Gables New Primary School

Preliminary Construction Management Plan

JOHNSTAFF

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Contents

1 Introduction

This Preliminary Construction Management Plan has been prepared by Johnstaff on behalf of the NSW Department of Education (the **Applicant**) to assess the potential environmental impacts that could arise from the development of The Gables New Primary School at Lot 301 DP 1287967 on Fontana Drive, Gables (the **site**).

This report has been prepared to outline the general construction management principles and controls to be implemented at the site.

This report accompanies a Review of Environment Factors that seeks approval for the construction and operation of a new primary school at the site, which involves the following works:

- Construction of school buildings, including learning hubs, a school hall and an administration and library building.
- Construction and operation of a public preschool.
- Delivery of a sports court and fields.
- Construction of car parking, waste storage and loading area.
- Associated site landscaping and open space improvements.
- Associated off-site infrastructure works to support the school, including (but not limited to) services, driveways and pedestrian crossings.

For a detailed project description, refer to the Review of Environmental Factors prepared by Ethos Urban.

1.1 Site information and Context

The site is located on Cataract Road, Gables, within The Hills Local Government Area (LGA), approximately 50km northwest of the Sydney CBD and 10km north of the Rouse Hill Town Centre. It comprises one lot, legally described as Lot 301 DP 1287967, that measures approximately 2.2ha in area. The site is bound by Pennant Way to the north, Cataract Road to the east, Fontana Drive to the west and a vacant lot to the south.

An aerial image of the site is shown at **Figure 1**.

Figure 1 – Aerial photo of the site, the site boundary is outlined in red (Source: Nearmap)

Statement of Significance

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed development, it is determined that:

- The extent and nature of potential impacts are Nil to very low and will not have significant adverse effects on the locality, community and the environment;
- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal effect on the locality, community.

1.2 REF Reporting Requirements

Item	REF Requirement	Relevant Section of Report
23	Preliminary Construction Management Plan	Section 2,3,4,5,6,7,8,9
24	Construction Waste Management Plan	Section 7

1.3 Purpose

School Infrastructure New South Wales (SINSW) proposes engaging a Head Contractor to undertake the construction of the school, Gables New Primary School (the works). Upon engagement, the Head Contractor will be required to prepare a Construction and Environmental Management Plan (CEMP), which will detail the methodology for carrying out the works so as to minimise potential impacts of construction activities on teachers and students, neighbours and nearby residents, users of public footpaths and roads in the vicinity of the site, surrounding streets used to access the site and the environment.

This Preliminary Construction Management Plan (PCMP) has been prepared by Johnstaff Projects Pty Ltd, on behalf of SINSW, for submission as supporting documentation for a Review of Environmental Factors (REF) Submission. The purpose of this PCMP is to outline the general construction management principles and controls to be implemented at the site.

2 Project Scope of Works

2.1 The Works

The following table sets out the project details.

Project Title	**Gables New Primary School**
Project Description	The proposal involves construction of a new school to provide 47 teaching spaces and associated works including; hall, library, sports court, staff area and a COLA. All works will be compliant with the Education Facilities Standard Guidelines (EFSG).
Scope of Work	Specifically, the upgrades proposed involve: • Construction ofa new single storey hall building fronting Pennant Way, containing a hall, stage, store area, , amenities, canteen, staff facilities, amenities and Out of Hours School Care (OHSC) facilities. • Construction of a new three storey mixed use building fronting Pennant Way, containing a COLA, library, special support program offices, four General Learning Spaces (GLS) and a staff lounge area • Construction of a new three story mixed used building fronting Pennant Way and Fontana Drive, containing staff administration areas, amenities, three special support learning GLS and sixteen GLS • Construction of a new three story teaching hub building fronting Fontana Drive, containing 24 GLS • Construction of a new single story preschool building fronting Fontana Drive, containing 3 playrooms, amenities and staff areas • Construction of a carpark with 37 vehicle spaces • Construction of sports court, external pathways and extensive landscaping across the site

Figure 2 on the following page indicates the proposed scope of work.

Figure 2 – Proposed Scope of Work

2.2 The Works Construction Staging

As the site is currently a greenfield site, there is no live school which the works need to be staged around. All of the works can be completed under the one construction stage.

2.3 Construction Program

The following shows the indicative program milestone dates for the construction works.

Milestones for Gables New Primary School	Target Completion Date
Site Establishment	May 2025
Proposed Construction Period	May 2025 to December 2026
Commencement of Operations	Day 1, Term 1, 2027

3 Responsibilities and Authorities

3.1 Roles and Responsibilities

Position	Responsibility
Project Manager	Comply with the group's WHS and Environmental Management Policies, Plans and Procedures. Ensure that safe work methods are adopted for all site activities. Participate in OHS meetings (i.e. toolbox talks etc). Participate in Safety Committee Meetings (i.e. meeting concluding safety walk). Ensure the appropriate safety equipment is worn by site personnel at all times. Identify and document potential risks to projects and develop effective control strategies to minimise risk. Understand the relevant project specifications and drawings. Monitor work against specifications to ensure the continuing quality and accuracy of work performed. Ensure construction works precede in accordance with all relevant contractual requirements. Management of construction progress and the successful completion of all nominated contracts. Ensure that quality levels are achieved in accordance with the contractual obligations, as well as the group's expectations. Ensure the timely processing of all progress claim valuations, variations, other relevant claims and subcontractor claims.
Head Contractor	Development of a formal Construction Environmental Management Plan prior to the commencement of Construction. The Construction Manager is responsible for the project's overall delivery. Complying with the group's OHS, Environmental, Quality, IR and Human Resources Management Systems. Ensuring construction works are completed in accordance with all relevant contractual requirements. Leading project teams to achieve desired project outcomes. Accepting full responsibility for the achievement of construction progress and the successful completion of all nominated contracts. Ensuring that quality levels are achieved in accordance with the contractual obligations, as well as the group's expectations. Ensuring that planning and scheduling of works occurs as required. Maximising the group's commercial position at each level and stage of the project. Development, review and submission of reports to the Project Manager as required. All other responsibilities as outlined in the relevant Position Description.
Forepersons / Sub Forepersons	Comply with the OHS and Environmental Management Policies, Plans and Procedures. Ensure that safe work methods are adopted by all parties in relation to all site activities. Participate in OHS meetings (i.e. toolbox talks etc). Complete site inductions in accordance with the group's requirements. Monitor work against specifications to ensure the continuing quality and accuracy of work performed. Notify the Project Manager/Construction Manager of any defects, mistakes, errors, contamination or variations identified. Ensure construction works proceed in accordance with all relevant contractual

	requirements. Ensure that quality levels are achieved in accordance with the contractual obligations, as well as the group's expectations. Undertake planning and scheduling of various works. Co-ordinate subcontractor/trade contractor works. Ensure correct set out for all building works. Provide Project Manager and or Construction Manager with regular reports on progress of building works.
Architect and Consultant Team	Manage and coordinate internal resources to support the requirements of the project. Facilitate client decisions to ensure coordination, deliverables and timing of outputs. Identify and manage commercial risk associated with design outputs and deliverables. Identify and manage risks related to safety in design. Assess and identify any gaps in Consultant scopes and Agreements to confirm coordination across the design. Instigate and maintain standard preconstruction "management tools". Ensure Authorities obligations and requirements are being delivered in the design documents. Assist in the formulation of Ecological Sustainable Development (ESD) initiatives required to achieve project targets and obligations. Monitor ESD deliverables for incorporation in design outputs and construction obligations.

3.2 Project Organisation Chart

The Project Organisation Chart is provided below and outlines the key project groups and their relationships.

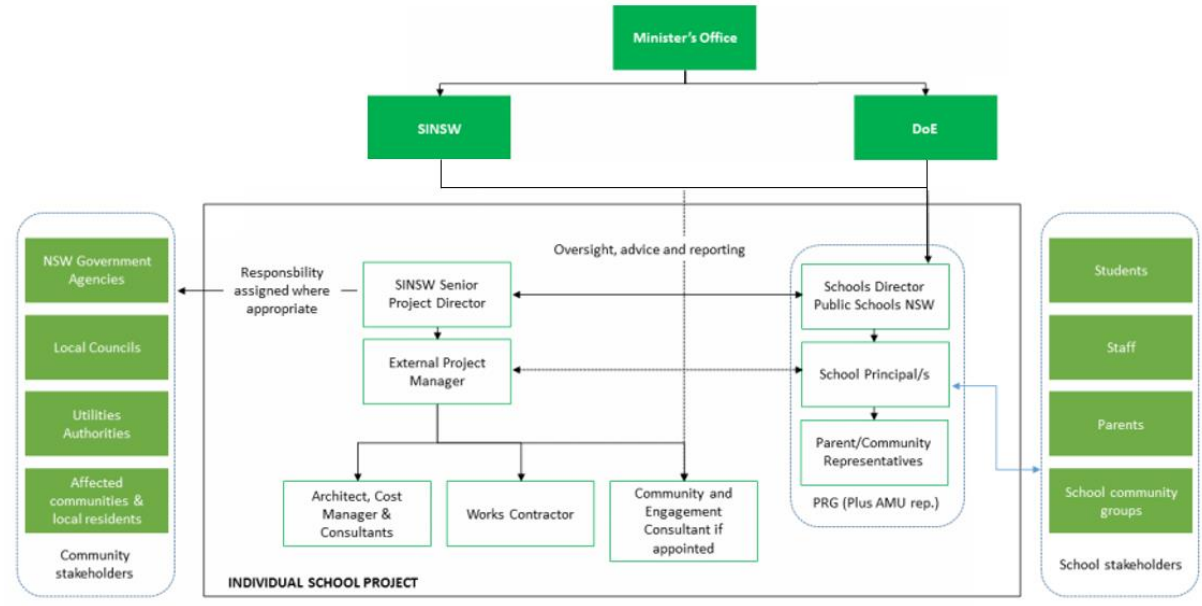

Figure 4 – Organisation Chart

3.3 Legislative Requirements

The works will be undertaken is accordance with Legislative Requirements including but not limited to:

- National Construction Code 2022 comprising the Building Code of Australia;
- Protection of the Environment Operations Act 1997 and Regulations;
- Environmentally Hazardous Materials Act 1985;
- Protection of the Environment Administration Act 1991 and Regulations;
- Work, Health & Safety Act 2017 and relevant codes of practice and standards;
- Australian Standard 2601-2001: Demolition of Structures;
- Environmental Planning and Assessment Act 1979;
- Heritage Act 1997;
- Local Government Act 1993; and
- National Parks and Wildlife Act 1974.

3.4 Utility Provider and Associated External Approvals

At various stages external approvals of components of the works will be required. This will include:

- The Hills Shire Council
- Endeavour Energy
- NSW Fire and Rescue;
- Transport for NSW (Roads and Maritime Services);
- Sydney Water
- Altogether (Private Sewer Authority)
- Telstra Communication providers ; and
- Other relevant utility providers.

The approach required to manage these various authorities will be dependent on the respective requirements, however prior coordination with SINSW will be necessary to ensure all approaches are aligned and coordinated with, early engagement will mitigate potential delays and identify potential issues ahead of time and contact consistency will be crucial.

In general, the following principles will be adopted for services shutdowns or when disconnecting services:

- Services impacts on the existing facility will be investigated with full coordination, development and input with the Client and all relevant Stakeholders;
- Impacts on the surrounding/adjacent site users will be kept to a minimum, which may result in ‘out of hours’ being required;
- All relevant Statutory Authorities will be consulted prior to the works commencing to ascertain lead times and correct termination locations;

- All terminations will be undertaken in accordance with SINSW requirements;
- All termination will be undertaken by suitably licensed contractors;
- A minimum of two weeks notice is to be provided to any third party that will be impacted by any service disruption and disruption is to be minimised; and
- For locating and dealing with existing services, the Head Contractor is to comply with the requirements of GC21 Edition 2 Preliminaries (Existing Services).

4 Site Operations and Management

4.1 Prior to Commencement of Works

Prior to the commencement of the works, the Head Contractor will:

- ascertain all relevant project information, applicable Standards, Statutory requirements and Conditions, including all Authorities having jurisdiction over the works;
- obtain all relevant insurances, permits and approvals and pay all associated fees, including any outstanding Long Service Leave Levies;
- ensure a copy of the REF is filed on site for reference throughout the works.

The Head Contractor will complete a dilapidation survey of existing infrastructure that may be impacted by the works, including covering roads, footpaths, and external areas of existing buildings located adjacent to the construction site. The resulting report will be provided as a pre-commencement record of the existing built works adjacent to the construction areas.

4.2 Works Areas

Prior to the commencement of the works, physical separation of the site from the street and the school will be established through Class A Hoarding or appropriate fencing. Temporary footpaths will be established where it is deemed required for public access. Site accommodation will be located within the site boundary to accommodate construction workers and site visitors.

4.3 Site Establishment

The Head Contractor will provide and maintain all necessary temporary facilities required for the safe and secure performance of the works, including, but not necessarily be limited to:

- first aid facilities;
- hoardings;
- storage compounds;
- site administration facilities;
- work sheds (including decontamination facilities where applicable) and changing areas for the use of the remediation contractor, all subcontractors and consultants;
- cranes;
- site amenities;
- temporary site sheds; and
- bins for rubbish generated by personnel;
- access equipment, including scaffolding, barriers, platforms, ladders, etc;
- construction plant; and
- emergency vehicle access.

The following table summarises the measures that will be implemented prior to commencement of the works at the site.

Item	Description
Control of site	Site control will ultimately be the responsibility of the Head Contractor.
Access	Access to the site will be controlled by the Head Contractor performing the works and the site will be off limits to all non-essential personnel. The public will not have access to this area of the site.
Supply of utilities	The installation and commissioning of all temporary site services (e.g. electricity, water, sewerage and telecommunications) required for the duration of the works will be installed to the requirements of the appropriate regulatory authorities. All approvals in respect to the installation, operation and eventual removal of temporary services will be obtained.
Contractor's facilities	All site accommodation and facilities required for the works will be established in conformance with relevant regulations and authority's requirements. Existing site infrastructure may be utilised for this purpose. Licensed persons in accordance with statutory requirements for the specialist activity in question will carry out all connections.

Site accommodation will be located within the site boundary to minimise any impact on the local community and site access will be controlled through appropriate security controls. Accommodation and amenities for the construction workforce will be provided in demountable site sheds. These site sheds will be erected, relocated and disestablished throughout the redevelopment to cater for fluctuating workforce demand and moving work areas. All site accommodation will be joined by covered walkways to ensure the workforce and office staff can move around the area and stay dry from any inclement weather. The site perimeter will be secure at all times with no unauthorised access permitted.

4.4 Public Safety and Amenity

Hoarding/fencing will be installed as required to optimise public safety and to prevent public access to, and maintain security of, the works. These measures may be staged throughout the works so as to minimise disruption to surrounding site users. The key issues to consider for Public Safety and Amenity include the following:

- Strictly controlling where construction will interface with the public;
- Selection of equipment and low impact construction methods to mitigate noise, dust and vibration impacts does not impacts where possible.
- Regular construction risk assessment using the Interface Strategy principles to identify areas of potential interface that may affect business continuity;
- Undertake a holistic integrated system testing and commissioning process;
- Stakeholder notices / updates.

The project team understands the disruption the project will bring to the various stakeholders and the importance of communicating the construction programming the staff, pupils, pupils' families and public. The better the stakeholders understand of the timing and reasoning of the works, the more comfortable they will be with the temporary inconveniences.

A set of staging plans covering the works phases may be required, including:

- All site establishment items;
- Changed or modified egress paths;
- Pedestrian and vehicle circulation route changes;

- Temporary signage requirements;
- Upcoming changes to works areas including approximated program dates; and
- Projected completion and handover areas.

4.5 Construction Hours

Works are proposed to be generally undertaken between the hours of 7:00am and 6:00pm Monday-Friday and between 8:00am and 1:00pm on Saturdays.

In addition to regular working hours, there will be occasional periods when out of hours works will be necessary. This may include special deliveries, hoarding installation and removal, and services connections. Crane installation and removal may need to be undertaken over a weekend, utilising both Saturday and Sunday to minimise impacts on the surrounding areas.

Occasional night works, and works on Sundays or public holidays, would be required where dictated by authority requirements (such as road closures) or for worker or public safety.

Construction activities would be locally enclosed by hoarding or temporary fencing staged according to the works.

The Head Contractor will determine the necessary out of standard construction works hours with SINSW, Transport for New South Wales (TfNSW), Transport Management Centre (TMC), and Hills Shire Council to address the approvals and additional measures required prior to scheduling any out of hours works. This may include works such as the dismantling of hoardings, public domain works, service connections and other works that interface with the surrounding facilities.

Such permission may be sought where special requirements exist e.g. for oversized deliveries or works which need to be carried out when students are not present on the site.

4.6 Inductions

The project induction will train new workers on project specific safety and emergency procedures; however, the key focus will include interface controls, including:

- The requirements of the REF;
- Working hours;
- Traffic Management;
- Construction methodology;
- Disruptive Works Procedure: All workers will be made aware of their responsibilities towards understanding what constitutes disruptive works and understand the timeframes associated with preparing to carry out any such works; and
- Working Adjacent to Local Residential and Business Properties: All workers will be made aware of the need to ensure positive contractor behaviour at the approach and on site, including minimising disruptions to local parking and access; and

4.7 Materials Handling

Given the anticipated site constraints a detailed cranage analysis will need to be undertaken to determine the type, size, position and quantity of cranes required for the most efficient material handling solution for the project. Through this exercise the following selection criteria will be considered to all crane positions:

- Coverage for the site;
- Ability to service plantroom areas;

- Capacity for heaviest lifts;
- Minimal disruption to site roads and traffic flow;
- Minimal disruption to internal fit out;
- Ability to service all stages of project from chosen location;
- Redundancy in coverage to account for breakdown or emergency;
- Access to erect and dismantle of cranes.

A significant amount of space is required to sort the material to ensure the piece install is smooth and efficient. The site may utilise a forklift or telehandler to assist with unloading, general materials handling, and bins.

5 Environment Health and Safety

The Head Contractor will prepare and implement a comprehensive Environmental Management Plan (EMP) to ensure compliance with all relevant Statutory requirements and the requirements of the DoE. This plan will be developed in consideration of the following:

- Protection of Environmental Operations Act 1997;
- Protection of the Environment Operations (Noise Control) Regulation 2000;
- WHS Act 2011;
- Protection of the Environment Operations (Clean Air) Regulation 2002;
- Waste Avoidance and Resource Recovery Act 2001;
- Protection of the Environment Operations (Waste) Regulation 1996;
- Environmentally Hazardous Chemicals Act 1985; and
- Environmentally Hazardous Chemicals Regulation 1999.

The following sections outline the environmental management principles to be implemented.

5.1 Contamination

5.1.1 Contamination and Remediation

Douglas Partners Pty Ltd (Douglas Partners) undertook a Detailed Site Investigation (contamination) (DSI) in September 2022 and concentrations of the contaminants of potential concern (CoPC) in all analysed soil samples were within the adopted site assessment criteria, and asbestos was not detected in the analysed soil samples. Based on the results, the DSI report concluded that the site is suitable for the proposed public school development subject to implementation of the following recommendations:

- An unexpected finds protocol (UFP) should be prepared and implemented during site works to address any potentially impacted fill (including asbestos contamination); and
- Additional assessment as required to provide a final waste classification for surplus soils requiring off-site disposal

With no identified soil contamination, the report did not conclude that active remediation is required in order for the site to be suitable for the proposed development. The recommendations provided are therefore limited to typical construction practices. If any previously undetected contamination is found, the procedures in the recommended unexpected finds protocol for the identification, assessment and, if needed, remediation will be implemented. In this regard, it is Douglas' opinion that a RAP is not required for the project.

5.1.2 Asbestos Containing Building Materials

There is no existing building on site, therefore no asbestos testing was completed on any buildings. However, Douglas Partners Pty Ltd (Douglas Partners) undertook a Detailed Site Investigation (contamination) (DSI) in September 2022. Within their results they confirmed that asbestos was not detected in the analysed soil samples.

5.1.3 Unexpected Finds

The stripping of surface soils may reveal the presence of fragments of asbestos sheeting or other unexpected contaminants with the potential to pose human health risks if not managed appropriately. If

soil is encountered during the works which appears to be potentially contaminated and appears to be different from the soils otherwise encountered to date, or point sources of contamination such as buried drums or wastewater interceptors are encountered, the following procedures will apply:

- Any suspicious material/soil which have been excavated will be stockpiled on bunded, strong, impermeable plastic sheeting, protected from erosion and all seepage retained (divided into domains or stockpiles representing similar material types);
- Excavation works at that part of the site where the suspicious material (soil, asbestos containing material or physical find) was encountered will cease until an inspection is carried out by an appropriately qualified environmental consultant or its representative;
- Based on visual inspection, the environmental consultant will provide interim advice on construction health and safety, soil storage and soil disposal to allow other activities to proceed if possible; and
- Based on sampling and analysis of the material, the environmental consultant will provide advice based on a comparison of the laboratory test results to appropriate criteria relating to human health, potential environmental impacts and waste disposal.

In the context of the above, “suspicious” material would include, but is not limited to, oily materials or materials with unusual odours, drums, metal or plastic chemical containers, buried solid waste, ash, slag, coke or brightly coloured material etc.

Asbestos at the site would need to be managed through the implementation of an Asbestos Management Plan. Upon discovery of any suspected asbestos containing material (ACM) at the site, an Asbestos Management Plan will be implemented with the following actions to be taken immediately:

- stop all activities that may disturb the materials;
- inform the site operator of the discovery;
- suspend work until it has been determined whether the material in question contains asbestos; and
- physically quarantine the area with a signed barrier stating “Danger Asbestos”.

5.2 Archaeology Material

An Aboriginal Cultural Heritage Due Diligence Assessment has been prepared by GML Heritage (GML) and provides an assessment of the archaeological potential for the site. GML has assessed the archaeological potential of the site to be nil-low, the study area does not contain known or identified aboriginal objects, or specific historical connections. Gables is now visually divorced from its pre-1788 context due to comprehensive landscape modification, particularly during its development as a suburb. This modification has also drastically reduced the chance that archaeological material could be present. In the event that a heritage or archaeological item is discovered during the course of the works, works onsite will cease and the Office of Environment and Heritage will be contacted. The area will be isolated until advice is sought from a qualified Heritage Consultant prior to work recommencing.

5.3 Noise and Vibration

A Noise and Vibration assessment has been prepared by Resonate and generally outlines the controls that will be implemented to manage noise and vibration during construction. Noise and vibration shall not exceed the limits set out by the NSW Environmental Protection Authority.

The report prepared by Resonate outlines a number of strategies to be implemented to manage construction noise and vibration. Additional considerations could include:

- Prior to the commencement of major construction works, the contractor must develop a Construction Noise and Vibration Management Plan (CNVMP) which identifies relevant construction noise, neighbouring sensitive land uses, summarises key noise and vibration

construction activities, reasonable work practices to be implemented and summarises stakeholder consultation.

- A noise and vibration complaints handling procedure and register must be developed and implemented during construction.
- If high noise works are to occur outside of the Stdnard Working Hours and later than 1pm on a Saturday, then the CNVMP must define an approval process for undertaking out of hours works and for identifying reasonable and feasible mitigation measures to be implemented.
- Coordinate truck movements and site access through selecting access routes which consider potential disturbance to residents.
- Regularly train workers and contractors (such as at toolbox talks) to use equipment in ways to minimse noise
- Site managers to periodically check the site and nearby residences for noise problems so that solutions can be quickly applied
- Noisey plant must be located as far away from residnces as is practicaly to allow efficient and safe completion of the task
- Equipment that is used intermittently must be shut down or throttled down to a minimum during periods where it is not in use

As part of the noise and vibration mitigation treatment for the project, the Head Contractor will be responsible for the checking of compliant maintenance regimes and Statutory supervision of all equipment. Proposed noise and vibration mitigation treatments will be included in the Head Contractor's CEMP.

5.4 Air Quality Management

Objectives for the project are to implement appropriate controls to suppress dust and other suspended particles in accordance with legislation, as well as management requirements minimising the generation of dust on the site and potential emission issues relating to plant and equipment. Strategies for air quality management includes:

- Clear definition of trafficable and material storage areas to prevent unnecessary vehicle movement into other areas;
- Use of water carts to dampen work areas and exposed soils to prevent the emission of excessive dust;
- Installation of a wheel shaker grid and/or wash down facilities at the vehicle egress point during excavation works;
- Ensuring trucks transporting materials to and from the site use covers to prevent windblown dust or spillage;
- Ensuring truck tailgate locking mechanisms are operational and in use;
- Periodic inspection of surrounding roads to ensure no construction contamination and initiation of road sweeping if required;
- Careful selection of materials for temporary road surfacing;
- Subcontractors to maintain equipment / machinery to ensure exhaust emissions comply with relevant legislation and guidelines;

- All waste material to be sorted, collected and removed from site (for recycling where possible); and

- Air quality monitoring.

5.5 Odour Control

The amount of odour generated by the works will be influenced by the extent of open excavation stockpiles, weather conditions and the quality of excavated material.

Odour management will address the following key issues:

- Location and cause of odour;

- Minimisation of odour and its source;

- Odour management response procedures; and

- Implementation of an odour monitoring regime.

If air quality is considered to be unsatisfactory, the Head Contractor will conduct appropriate works to rectify the ambient air quality to an acceptable standard within the shortest time practicable.

5.6 Vegetation Protection

The Head Contractor's CEMP will detail the measures that will be implemented to protect trees and vegetation being retained throughout the works. The Head Contactor will ensure areas of native Fauna are preserved through fencing and signage accordingly to avoid any damage and any conservation measures currently in place will be maintained.

The Head Contractor will also minimise the spread of weeds and grasses. This may include covering long-term stockpiles and bare areas with shade cloth or revegetating to minimise the establishment of weeds. Land clearing shall be minimal and staged to reduce the total area of cleared land at one time.

5.7 Sediment and Erosion Control

A Civil Engineering Design Report has been prepared by Meinhardt and generally outlines the controls that will be implemented to manage sediment and erosion during construction. Any discharges from the site will be strictly controlled to ensure hazardous materials and contaminants are contained in accordance with the requirements of all relevant Authorities and guidance, particularly the "Blue Book" – Managing Urban Stormwater: Soils and Construction (Landcom, 2004).

The site will be continually cleaned of rubble to minimise possible sediment flow during rainfall periods. Stormwater kerbs and drainage lines will be fitted with silt barriers (or the like) to slow run-off and reduce erosion/discharge from the site. Silt barriers will be replaced when 30% of their capacity has been reached and other control equipment will be inspected and maintained, particularly during heavy rainfall periods, and replaced when no longer effective.

Stormwater grate inlets surrounding the site will be covered with geotextile fabric to allow water to enter into drains whilst retaining sediments.

All long-term soil stockpiles will be protected from wind and water erosion by coverage with anchored shade cloth or vegetation as well as being fitted with silt barriers (where appropriate). Sediment and leachate control measures must be incorporated for any stockpiled material to prevent sediment entering the stormwater system or from migrating off-site. Control measures will be established to prevent surface water run-off entering and leaving excavations and stockpile areas.

Control measures may include:

- temporary bunding or diversion drains;

- impermeable sheeting placed under and/or over stockpiles;
- silt fences/silt socks to surround stockpiles; and
- protection of existing drains with silt barriers/fencing.

These mitigation measures will be regularly inspected to ensure that they are in good condition and if necessary upgraded where their performance is deteriorating.

5.8 Hazardous Materials

All hazardous materials (including subcontractors' materials) shall be registered by the Head Contractor and stored in an impervious Hazardous Materials Store which will be properly maintained to ensure that it has not deteriorated and remains effective.

A spillage kit (dry absorbent material – sand, saw dust or oil absorber) shall be on site and its location communicated. A licensed waste disposal contractor shall carry out transport and disposal of spillages.

The discovery of unexpected hazardous materials or contamination will be dealt with in accordance with Council, the NSW EPA and WorkCover requirements, in consultation with the project team members as required.

6 Construction Traffic Management

6.1 Construction Access and Vehicular Routes

A Preliminary Construction Traffic Plan has been prepared by TTW (NSW) Pty Ltd and is provided within the REF documents pack. This document is to be relied upon for the general construction traffic and pedestrian management and controls to be implemented through construction.

The anticipated vehicular ingress and egress routes are provided in Figure 5 below.

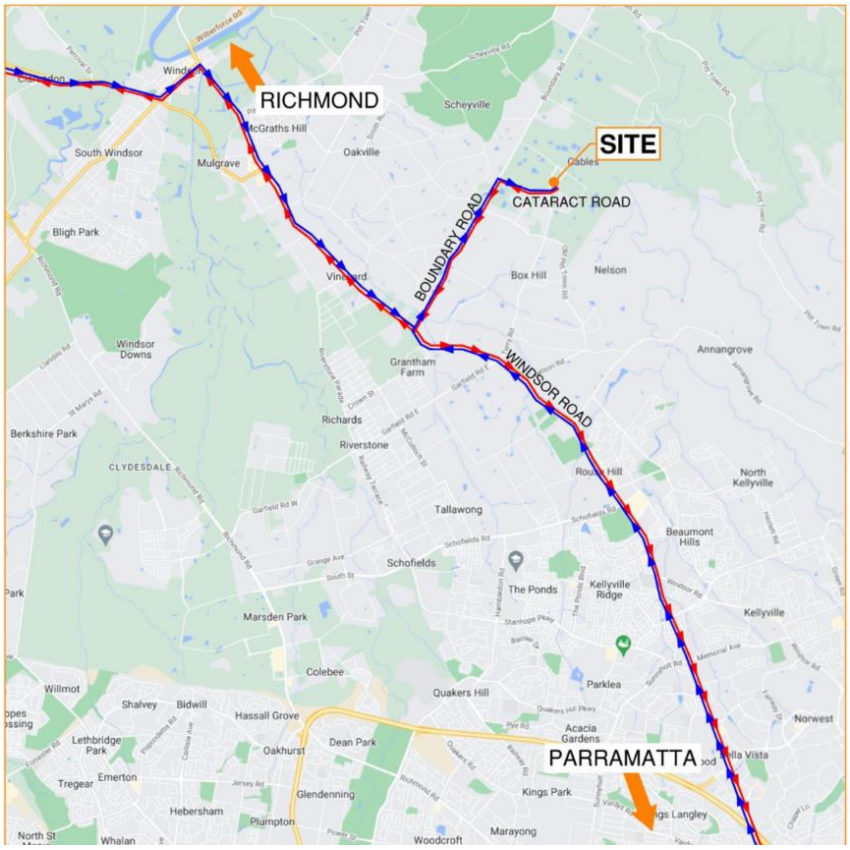

Figure 5 – Construction Vehicle Ingress and Egress Routes

It is anticipated that trucks traveling to / from the North / South will mainly utilise Old Windsor Road as shown in Figure 5. However, note that these are suggested routes only. Drivers are expected to travel to their intended destination using routes that are deemed as appropriate depending on local traffic conditions.

6.2 Construction Vehicles and Truck Movements

Vehicles that will access the site during the works will comprise Articulated Vehicles and Small-Heavy Rigid Vehicles. Proposed truck types to be used during the works include:

- Demolition material removal trucks;
- Spoil and excavation removal trucks.
- Concrete trucks
- Rigid delivery trucks; and
- Semi-trailers for large equipment and plant (subject to access).

All heavy goods such as machinery plants will be delivered outside of peak traffic hours and school peak hours. Applications for 'out of hours' works will be considered on a case-by-case basis. All out of hours applications will need to be approved by the relevant authority.

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

Road network impacts by worker traffic to the site will be mitigated by the construction workers generally starting earlier and finish earlier than the commuter peak periods, and would likely not coincide with the school or road network peak periods. Construction workers driving to sites in constrained parking environments will be encouraged to carpool, further reducing the impact on the road network.

The impact of construction traffic will be discussed once specific construction details are provided however vehicle volumes are expected to be low, in the order of 10-20 vehicles per day with approximately 10 vehicles in the busiest construction period. This usually occurs during concrete pours or the demolition phase. The traffic generation of this magnitude is less than the number of trips generated and assessed for the operational phase of the development and therefore the potential impacts are anticipated to be minimal.

6.3 Mitigation measures

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

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

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

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

Traffic Controllers will be used to stop traffic on the public street(s) to allow trucks to enter or leave the site. Where possible, vehicles must enter and exit the site in a forward direction. They must wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site, the vehicles already on the road have right-of-way. Vehicles entering, exiting and driving around the site will be required to give way to pedestrians at all times.

6.4 Pedestrian and Traffic Safety

A majority of the works will be carried out within the compounds of the school. Pedestrians and cyclists will be diverted and controlled by traffic controllers as necessary when larger vehicles wish to access the site. They will control pedestrians as well as vehicles. Pedestrians and cyclists will be directed through

appropriate fencing/hoarding within the school. As the site entrance will be at Bydown Street, which currently offers secondary access to the school, the interaction with pedestrians and cyclists is expected to be limited.

Pedestrian and cyclist routes past the site will be protected during construction where required. Fencing and/or hoarding in accordance with the relevant standards will be provided around the site to provide protection and prevent unauthorised access. Where works are required in the public domain, safe routes will be provided around the worksite, which will require a site-specific management plan.

7 Construction Waste Management Plan

A Construction Waste Management Plan (CWMP) will be developed by the Head Contractor prior to commencement of construction works on site. Periodic review of this CWMP will be undertaken to ensure continual compliance with environmental regulations and standards.

7.1 Waste Management / Recycling Principles

The main source of waste associated with the construction works would be construction waste (excess building materials, off cuts, damaged material etc). It is likely that some 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. The Head Contractor will be required to achieve compliance with the EPA guidelines.

The following measures are encouraged in the management and reduction of waste to minimise the loss of natural resources and landfill space:

- Emphasise the importance of recycling and waste reduction;
- Reduce the amount of waste material produced on the project by ensuring that only enough materials required to perform the works are ordered;
- Any excess materials from particular work areas are to be retained and incorporated into other work areas where practical;
- 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;
- Encourage the use of recycled materials where it is reasonably practical;
- Minimise the use of packaging materials and recycle packaging materials where possible;
- Waste concrete to be sent to a concrete recycling plant where possible; and
- Separate removed native vegetation from general construction waste, mulched and stockpiled for re-use.

7.2 Legislation

Relevant Waste management legislation and guidelines applicable to the project are listed below:

- NSW Environmental Planning and Assessment Act 1979
- NSW Environmental Planning and Assessment Regulation 2021
- NSW Protection of the Environment Operations Act 1997
- NSW Protection of the Environment Operations (General) Regulation 2021
- NSW Waste Avoidance & Resource Recovery Act 2001
- ISO 14001:2015 Environmental management systems - Requirements with guidance for use
- NSW Government Environmental Management System Guidelines (3rd Edition – 2013)

7.3 Non-Recyclable Waste

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

7.4 Waste Collection & Disposal

Appropriate waste bins are to be provided by the Head Contractor and made available to all site personnel. All site personnel shall be directed to place waste in the bins provided. This shall be included in the Site Induction. Dedicated waste collection points will be nominated with a waste management loading zone.

7.5 Hazardous Materials

When hazardous Materials are disposed off site, it should be classified in accordance with the EPA Waste Classification Guidelines (2014) and disposed of to a suitably licensed landfill. In dry and windy conditions, the stockpile would be lightly wetted and covered with plastic sheet whilst awaiting disposal.

7.6 Waste Reporting

Waste generation is to be monitored by the Head Contractor on a regular basis to ensure that the company's waste reduction objectives are achieved. Waste disposal quantities are monitored to ensure compliance. The Contractor will record waste disposal data.

7.7 Concrete Waste & Washout

Concrete trucks and pumps shall be washed out at designated locations. 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.

7.8 Further 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 licensed 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 Protection of the Environment Operations Act 1997).
- The Waste management strategy for the project will operate over the design, procurement, and construction including fit out of the project. Refer table below.

Management Strategies
Design • Use of prefabricated components in design • Design for materials to standard sizes • Design for operational waste minimisation
Procurement • Select recycled and reprocesses materials • Components that can be reused after deconstruction
Pre-construction • Waste strategy to be revised and approved prior to construction
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

7.9 Estimated Waste Quantities

Demolition Phase

There are no demolition works required as part of the project. The site is a greenfield site with no existing buildings on the site.

Construction Phase

Refer to table below. Please note the quantities are estimates only.

Material Type	Estimated Volume			Onsite Treatment	Offsite Treatment	
	Reuse	Recycle	Disposal	Proposed reuse and/or Recycling Method	Disposal/ Transport Contractor	Waste Depot, Recycling Outlet or Landfill Site
Metals		95m^3		Site bins	TBA	TBA

Bricks, Concrete, Tile		230m^3		Site bins	TBA	TBA
Timber			125m^3	Site bins	TBA	TBA
Cardboard		85m^3		Site bins	TBA	TBA
Plasterboard		195m^3		Site bins	TBA	TBA
Plastic, packaging			72m^3	Site bins	TBA	TBA
Pallets/cable drums	105m^3			Separated and collected	TBA	TBA
Liquids			10m^3	Separated onsite	TBA	TBA
General waste			750m^3	Site bins	TBA	TBA
Subtotal	105m^3	605m^3	957m^3	Site bins	TBA	TBA
Total	1667m^3					
Note: The disposal and waste depot are yet to be determined as the contracts have not been let, as such they have been listed as TBA.						

7.10 Further Waste Management Methods

The waste subcontractor will supply builder's waste bins for onsite collection and storage of general waste material. It is required that the waste facility will recycle a minimum of 80% of the material brought to their recycling depot. The individual recyclable waste streams are outlined below.

- Concrete;
- Bottles, Cans and Plastics;
- Bricks;
- Timber;
- Steel;
- Cardboard and white paper.

The following figure outlines the general principles for the prevention of waste.

Figure 6 – Waste Prevention Principles

Any removal of any waste from the project site shall be tracked using either the Head Contractor's site documentation (daily work books, etc.) or by any Authority's waste tracking forms when applicable. Inspections of waste disposal certificates and weighbridge dockets will be required to verify that waste has been appropriately disposed at NSW EPA approved sites and also to verify the quantity of waste removed from site.

Part 16 of the Regulations specify that if waste is transported from a premise, the waste generator must ensure that the waste is transported:

- to a waste facility that is licensed under the Act; or
- to a person carrying on mobile waste processing that is licensed under the Act; or
- to a place that can otherwise lawfully be used as a waste facility for that waste.

Part 6 also states that a person must not, in the course of business, transport by motor vehicle any waste that is generated in NSW (other than restricted solid waste) to any place in or outside of NSW, unless the place can lawfully be used for the disposal of that waste and one of the following applies:

- the place is 150 kilometres or less from the premises of origin of that waste; or
- the place is more than 150 kilometres from the premises of origin and is the closest or second closest to those premises of the places, in or outside New South Wales that can lawfully be used for the disposal of that waste.

7.11 Operational Waste Management Plan

An Operational Waste Management Plan (OWMP) has been prepared by Elephants Foot Consulting and identifies the different waste streams likely to be generated during the school's operational phase of the development, including:

- General Waste;
- Cardboard/Paper Recyclables; and
- Co-mingled Recyclables.

This OWMP is to be implemented during the operational phase of the school and outlines best practice waste management for the school (post works) including waste generation estimates, waste disposal and collection procedures.

8 Stakeholder Management

8.1 Consulting and Communicating

The planning and implementation of the works will be completed in accordance with all relevant requirements of Statutory Authorities, including:

- The Hills Shire Council;
- NSW Office of Environment and Heritage;
- NSW Environmental Protection Agency;
- Sydney Water;
- Transport for NSW (Roads and Maritime Services); and
- SafeWork NSW.

SINSW is also undertaking extensive ongoing consultation with the schools and the wider community to inform them and seek their feedback. The project will also provide appropriate core facilities to best practice teaching in line with the Department of Education's *Education Facilities Standards and Guidelines* (EFSG) and to facilitate 21st Century and Future Focused Learning objectives.

A Community Communication Strategy will be used to engage with stakeholders in relation to the construction works programme and managing complaints and enquiries. The potential for negative environmental and amenity impacts during construction, although over a relatively short duration, would be reduced though environmental management during construction, ongoing community engagement and provision of project information such as operating hours and traffic routes.

Due to the nature of the proposed construction works and the proximity of the site to the local community, appropriate mitigation measures and safeguards are required to avoid the potential for impacts such as:

- Noise and vibration generated during construction activities, affecting adjoining properties;
- Dust generated from construction activities, affecting adjoining properties; and
- Vehicles leaving the construction site depositing construction materials on public roads.

Existing properties directly affected by the construction program would be advised of works and provided with contact details, which would be supported by a community relations team providing:

- A contacts database for registering, managing and reporting complaints & enquiries;
- A contact number for enquiries & complaints;
- A website with a dedicated email address and feedback forms; and
- Specific information in the form of letters, fact sheets and newsletters for the local community.

The intent is for all works to be conducted within approved working hours; however, if works are expected to extend beyond these hours, appropriate stakeholders would be notified prior to these activities.

A Community Consultation Strategy would be implemented to maintain a good neighbour policy with surrounding businesses, residents, and special interest groups during construction.

8.2 Interaction with the Surrounding Community

The following actions will be implemented, which focus on minimising the impacts of construction activity to the community surrounding the site:

- Installation of Construction work zones and the monitoring and maintenance of such;
- Monitor compliance of the Preliminary Construction Traffic Management Plan and the safety and environmental controls to be listed in the CEMP or elsewhere;
- Clear display of contact details on the site temporary fencing for community information and contact in case of emergency;
- Make arrangements for the notification to surrounding properties of activities which may affect their amenity, including the provision of a 24-hour contact point; and
- Consultation and participation with the local community to address concerns and assess possible community initiatives.

8.3 Dispute resolution

The project team acknowledges the potential for disruption as a result of the works, and proposes that a complaint procedure/complaint register be developed. Should a complaint or infringement occur, the following procedures will be adopted:

- All complaints and infringements are to be brought to the attention of the site manager immediately upon receipt;
- The Head Contractor shall verbally notify SINSW immediately, followed by written notification issued to SINSW by no later than COB of the day of the complaint/infringement (it is the responsibility of SINSW community engagement team to issue a formal response, not the Head Contractor);
- The site manager shall investigate the complaint and ensure appropriate action is taken to address the complaint or infringement within a suitable timeframe;
- A Community Contact Notification form shall also be completed for all complaints and enquiries; and
- A copy of this documentation is to be filed within the site office.

9 Workplace Relations

SINSW, Johnstaff and the Head Contractor are fully committed to providing safe working environment. A site Safety Management Plan (SMP) will be required to ensure that equipment, workplaces and practices comply with relevant regulations and standards. Regular and ongoing reviews of these standards will be conducted and where higher standards are practical and desirable, they will be adopted. In addition, the Head Contractor will:

- Provide adequate resources to satisfy this policy;
- Identify, control and reduce work related hazards and risks that may produce injury, illness or asset damage;
- Identify, quantify and control to safe levels, those chemicals and physical agents in the workplace capable of causing ill health;
- Promote environmental, health, safety and the welfare of employees and subcontractors while respecting the privacy of individuals;
- Provide information, instruction and training for employees to increase their personal understanding of workplace hazards, promote safe working practices and ensure subcontractors are aware of and satisfy these expectations.
- Consult employees and subcontractors in environmental, health and safety to reduce workplace hazards and risks;
- Consult with the project team, industry bodies and others in the development of appropriate standards, control strategies and monitoring techniques, which comply, with the requirements of statutory authorities; and
- Set short and long term goals in occupational health and safety management, and review performance against these goals.

A key tool in the management of safety on the project will be the continued improvement of the Head Contractor's Job Safety & Environment Analysis (JSEA) and/or Safe Work Method Statements (SWMS). These will include the following:

- A description of the work to be undertaken;
- An identification of the foreseeable hazards associated with the works; and
- A description of the hazard control measures to be used.

10 Mitigation Measures

The mitigation measures for the REF deliverables for the proposed development at the site relevant to this report are summarised in the table below.

Project Stage Design (D) Construction (C) Operation (O)	Mitigation Measures	Relevant Section of Report
D	Development of a formal Construction Environmental Management Plan by the Contractor, prior to the commencement of Construction.	3.1
C	The Contractor is to comply with the WHS and Environmental Management Policies, Plans and Procedures. In addition to this, ensure that safe work methods are adopted by all parties in relation to all site activities.	3.1
D,C	Prior to works commencing on site the Contractor will ascertain all relevant project information, applicable Standards, Statutory requirements and Conditions, including all Authorities having jurisdiction over the works; obtain all relevant insurances, permits and approvals and pay all associated fees, including any outstanding Long Service Leave Levies; ensure a copy of the REF is filed on site for reference throughout the works.	4.1
C	Prior to the commencement of the works, physical separation of the site from the street and the school will be established through Class A Hoarding or appropriate fencing.	4.2
C	The Contractor is to prepare an unexpected finds protocol (UFP) should be prepared and implemented during site works to address any potentially impacted fill (including asbestos contamination); and additional assessment as required to provide a final waste classification for surplus soils requiring off-site disposal.	5.1
D	Prior to the commencement of major construction works, the contractor must develop a Construction Noise and Vibration Management Plan (CNVMP	5.3
C	The contractor is to ensure all appropriate sediment and erosion control measures are in place throughout the duration of the construction works in line with Australian Standards and Meinhardt Engineering's Civil specification and drawings.	5.7

C	The Contractor is to adhere to all requirements of the Preliminary Construction Management Plan prepared by TTW Traffic.	6.3
C	The Contractor is to ensure there is a dispute resolution plan in place and all complaints encountered by the general public are recorded and communicated to School Infrastructure as soon as possible.	8.3

JOHNSTAFF