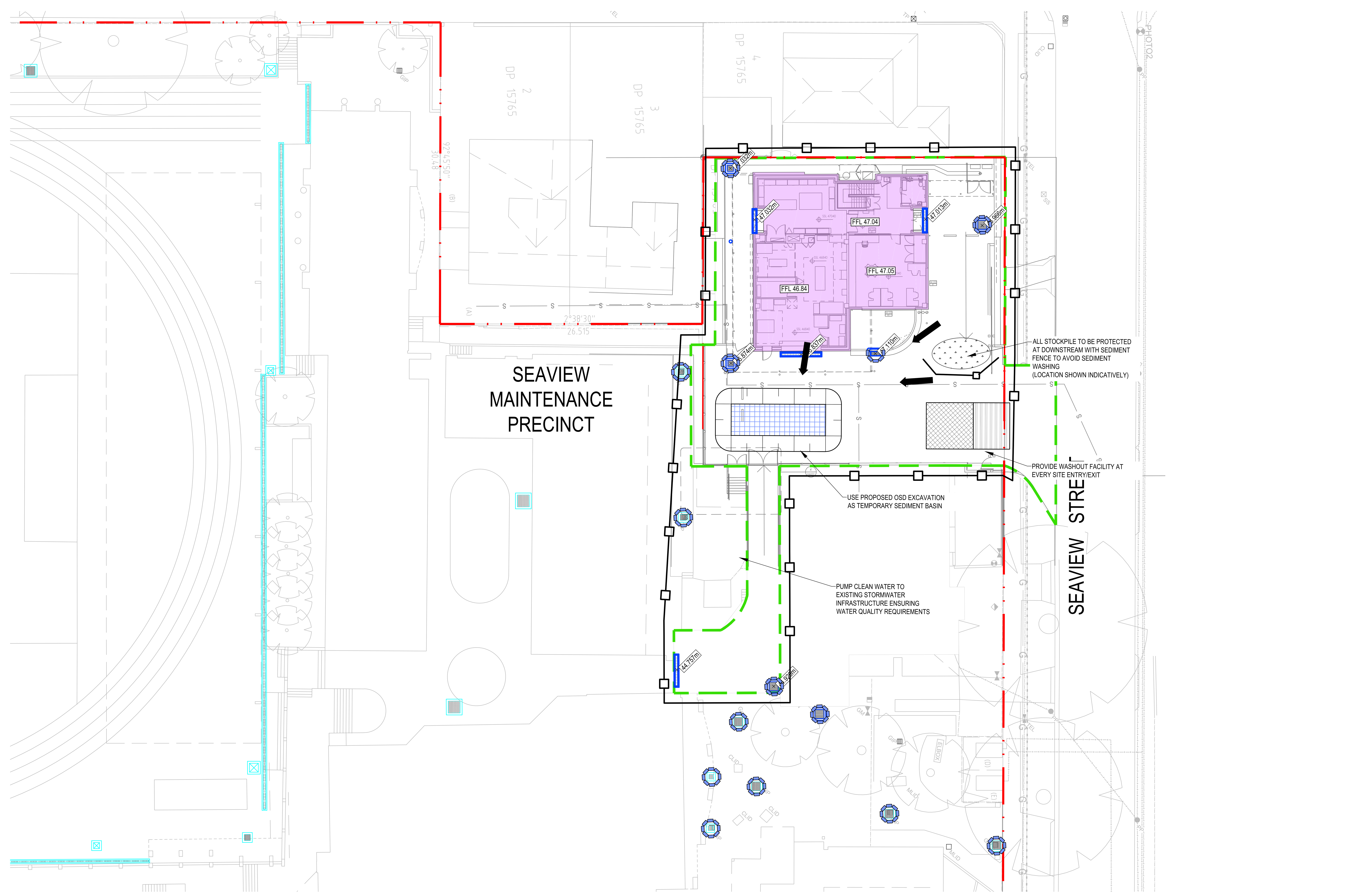
Stormwater runoff from area S2-1 will be directed to the proposed sediment basin, whereas in the rest of the site the runoff will be directed to the existing stormwater infrastructure using the sediment trap devices as described. It is anticipated that flows up to the 1 in 5-year ARI critical storm event will be contained within the proposed basin, and larger storm events up to the 1 in 20-year ARI critical, and 1 in 100-year ARI critical, storm events will overtop the basin but still be contained within the basement excavation area. Treated water will be pumped to the existing stormwater pipe as detailed on the SECP.

As explained in 5.4, no other sediment basins are required however, it is noted that the proposed OSD tank at the Area S1-1 will be also used as temporary basin to contain the flows from the disturbed area until the completion of the works.

All sediment and erosion control devices shall be maintained in a satisfactory working order throughout the contract maintenance. The contractor shall inspect all devices after each storm for structural damage or clogging by silt and other debris and make prompt repairs or replacements.

The provision of temporary sediment basins on the site will ensure construction soil and water will be adequately managed on site.

Appendix A Sediment and Erosion Control Plans



LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED STAGE 1 BOUNDARY
- VEHICLE SHAKEDOWN DEVICE
- PROPOSED SILT FENCE
- SANDBAG PIT PROTECTION
- PROPOSED JUNCTION PIT
- EXISTING JUNCTION PIT
- PROPOSED GRATED PIT
- EXISTING GRATED PIT
- PROPOSED KERB INLET PIT
- EXISTING KERB INLET PIT
- PROPOSED GRATED INLET PIT
- EXISTING GRATED INLET PIT
- PROPOSED SEDIMENT BASIN
- DIRECTIONAL FLOW ARROW

NOTES

1. REFER DRAWING CI-1-007-001 FOR EROSION AND SEDIMENT CONTROL NOTES.
2. REFER DRAWING CI-076-S2-001 FOR EROSION AND SEDIMENT CONTROL DETAILS.
3. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY.
4. PROVIDE SEDIMENT TRAP CONTROL AROUND ALL EXISTING KERB INLET PITS PRIOR TO DEMOLITION.

KEY PLAN

SCALE: N.T.S.

1:200 2 0 2 4 6 8 10 A1
1:400 A3

REV	DESCRIPTION	DRAWN	APP'D	DATE
1	ISSUED FOR CONSTRUCTION	CPO	MMM	31/03/22

DRAWN:	CPO
DESIGNED:	MMM
VERIFIED:	
APPROVED FOR TENDER:	
APPROVED FOR CONSTRUCTION:	

ARCHITECT/CLIENT: PMDL ARCHITECTURE INTERIORS MASTERPLANNING; HANSENYUNCKEN

PROJECT: TRINITY GRAMMAR SCHOOL - CONSTRUCTION SOIL AND WATER MANAGEMENT

TITLE: EROSION AND SEDIMENT CONTROL PLAN AREA S1-1

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CONSTRUCTION ISSUE

SCALE @ A1	PROJECT No	DRAWING No	REV
1:100	301350145	CI-071-S1-001	1

DATE PLOTTED: 31/03/2022 8:19:45 PM BY: MORENO, MIQUEAS

QUADRANGLE

CHAPEL DRIVE

PROSPECT ROAD

SCOPE OF WORKS

REFER TO SHEET L202
REFER TO SHEET L203
REFER TO SHEET L204

PROVIDE WASHOUT FACILITY AT EVERY SITE ENTRY/EXIT

SSD

LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED STAGE 1 BOUNDARY
- VEHICLE SHAKEDOWN DEVICE
- PROPOSED SILT FENCE
- SANDBAG PIT PROTECTION
- PROPOSED JUNCTION PIT
- EXISTING JUNCTION PIT
- PROPOSED GRATED PIT
- EXISTING GRATED PIT
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- EXISTING GRATED INLET PIT
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- DIRECTIONAL FLOW ARROW

NOTES

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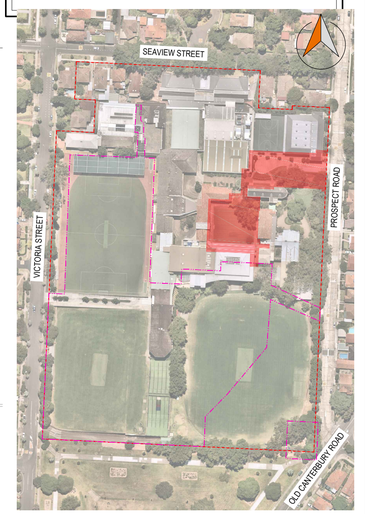
3. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY.
4. PROVIDE SEDIMENT TRAP CONTROL AROUND ALL EXISTING KERB INLET PITS PRIOR TO DEMOLITION.



KEY PLAN
SCALE: N.T.S.

1:200 2 0 2 4 6 8 10 A1
1:400 A3

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REV	DESCRIPTION	DRAWN	APP'D	DATE
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CAD FILE: 301350145-CI-071-S1-002.DWG

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APPROVED FOR TENDER:	
APPROVED FOR CONSTRUCTION:	

PMDL ARCHITECTURE INTERIORS MASTERPLANNING
HANSENYUNCKEN
ARCHITECT/CLIENT

PROJECT: TRINITY GRAMMAR SCHOOL - CONSTRUCTION SOIL AND WATER MANAGEMENT

TITLE: EROSION AND SEDIMENT CONTROL PLAN AREA S1-2

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CONSTRUCTION ISSUE

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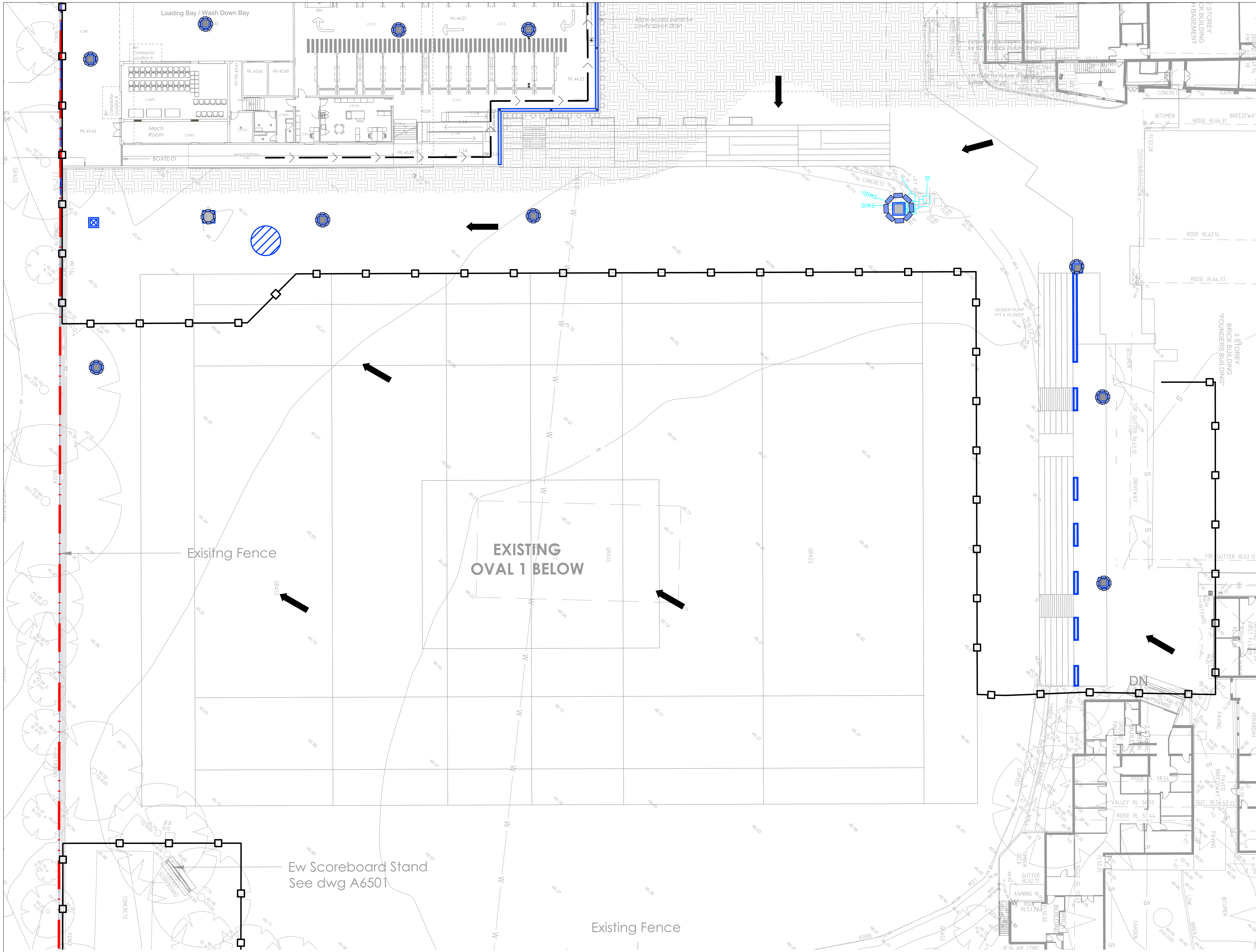


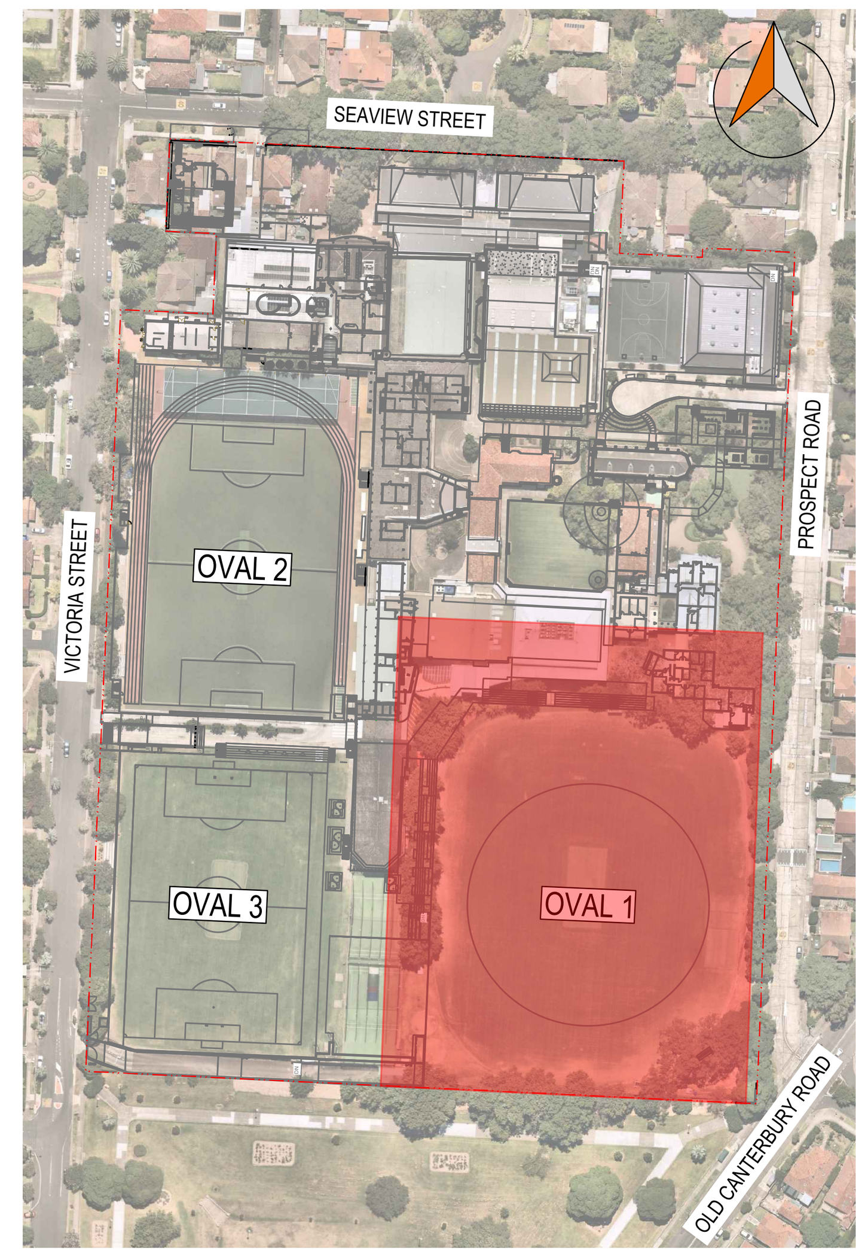
LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED STAGE 1 BOUNDARY
- VEHICLE SHAKEDOWN DEVICE
- PROPOSED SILT FENCE
- SANDBAG PIT PROTECTION
- PROPOSED JUNCTION PIT
- EXISTING JUNCTION PIT
- PROPOSED GRATED PIT
- EXISTING GRATED PIT
- PROPOSED KERB INLET PIT
- EXISTING KERB INLET PIT
- PROPOSED GRATED INLET PIT
- EXISTING GRATED INLET PIT
- PROPOSED SEDIMENT BASIN
- DIRECTIONAL FLOW ARROW
- PROPOSED CATCH DRAIN

NOTES

1. REFER DRAWING CI-1-007-001 FOR EROSION AND SEDIMENT CONTROL NOTES.
2. REFER DRAWING CI-076-S2-001 FOR EROSION AND SEDIMENT CONTROL DETAILS.
3. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY.
4. PROVIDE SEDIMENT TRAP CONTROL AROUND ALL EXISTING KERB INLET PITS PRIOR TO DEMOLITION.

BASIN ID	TOTAL CATCHMENT AREA (ha)	SETTLING ZONE VOLUME (m^3)	SEDIMENT STORAGE VOLUME (m^3)	TOTAL BASIN VOLUME (m^3)
A	1.175	186.000	93.000	279.000



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APPROVED FOR TENDER:
APPROVED FOR CONSTRUCTION:

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HANSENYUNCKEN

1:250 / 1:500 — A1 / A3

ARCHITECT/CLIENT

PROJECT: TRINITY GRAMMAR SCHOOL - CONSTRUCTION SOIL AND WATER MANAGEMENT

TITLE: EROSION AND SEDIMENT CONTROL PLAN AREA S2-2

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CONSTRUCTION ISSUE

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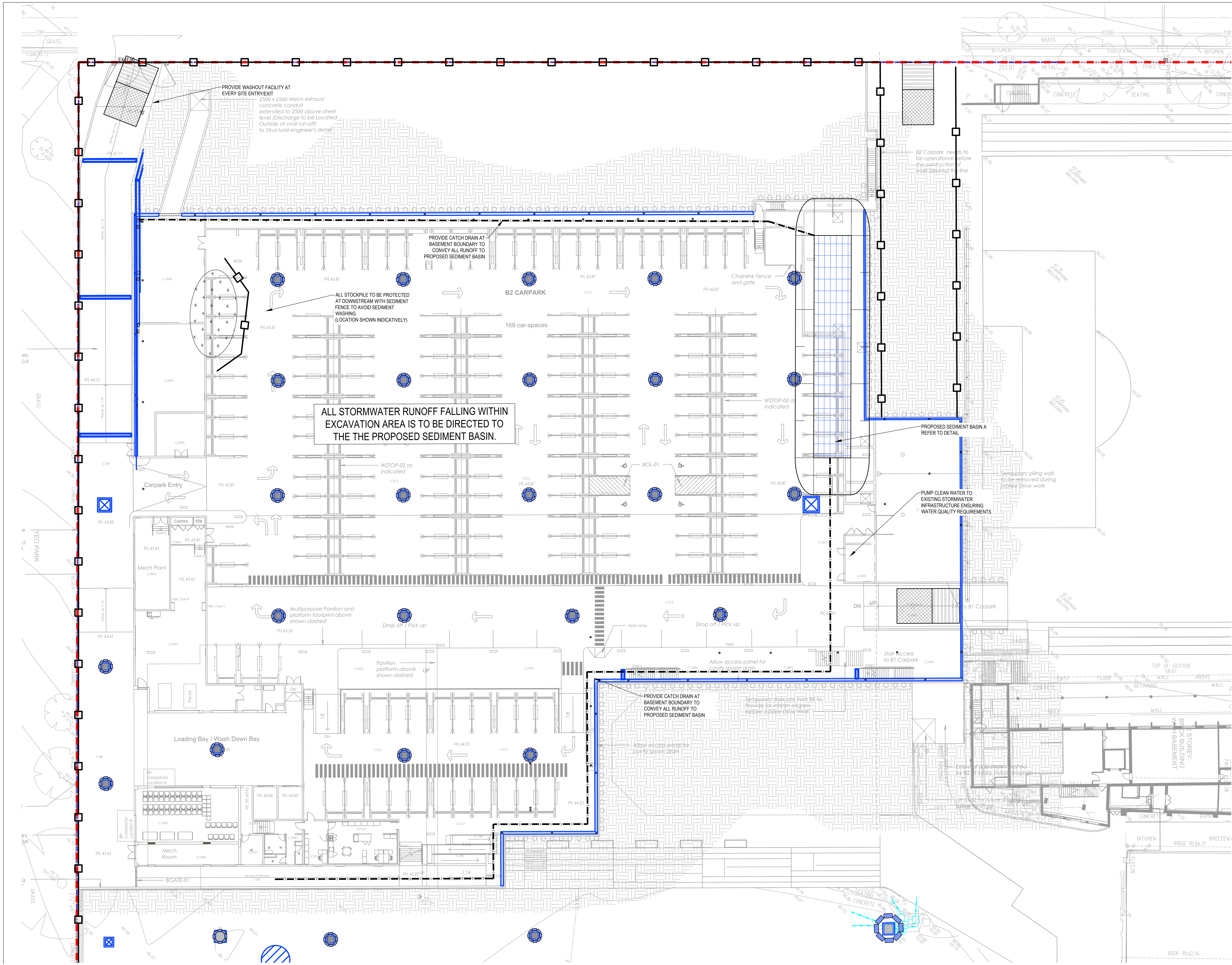
PROVIDE WASHOUT FACILITY AT EVERY SITE ENTRY/EXIT
2500 x 2500 Mech exhaust concrete conduit extended to 2500 above street level (Discharge to be Located Outside of oval run-off) to Structural engineer's detail
PROVIDE CATCH DRAIN AT BASEMENT BOUNDARY TO CONVEY ALL RUNOFF TO PROPOSED SEDIMENT BASIN
ALL STOCKPILE TO BE PROTECTED AT DOWNSTREAM WITH SEDIMENT FENCE TO AVOID SEDIMENT WASHING (LOCATION SHOWN INDICATIVELY)
B2 CARPARK
169 car-spaces
Chainlink Fence and gate
B2 Carpark needs to be operational before the contruction of work beyond this line
ALL STORMWATER RUNOFF FALLING WITHIN EXCAVATION AREA IS TO BE DIRECTED TO THE THE PROPOSED SEDIMENT BASIN.
PROPOSED SEDIMENT BASIN A REFER TO DETAIL
PUMP CLEAN WATER TO EXISTING STORMWATER INFRASTRUCTURE ENSURING WATER QUALITY REQUIREMENTS
Temporary piling wall to be removed during Jubilee Drive work
Carpark Entry
Mech Plant
Multipurpose Pavilion and platform footprint above shown dashed
Drop off / Pick up
Pavilion platform above shown dashed
Loading Bay / Wash Down Bay
PROVIDE CATCH DRAIN AT BASEMENT BOUNDARY TO CONVEY ALL RUNOFF TO PROPOSED SEDIMENT BASIN
Temporary staircase from B2 to provide for interim egress before Jubilee Drive work
Allow access panel for cavity spoon drain
Stair access to B1 Carpark
to B1 Carpark
Mech Room
BGATE-01
BOL-01
WSTOP-02 as indicated

LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED STAGE 1 BOUNDARY
- VEHICLE SHAKEDOWN DEVICE
- PROPOSED SILT FENCE
- SANDBAG PIT PROTECTION
- PROPOSED JUNCTION PIT
- EXISTING JUNCTION PIT
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- EXISTING GRATED PIT
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- PROPOSED GRATED INLET PIT
- EXISTING GRATED INLET PIT
- PROPOSED SEDIMENT BASIN
- DIRECTIONAL FLOW ARROW
- PROPOSED CATCH DRAIN

NOTES

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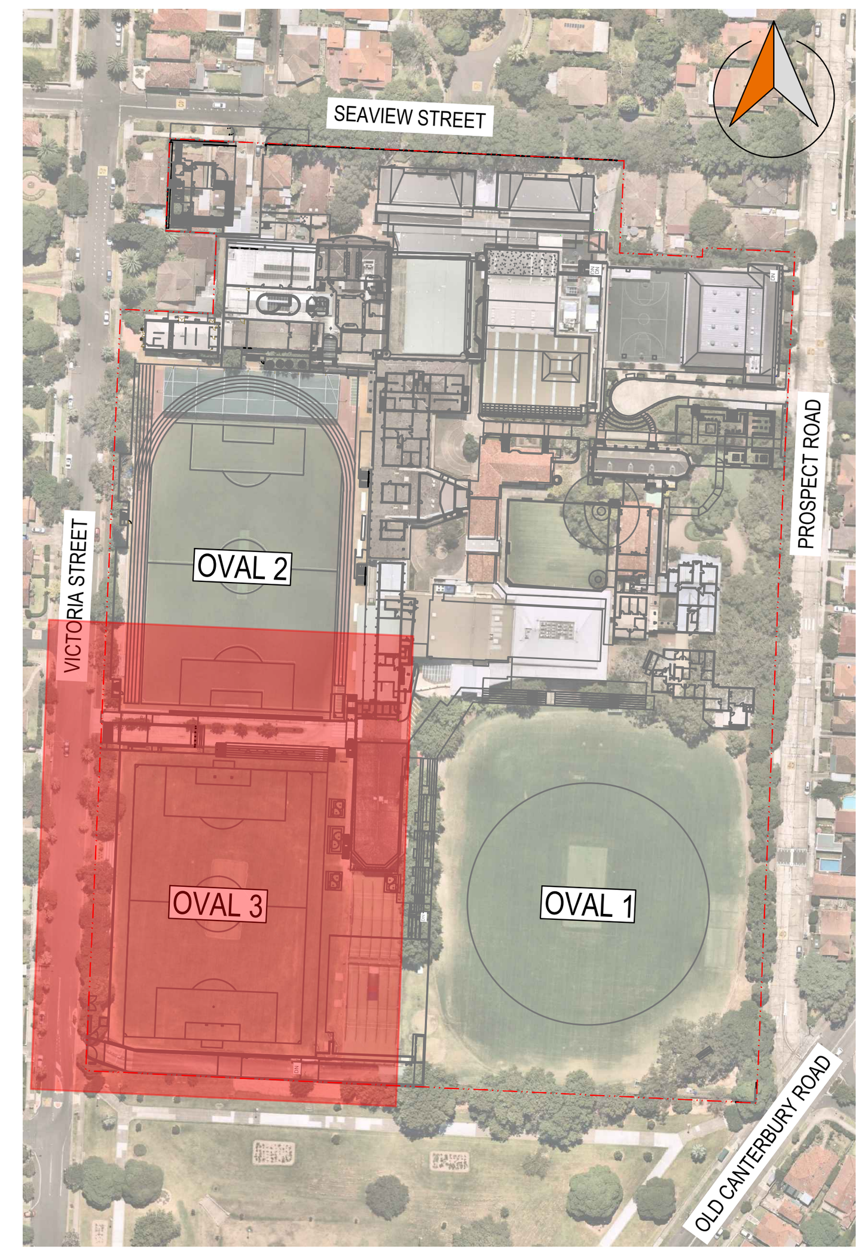
2. REFER DRAWING CI-076-S2-001 FOR EROSION AND SEDIMENT CONTROL DETAILS.
3. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY.
4. PROVIDE SEDIMENT TRAP CONTROL AROUND ALL EXISTING KERB INLET PITS PRIOR TO DEMOLITION.

BASIN ID	TOTAL CATCHMENT AREA (ha)	SETTLING ZONE VOLUME (m^3)	SEDIMENT STORAGE VOLUME (m^3)	TOTAL BASIN VOLUME (m^3)
A	1.175	186.000	93.000	279.000



KEY PLAN

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CAD FILE: 301350145-CI-071-S2-001.DWG

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DRAWN:	
DESIGNED:	
VERIFIED:	
APPROVED FOR TENDER:	
APPROVED FOR CONSTRUCTION:	

PMDL ARCHITECTURE INTERIORS MASTERPLANNING

HANSENYUNCKEN

DETUR GLORIA SOLI DEO

1:250 A1 / 1:500 A3 — 5 0 5 10

ARCHITECT/CLIENT

PROJECT: TRINITY GRAMMAR SCHOOL - CONSTRUCTION SOIL AND WATER MANAGEMENT

TITLE: EROSION AND SEDIMENT CONTROL PLAN AREA S2-1

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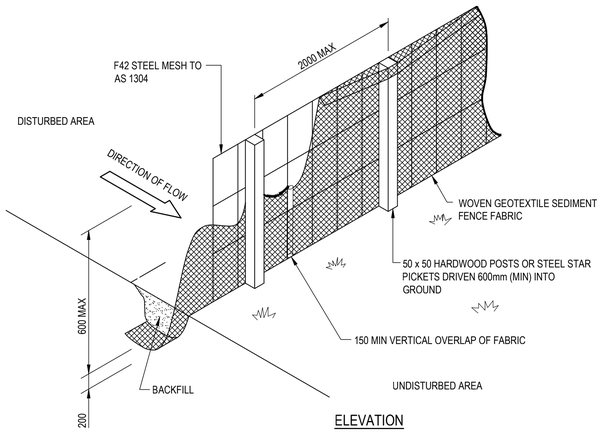
CONSTRUCTION ISSUE

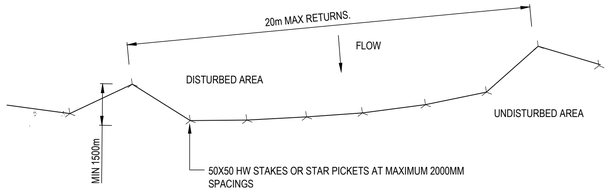
SCALE @ A1	PROJECT No	DRAWING No	REV
1:250	301350145	CI-S2-071-001	1

NOTES

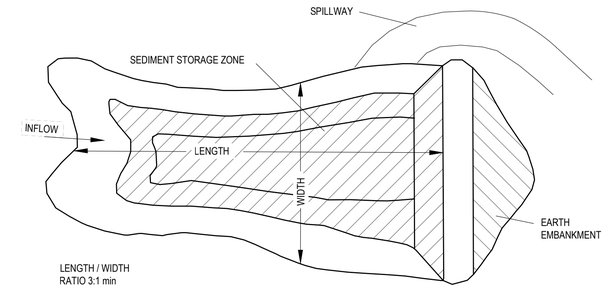
1. REFER DRAWING CI-007-001 FOR EROSION AND SEDIMENT CONTROL NOTES.
2. REFER DRAWINGS CI-070-001 TO CI-070-003 FOR EROSION AND SEDIMENT CONTROL PLANS.



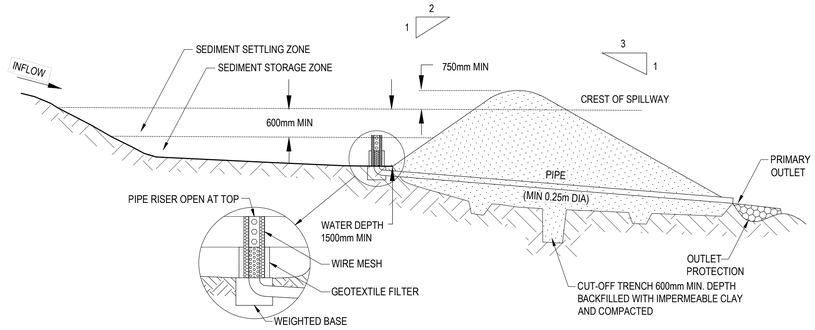
ELEVATION



PLAN



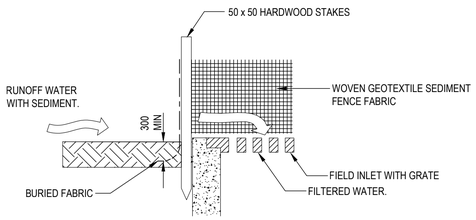
PLAN VIEW



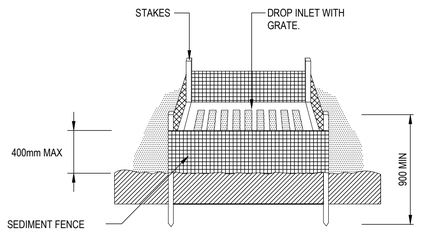
CROSS-SECTION

SEDIMENT BASIN DETAIL

SCALE N.T.S



SECTION

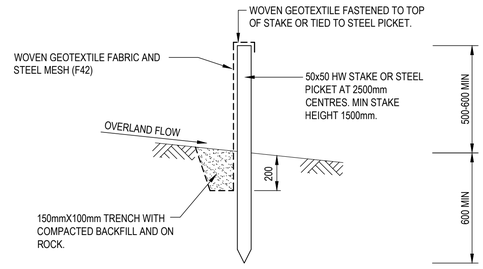


ELEVATION

GEOTEXTILE FILTER FABRIC

DROP INLET SEDIMENT TRAP

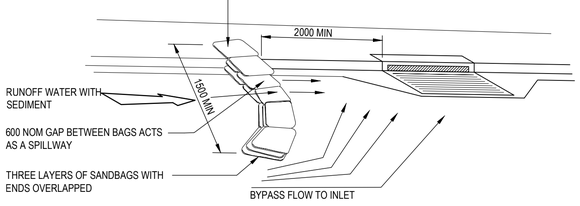
SCALE N.T.S.



SECTION DETAIL

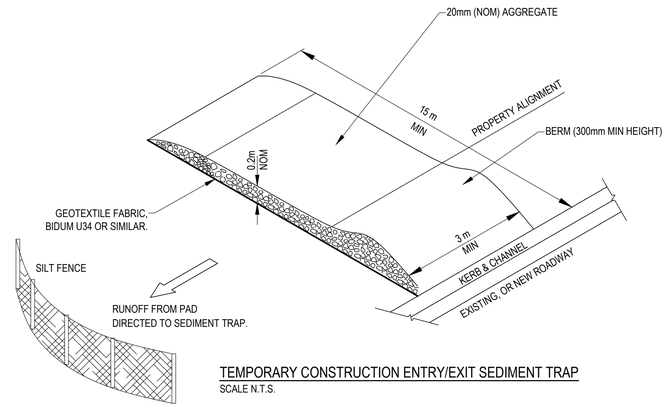
SEDIMENT FENCE DETAIL

SCALE N.T.S.



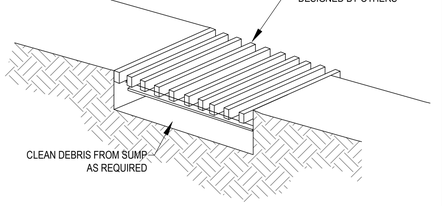
SANDBAG KERB INLET SEDIMENT TRAP

SCALE N.T.S.



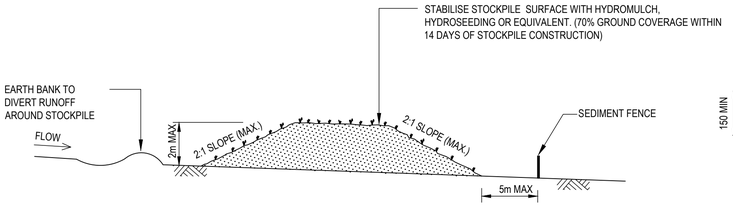
TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP

SCALE N.T.S.



SHARKER PAD

SCALE N.T.S

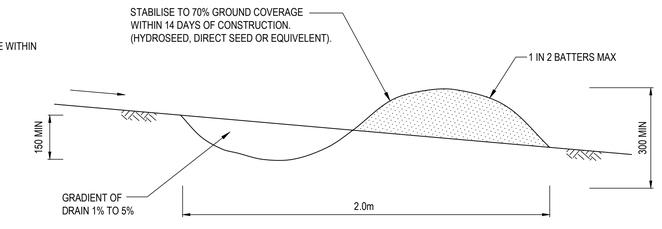


TYPICAL STOCKPILE CONFIGURATION

SCALE N.T.S.

NOTE:

1. LOCATE STOCKPILES AT TOP OF CATCHMENT ON FLAT GROUND AND NOT WITHIN 5m OF CONCENTRATED FLOW PATHS.

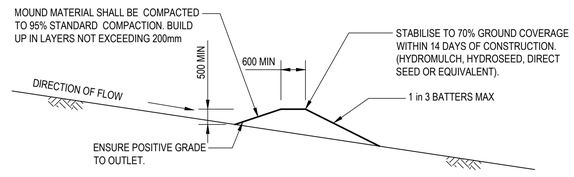


CATCH DRAIN / EARTH BANK DETAIL

SCALE N.T.S.

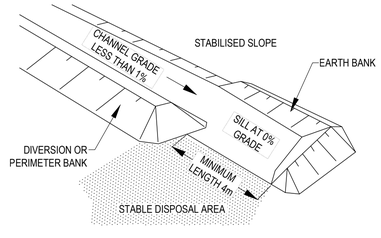
NOTES:

1. ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES.
2. BUILD DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS RATHER THAN V SHAPED



DIVERSION CHANNEL/ BANK DETAIL

SCALE: NTS



LEVEL SPREADER (OR SILL)

SCALE N.T.S

2	ISSUED FOR CONSTRUCTION	JDL	MMM	23/02/22
1	ISSUED FOR CONSTRUCTION	JDL	MMM	16/02/22

DRAWN:	JDL
DESIGNED:	MMM
VERIFIED:	16/02/2022
APPROVED FOR TENDER:	MMM
APPROVED FOR CONSTRUCTION:	RET

PMDL ARCHITECTURE INTERIORS MASTERPLANNING

HANSENYUNCKEN

TRINITY GRAMMAR SCHOOL - CONSTRUCTION SOIL AND WATER MANAGEMENT

EROSION AND SEDIMENT CONTROL PLAN SHEET 2 OF 2

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1:100	301350145	CI-1-070-002	2

CAD FILE: 301350145-CI-070-S2-001.DWG

Appendix B Sediment Basin Calculations

SWMP Commentary, Standard Calculation

Note: These "Standard Calculation" spreadsheets relate only to low erosion hazard lands as identified in figure 4.6 where the designer chooses to not use the RUSLE to size sediment basins. The more "Detailed Calculation" spreadsheets should be used on high erosion hazard lands as identified by figure 4.6 or where the designer chooses to run the RUSLE in calculations.

1. Site Data Sheet

Site name: **Trinity Grammar School**

Site location: **119 Prospect Road, Summer Hill**

Precinct:

Description of site:

Site area	Site						Remarks
	S2-1						
Total catchment area (ha)	1.175						
Disturbed catchment area (ha)	1.175						

Soil analysis

Soil landscape							DIPNR mapping (if relevant)
Soil Texture Group	D						Sections 6.3.3(c), (d) and (e)

Rainfall data

Design rainfall depth (days)	5						See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	85						See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event	31.5						See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	11						See IFD chart for the site
Rainfall erosivity (R-factor)	2630						Automatic calculation from above data

Comments:

Soil Texture Group: D | Soil Hydrology Group: C

Soil Group taken from Appendix C Table 20: Sydney Soil Landscape for Birrong.

x-day, y-percentile rainfall event taken for Bankstwon region in Table 6.3a

Peak Flow Comments:
- 4.48 ARI rather than 5 ARI (20% AEP)
- 9.49 ARI rather than 10 ARI (10% AEP)
- 19.5 ARI rather than 20 ARI (5% AEP)
- 49.5 ARI rather than 50 ARI (2% AEP)

2. Storm Flow Calculations

Peak flow is given by the Rational Formula:

$$Qy = 0.00278 \times C_{10} \times F_Y \times I_{y,\,tc} \times A$$

where:
- Q_y is peak flow rate (m^3/sec) of average recurrence interval (ARI) of "Y" years
- C_{10} is the runoff coefficient (dimensionless) for ARI of 10 years. Rural runoff coefficients are given in Volume 2, figure 5 of Pilgrim (1998), while urban runoff coefficients are given in Volume 1, Book VIII, figure 1.13 of Pilgrim (1998) and construction runoff coefficients are given in Appendix F
- F_y is a frequency factor for "Y" years. Rural values are given in Volume 1, Book IV, Table 1.1 of Pilgrim (1998) while urban coefficients are given in Volume 1, Book VIII, Table 1.6 of Pilgrim (1998)
- A is the catchment area in hectares (ha)
- $I_{y,\,tc}$ is the average rainfall intensity (mm/hr) for an ARI of "Y" years and a design duration of "tc" (minutes or hours)

Time of concentration (t_c) = $0.76 \times (A/100)^{0.38}$ hrs (Volume 1, Book IV of Pilgrim, 1998)

Note: For urban catchments the time of concentration should be determined by more precise calculations or reduced by a factor of 50 per cent.

Peak flow calculations, 1

Site	A (ha)	tc (mins)	Rainfall intensity, I, mm/hr						C_{10}
			$1_{yr,tc}$	$5_{yr,tc}$	$10_{yr,tc}$	$20_{yr,tc}$	$50_{yr,tc}$	$100_{yr,tc}$	
S2-1	1.175	8	82.5	120	140	158	183	201	0.88

Peak flow calculations, 2

ARI yrs	Frequency factor (F_y)	Peak flows						Comment
		S2-1						
		(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m^3/s)	(m3/s)	
$1_{yr,\,tc}$	0.8	0.190						
$5_{yr,\,tc}$	0.95	0.328						
$10_{yr,\,tc}$	1	0.402						
$20_{yr,\,tc}$	1.05	0.477						
$50_{yr,\,tc}$	1.15	0.605						
$100_{yr,\,tc}$	1.2	0.693						

4. Volume of Sediment Basins, *Type D* and *Type F* Soils

Basin volume = settling zone volume + sediment storage zone volume

Settling Zone Volume

The settling zone volume for *Type F* and *Type D* soils is calculated to provide capacity to contain all runoff expected from up to the y-percentile rainfall event. The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle and can be determined by the following equation:

$$V = 10 \times C_v \times A \times R_{y\text{-}\%ile,\ x\text{-}day} \ (m^3)$$

where:

10 = a unit conversion factor

C_v = the volumetric runoff coefficient defined as that portion of rainfall that runs off as stormwater over the x-day period

R = is the x-day total rainfall depth (mm) that is not exceeded in y percent of rainfall events. (See Sections 6.3.4(d), (e), (f), (g) and (h)).

A = total catchment area (ha)

Sediment Storage Zone Volume

In the standard calculation, the sediment storage zone is 50 percent of the setting zone. However, designers can work to capture the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(ii)), in which case the "Detailed Calculation" spreadsheets should be used.

Total Basin Volume

Site	C_v	R x-day y-%ile	Total catchment area (ha)	Settling zone volume (m^3)	Sediment storage volume (m^3)	Total basin volume (m^3)
S2-1	0.50	31.5	1.175	185.0625	93	277.59375

Design with
community in mind

Level 6, Building B
207 Pacific Highway
St Leonards NSW 2065
Tel +61 2 8484 7000

For more information please visit
www.stantec.com

Stantec

A.7 Construction Waste Management Sub-Plan (CWMSP)

In accordance with SSD Condition D13(e)

CONSTRUCTION WASTE MANAGEMENT PLAN

TRINITY GRAMMAR SCHOOL
SUMMER HILL NSW
REDEVELOPMENT IN TWO STAGES
STAGES 1 AND STAGE 2A & 2B

Revision Number:	VERSION 1
Report Date:	31/03/2022
Presented by:	JO DRUMMOND EcCell Environmental Management 35 Waverley Crescent Bondi Junction NSW 2022 www.eccellenvironmental.com.au
Submitted to:	Trinity Grammar School (TGS). Location: 119 Prospect Road, Summer Hill NSW 2130

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

DISCLAIMER
This report is based on information provided by Hansen Yunken. To that extent, this report relies on the accuracy of the information provided to the consultant. This report is not a substitute for legal advice on the relevant environmental related legislation, which applies to businesses, contractors or other bodies. Accordingly, EcCell Environmental will not be liable for any loss or damage that may arise out of this project.

DOCUMENT CONTROL				
ISSUE NUMBER	DATE	AUTHOR	REVIEW	APPROVED BY
DRAFT	23/03/2022	Patrick Nolan	Jo Drummond	Jo Drummond
Version.1	31/03/2022	Patrick Nolan	Jo Drummond	Jo Drummond

1 INTRODUCTION

The purpose of the Construction Waste Management Plan (CWMP) is to comply to the Inner West Council Waste Management Guidelines for Construction sites.

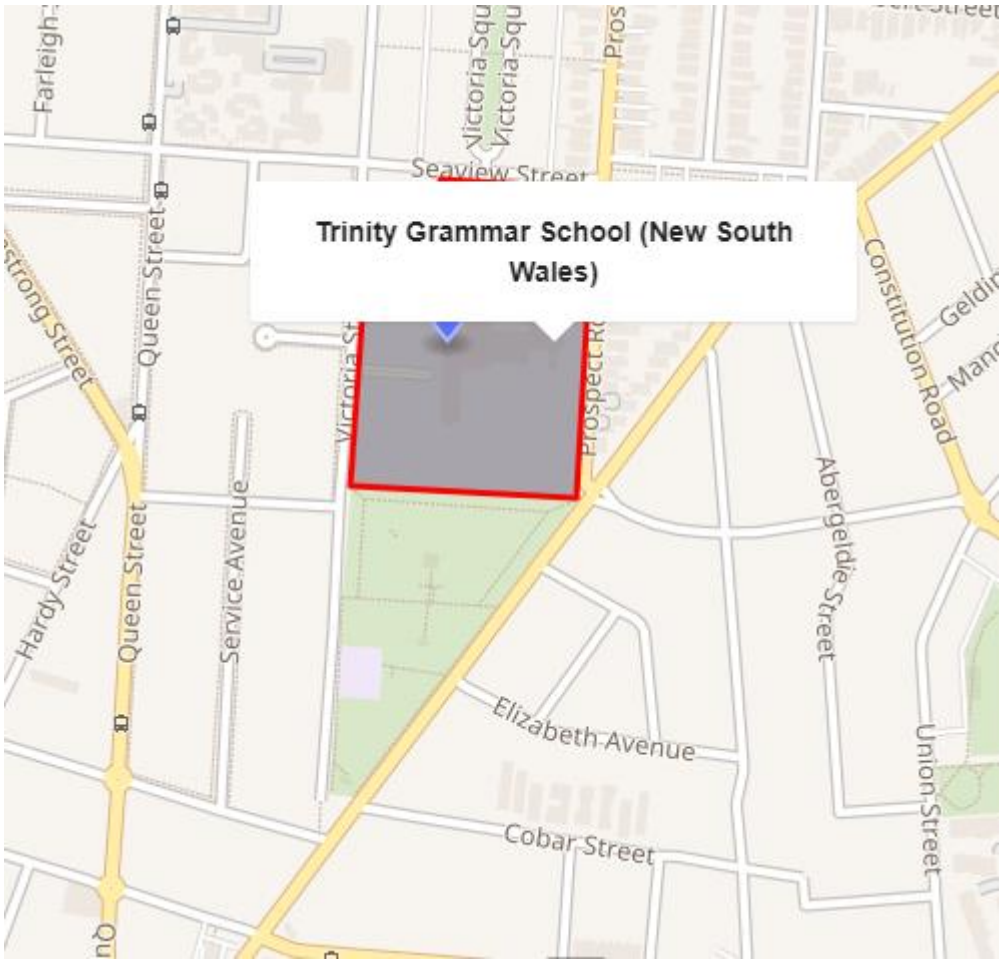
The development of the Trinity Grammar School Summer Hill campus will deliver new teaching and educational facilities including a new five storey building and pavilion, improved pedestrian movement and the refurbishment of existing school building facilities and basement car park.

2 PROJECT DESCRIPTION

The Trinity Grammar School Renewal Project:

- The works include A new five-storey building at the heart of the campus, which will provide flexible general-purpose teaching and learning facilities, along with a new focal point for the School's Reception, administrative offices and the relocated Arthur Holt Library. This building will sit between Number 2 Oval and the quadrangle, and between the Sports Centre and the James Wilson Hogg Assembly Hall, replacing the 1982 building known as 'New School'.
- The James Wilson Hogg Assembly Hall, the Roderick West School of Music, the Cafeteria and Founders Building will all be refurbished as part of this development and the James Mills Drama Centre will be relocated as part of the creation of a Performing Arts Precinct.
- Number 3 Oval will be excavated to create an additional carpark which will be connected to the car park under Number 2 Oval to increase the School's capacity to manage parking and traffic. Number 3 Oval will be restored as a natural turf playing field.
- A new Multi-Purpose pavilion will be built between Number 1 Oval and Number 3 Oval, providing additional indoor court and event space.
- Connections around the School campus will be improved, particularly between the car parks and the Junior School, with particular attention given to providing better access through consistent ground levels.
- New maintenance and grounds facilities, which will be moved from the centre of the campus to the periphery, reducing potential interaction between students and operational traffic.
- The activation of more outdoor spaces within the campus, including a new Junior School playground, new pedestrian access from Prospect St, and the establishment of landscaped areas suitable for education and recreation.

3 PROJECT LOCATION



Ref Google Maps

4 PURPOSE

The CWMP is to address construction and demolition waste including:

- measures to reuse or recycle at least 80% of construction and demolition waste.
- estimations of quantities and types of materials removed from the site;
- details of reusing or recycling methods for waste either on-site or off-site;
- facilities verification systems for retaining waste dockets from appropriately licensed facility;
- details regarding how waste is to be minimised within a development;
- targets for recycling;

5 NSW LEGISLATIVE REQUIREMENTS AND GUIDELINES

Relevant key legislation and guidelines applicable to the project include:

- Guidelines for Waste Management in New Developments 2018
- NSW Department of Planning and Environment, Secretary's Environmental Assessment Requirements (SEARs)
- P*rotection of the Environment (General) Operations Act* 1998
- Protection of the Environment Operations (Waste) Regulation 2014
- *Protection of the Environment Operations Act* 1997
- *Waste Avoidance and Resource Recovery Act* 2014
- *Inner West Council Waste Not DCP*

6 SERVICING ARRANGEMENTS

The current legislation determines that the generator of waste is the owner of the waste until the waste crosses a calibrated weighbridge into a licensed facility. Waste contractors to construction contractors are the primary transporters of waste off-site, accordingly, waste contractors will be required to provide verifiable monthly reports on waste reused, reprocessed or recycled (diverted from landfill) or waste sent to landfill. These reports have a direct bearing on the generator's compliance with the relevant regulations. The CWMP will be implemented on site throughout including singularly or collectively the demolition, excavation and construction phases. A Waste Data File must be maintained on-site and all entries are to include:

- The classification of the waste
- The time and date of material removed
- A description of and the volume of waste collected
- The location and name of the waste facility that the waste is transferred to
- The vehicle registration and the name of the waste contractor's company

The Waste Data File will be made available for inspection to any authorized officer at any time during the life of the site works. At the conclusion of site works, the designated person will retain all waste documentation and make this validating documentation available for inspection.

7 WASTE MANAGEMENT STRATEGIES

The waste management strategy for the project will operate over the design, procurement, and construction including fit out of the project and is detailed in Table 1.

Table 1 - Breakdown of Tasks and Responsibilities

Management Strategies	Responsibilities
Design	
• Use of modular components in design • Use of prefabricated components in design • Design for materials to standard sizes • Design for operational waste minimisation	• Architect & Engineer • Architect, Builder, Subcontractors. • Architect, Subcontractors • Architect & Builder
Procurement	
• Select recycled and reprocesses materials • Components that can be reused after deconstruction	• Architect, Engineer, Builder & Sub Contractors • Architect, Engineer & Builder
Pre-construction	
• Waste management plan to be reviewed & approved prior to construction. • Contract a Waste Contractor	• Builder • Waste Contractor
Construction on-site	
• Use the avoid, reuse, reduce, recycle principles • Minimisation of recurring packaging materials • Returning packaging to the supplier • Separation of recycling of materials off site • Audit & monitor the correct usage of bins • Audit and monitor the Waste Contractor	• Builder & Waste Contractor • Sub-contractors • Builder & Sub-contractor • Waste Contractor • Builder & Waste Contractor • Builder

8 WASTE MANAGEMENT PLAN APPLICATION

Project

Trinity Grammar School, Demolition< Excavation and New Build with Refurbishment

Address

113-119 Prospect Road,
Summer Hill NSW

Owners

Trinity Grammar School

Details of Application

Additions and Aleterations to Trinity Grammer School.

Description of Effected Buildings and Other Structures Currently on the Site

The project will occur over stages. The CWMP has been prepared for Stage 1 and Stage2,an additional CWMP will be required for Stage 3-5..Stage 1 and Stage 2 include demolition of four free-standing double-brick, houses at No. 46-52 Seaview Street properties (2x2 levels and 2 x 1 level brick and tile) . Then there's a five storeyed building known as 'New School', the James Wilson Hogg Assembly Hall, the Roderick West School of Music, the Cafeteria and Founders Building won't be demolished but will all be stripped out and refurbished as part of this development. The James Mills Drama Centre will be relocated as part of the creation of a Performing Arts Precinct. Driveway access will be modified and Number 3 Oval and adjacent car park and concrete slab with a shed and two water tanks will be demolished and then existing oval-built areas will be demolished to later excavate and create an additional below-ground carpark, which will be connected to the car park under Number 2 Oval. There will be maintenance to oval grounds and grounds facilities, in the centre of the built-up area and on campus.

Brief Description of Proposal

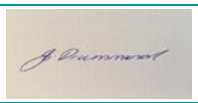
The Trinity Grammar School Renewal Project:

- Plan include: A new five-storey building at the heart of the campus, which will provide flexible general-purpose teaching and learning facilities, along with a new focal point for the School's Reception, administrative offices and the relocated Arthur Holt Library. This building will sit between Number 2 Oval and the quadrangle, and between the Sports Centre and the James Wilson Hogg Assembly Hall, replacing the 1982 building known as 'New School'.
- The James Wilson Hogg Assembly Hall, the Roderick West School of Music, the Cafeteria and Founders Building will all be refurbished as part of this development and the James Mills Drama Centre will be relocated as part of the creation of a Performing Arts Precinct.

- Number 3 Oval will be excavated to create an additional carpark which will be connected to the car park under Number 2 Oval to increase the School's capacity to manage parking and traffic. Number 3 Oval will be restored as a natural turf playing field.
- A new Multi-Purpose pavilion will be built between Number 1 Oval and Number 3 Oval, providing additional indoor court and event space.
- Connections around the School campus will be improved, particularly between the car parks and the Junior School, with particular attention given to providing better access through consistent ground levels.
- New maintenance and grounds facilities, which will be moved from the centre to the campus periphery, reducing potential interaction between students and operational traffic.
- The activation of more outdoor spaces within the campus, including a new Junior School playground, new pedestrian access from Prospect St, and the establishment of landscaped areas suitable for education and recreation.

If Materials / Waste is Reused On-Site or Off-Site, how will it be re-used?

The clean fill excavated from beneath Nos 2 & 3 Ovals and surrounds for the carpark, may be stockpiled for backfill and the activation of more outdoor spaces within the campus, including a new Junior School playground. There will be new pedestrian access from Prospect St, and the felled trees will be chipped and shredded on-site for potential reuse in the establishment of landscaped areas suitable for decoration, out-door education and recreation.

Prepared by :	
Name:	Jo Drummond
Signed:	
Contact Number:	0412 214 233
Date:	31/03/2022

9 PROJECT PHASE

9.1 DEMOLITION: STAGE 1 DEMOLITION NORTH WEST

MATERIAL TYPE ON SITE	ESTIMATED VOLUME (m^3) (Most Favourable → Least)		ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Waste Depot, Recycling Outlet or Landfill site
Brick, Block Work, Render, Roof & Floor Tiles	450 m^3		Separated On-site	TBA	TBA
Metals	150 m^3		Separated On-site	TBA	TBA
Timber & windows	90 m^3		Separated On-site	TBA	TBA
Plasterboard floors and ceilings	200 m^3		Separated On-site	TBA	TBA
Fixtures and fittings	100 m^3		Separated On-site	TBA	TBA
Window glass	20 m^3		Separated On-site	TBA	TBA
General Waste		150m^3	Separated On-site	TBA	TBA
Sub Total	1010m^3	150 m^3			
TOTAL	**1,160 m^3**				

Narrative: The project is developed in two stages. In Stage 1 of the project it includes the demolition of four double-brick (two a two levels) residential buildings on the north western side, which are replaced by a new build of a two-storey maintainence building

9.2 DEMOLITION: STAGE 2 DEMOLITION REMNAINING AREAS

MATERIAL TYPE ON SITE	ESTIMATED VOLUME (m^3) (Most Favourable → Least)		ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Waste Depot, Recycling Outlet or Landfill site
Brick, Block Work, Render, Roof & Floor Tiles, Slabs and Concrete	645 m^3		Separated On-site	TBA	TBA
Metals	220 m^3		Separated On-site	TBA	TBA
Timber & windows	135 m^3		Separated On-site	TBA	TBA
Plasterboard floors and ceilings	250 m^3		Separated On-site	TBA	TBA
Fixtures and fittings	140 m^3		Separated On-site	TBA	TBA
Window glass	35 m^3		Separated On-site	TBA	TBA
General Waste		280 m^3	Separated On-site	TBA	TBA
Sub Total	1425m^3	280 m^3			
TOTAL	**1,705 m^3**				

Narrative: Stage 2 of the site is the demolition of an existing two storey building in a centeral area opposite Oval 2 and a three-storey building between Ovals 2&3. Also around Oval 1, there will be demolition of an external structure, the making ready for new floor structure, and the removal of existing spectator's seats and associated structures. There will be gound level rebuilds; some carpark walls and stairs, stairs and walls near the pool, some entrances, paving, driveways and trees, island and planter structures will also be demolished. There is then the refurbishment of existing buildings generating waste: the music area, the founders building and the quadrangle building which will also generate demolition waste. There is the replacement of buidings including: the pavilion and the adjacent forecourt, the performing arts area and the library.

9.3 EXCAVATION

MATERIAL TYPE ON SITE	ESTIMATED VOLUME (m^3) (Most Favourable → Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Waste Depot, Recycling Outlet or Landfill site
Concrete		150 m^3		Separated On-site	TBA	TBA
Fill: Soil, Clay, Gravel & Ash	2,450 m^3			Separated On-site	TBA	TBA
VENM Waste		23,402 m^3		Separated On-site	TBA	TBA
GSW Waste			16,368 m^3	Separated On-site	TBA	TBA
Ashphelt		90 m^3		Separated On-site	TBA	TBA
Slurry Liquid Waste		50 m^3		Separated On-site	TBA	TBA
Sub Total	2,450 m^3	23,692 m^3	16,368 m^3			
TOTAL	42,510 m^3					

Narrative:

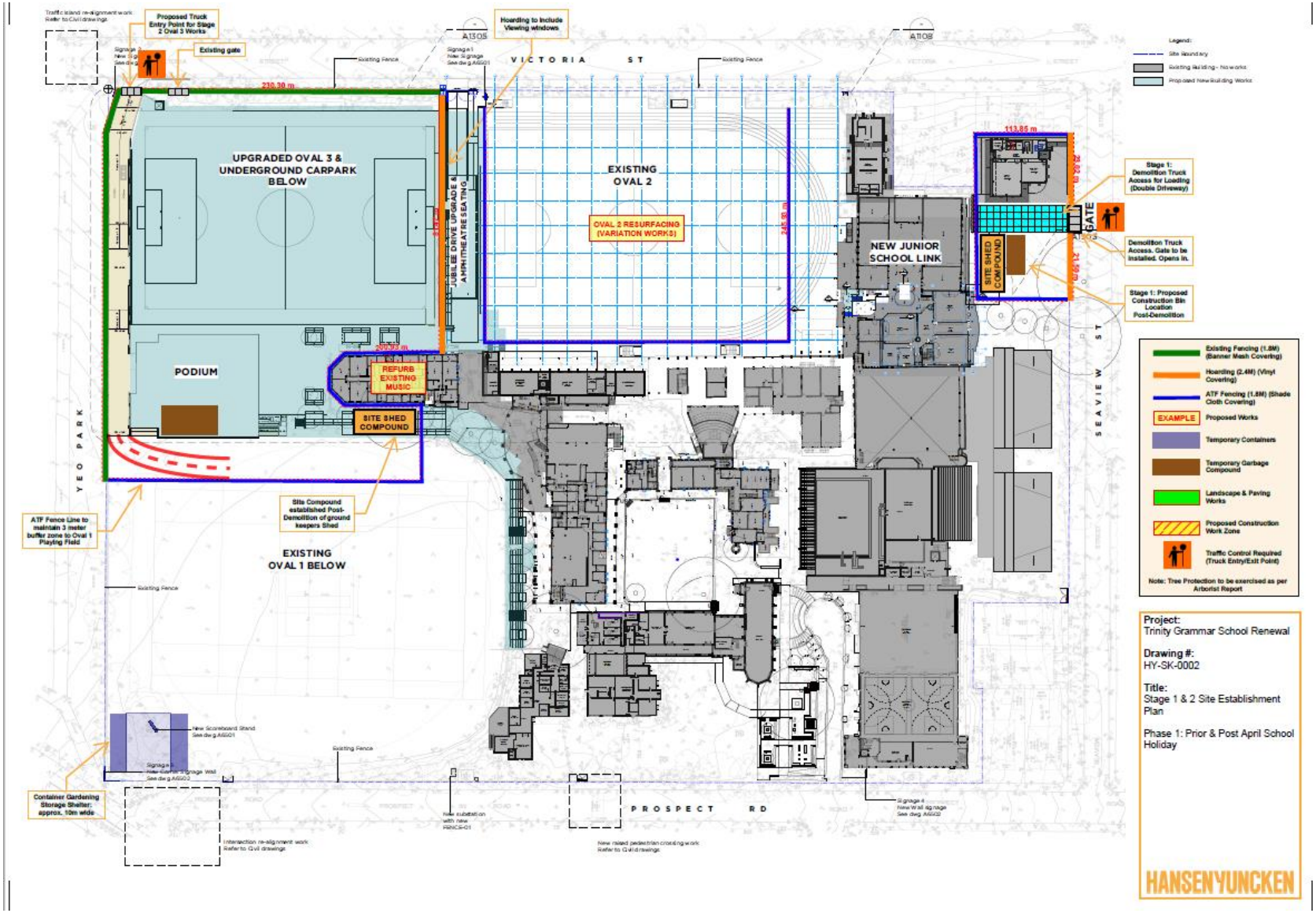
The intrusive investigation encountered fill described as gravel, sandy clay, sand, silty clay and clayey sand to depths of between 0.20 m and 4.30 m below ground level (bgl) underlain by residual clays. Ash was observed in fill in some locations. No other signs of contamination (anthropogenic material, staining, odours, etc.) were encountered in any of the boreholes. Groundwater was encountered at depths between 2.00 m and 7.50 m bgl. The borehole logs from DP (2019) are attached. Laboratory analysis results indicated that all samples were within the adopted site assessment criteria with the exception of benzo(a)pyrene in one sample, which exceeded the ecological screening limit. The exceedance was, however, not considered to be statistically significant. The laboratory results compared with the waste classification criteria are included in Table A1, attached. All contaminant concentrations were within the criteria for Waste Classification as defined in NSW EPA (2014) with the exception of benzo(a)pyrene in BH7/0.90-1.00 (0.85 mg/kg), which marginally exceeds the CT1 of 0.8 mg/kg.

9.4 CONSTRUCTION

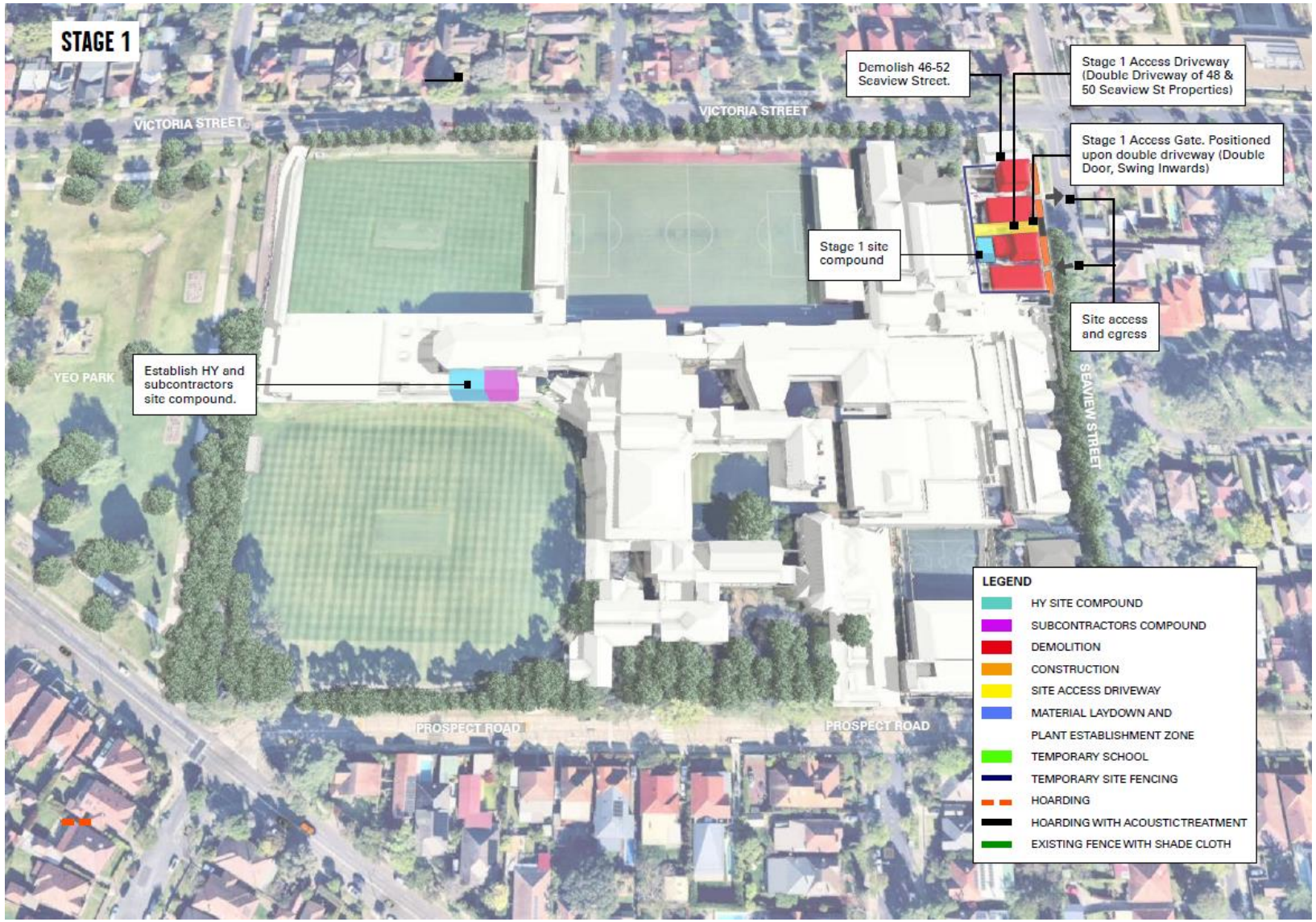
MATERIAL TYPE ON SITE	ESTIMATED VOLUME (m^3) (Most Favourable → Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Landfill Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Recycling Outlet or Landfill site
Brick, Block Work, Render, Tiles		82 m^3		Co-mingled Bins	TBA	Crushed for road base
Concrete		180 m^3		Co-mingled Bins	TBA	Crushed for road base
Metals		57 m^3		Co-mingled Bins	TBA	Scrap Metal Dealer for smelting
Timber Off-Cuts	10 m^3	61 m^3		Co-mingled Bins	TBA	Recycled for woodchips and mulch
Cardboard		92 m^3		Co-mingled Bins	TBA	Recycled into cardboard packaging
Plasterboard		66 m^3		Co-mingled Bins	TBA	Recycled as soil conditioner
Containers, Plastics, Packaging		36 m^3		Co-mingled Bins	TBA	Recycled into further plastic
Ashphelt		10 m^3		Substrata Back fill	TBA	Recycled into further plastic
Pallets And Reels	180 units			Stockpiled and returned	TBA	Returned to the supplier
Liquid Waste			28 m^3	Separated Container/Bin	TBA	Transferred to licenced landfill
General Waste			68 m^3	Co-mingled Bins	TBA	Transferred to licenced landfill
Sub Total	10 m^3+180 units	**583 m^3**	**96 m^3**			
TOTAL	**689 m^3**			NB: An additional 180 pallets & reels (single units returned to suppliers for reuse)		

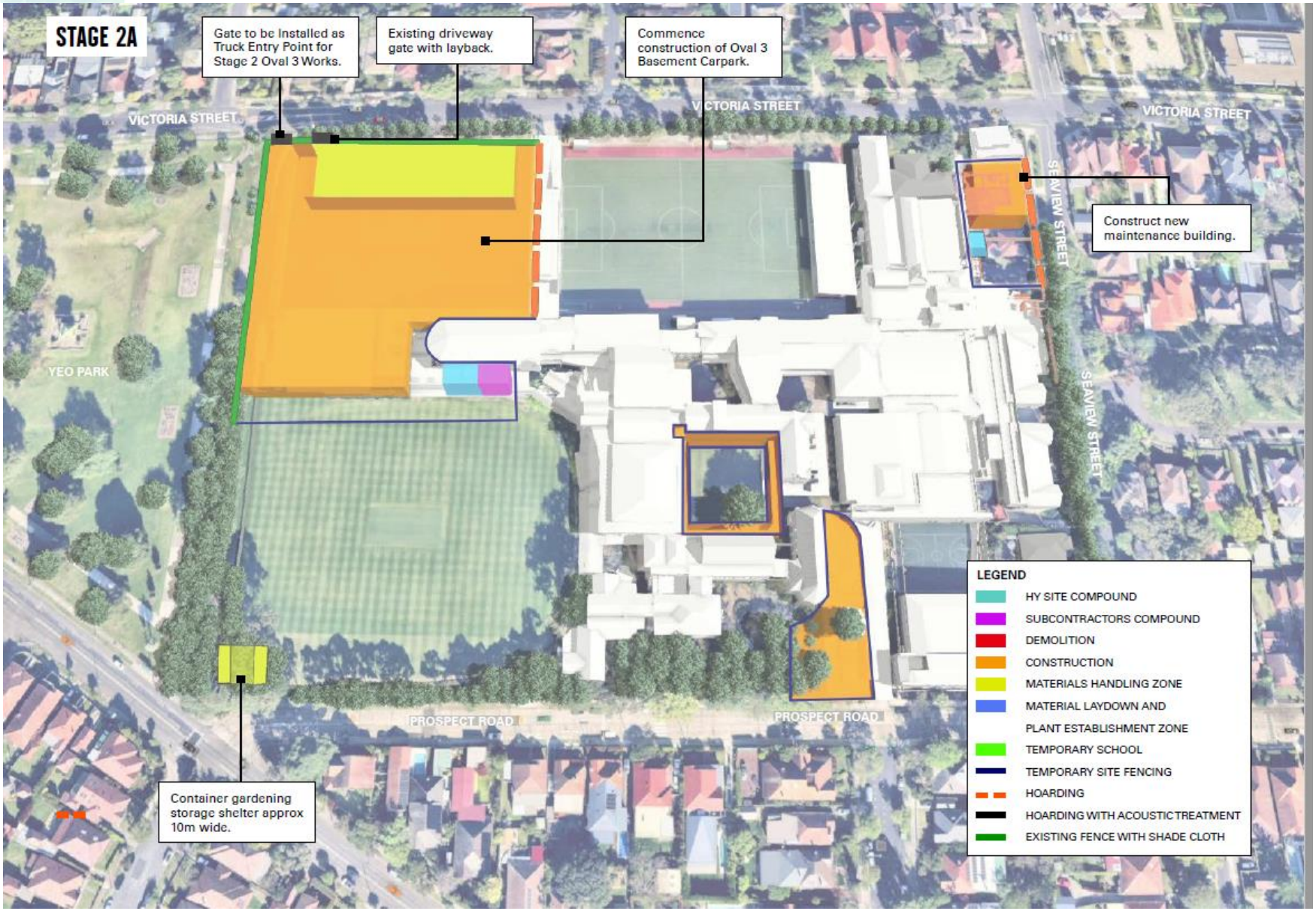
Narrative: *As this is a part fit-out there are no structural materials (steel & concrete) but paving and poured concrete in carpark increases waste.
*As the contracts for all contractors have not been let there are still those including the waste contractor To Be Advised (TBA).
*All waste will be co-mingled and taken for off-site separation and reuse or recycled except Pallets and Reels which are returned.

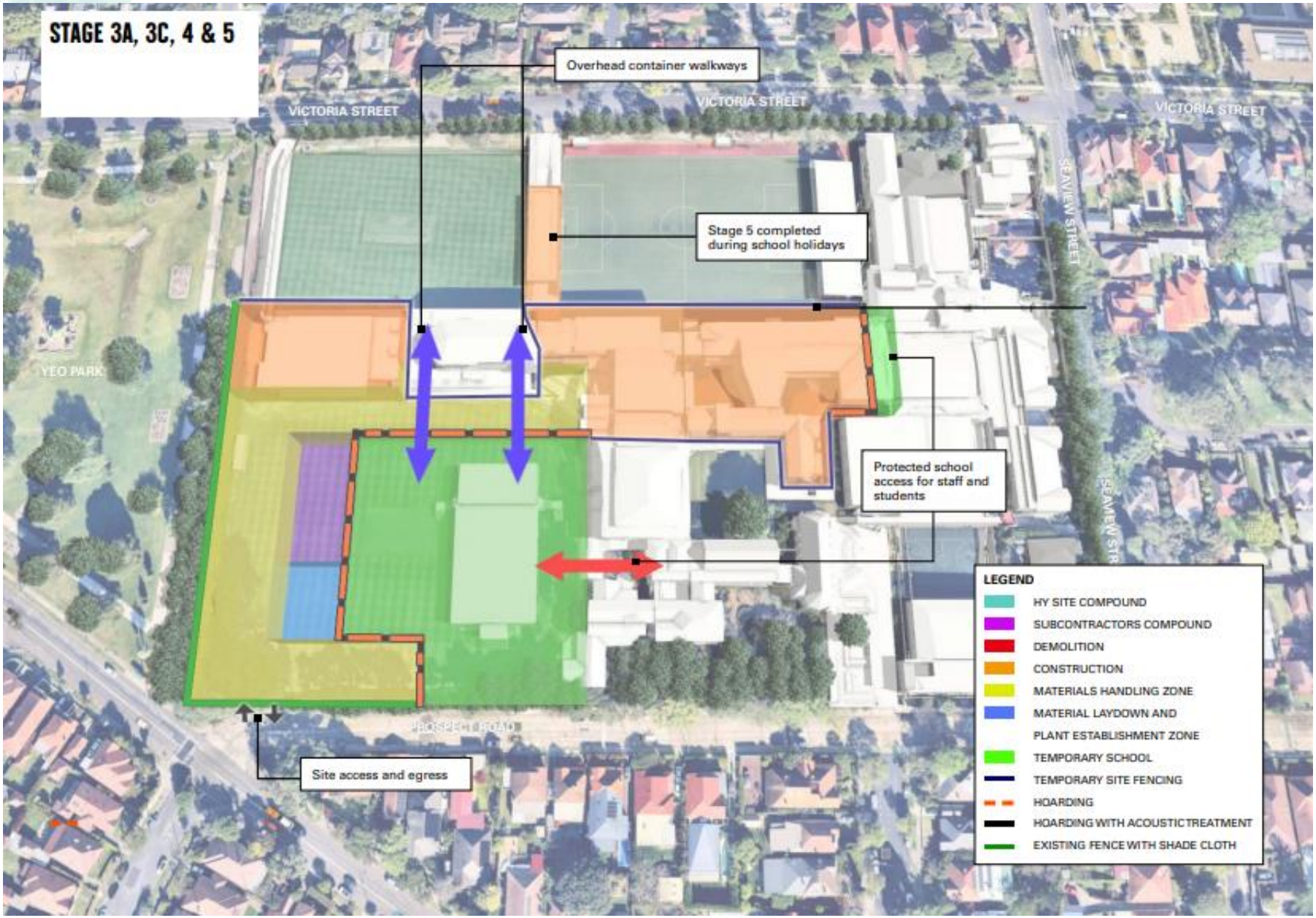
APPENDIX A – DEMOLITION AND CONSTRUCTION BIN AREAS



APPENDIX B – STAGING PLAN




STAGE 2A
Gate to be Installed as Truck Entry Point for Stage 2 Oval 3 Works.
Existing driveway gate with layback.
Commence construction of Oval 3 Basement Carpark.
Construct new maintenance building.
Container gardening storage shelter approx 10m wide.
VICTORIA STREET
VICTORIA STREET
VICTORIA STREET
SEAVIEW STREET
SEAVIEW STREET
YEO PARK
PROSPECT ROAD
PROSPECT ROAD
LEGEND
HY SITE COMPOUND
SUBCONTRACTORS COMPOUND
DEMOLITION
CONSTRUCTION
MATERIALS HANDLING ZONE
MATERIAL LAYDOWN AND
PLANT ESTABLISHMENT ZONE
TEMPORARY SCHOOL
TEMPORARY SITE FENCING
HOARDING
HOARDING WITH ACOUSTIC TREATMENT
EXISTING FENCE WITH SHADE CLOTH


STAGE 3A, 3C, 4 & 5
Overhead container walkways
Stage 5 completed during school holidays
Protected school access for staff and students
Site access and egress
VICTORIA STREET
VICTORIA STREET
VICTORIA STREET
SEAVIEW STREET
YEO PARK
LEGEND
HY SITE COMPOUND
SUBCONTRACTORS COMPOUND
DEMOLITION
CONSTRUCTION
MATERIALS HANDLING ZONE
MATERIAL LAYDOWN AND
PLANT ESTABLISHMENT ZONE
TEMPORARY SCHOOL
TEMPORARY SITE FENCING
HOARDING
HOARDING WITH ACOUSTIC TREATMENT
EXISTING FENCE WITH SHADE CLOTH