



Construction Environmental Management Plan

The New Primary School at Warnervale

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1 Introduction

1.1 Background

The New South Wales Department of Education is delivering more than 170 new and upgraded schools to support communities across NSW. A new primary school in Warnervale is proposed as part of the NSW Government initiative.

The New Primary School at Warnervale is to be located at 75 Warnervale Road, Warnervale. The school is located amongst the planned growth suburbs of Warnervale and Wadalba, within the former Wyong Shire Council Local Government Area (LGA), which now forms part of the recently created Central Coast Local Government Area. The school is surrounded by a large area of bushland which contains a small number of residential properties and is opposite a well-established suburban area to the north-east of the site. Warnervale Oval, which contains playing fields and a 400 metre running track is also situated on the opposite side of Warnervale Road, to the north-east of the site. The site is in close proximity to public transport systems; with Warnervale Train Station being 500 metre (west) from the site, as well as a public bus stop 10m (west) of the school site, providing services to Warnervale Railway Station, Tuggerah Railway Station, Wyong Railway Station and Lake Haven Shopping Centre. The site is situated a short distance from the proposed university and education business park precinct, located to the west of Warnervale Station and forming a key component of the economic development strategy for the district.

1.2 Purpose of the CEMP

The Construction Environmental Management Plan (CEMP) has been prepared to outline and describe how the construction of New Warnervale Primary School will comply with the Secretary's Environmental Assessment Requirements (SEARs) #9439 and relevant legislation, guidelines and standards.

This CEMP will:

- Describe the Project and outline the development details and civil earthworks programs
- Detail the statutory and legislative requirements
- Define performance objectives
- Identify roles and responsibilities
- Specify training and competency requirements
- Summarise monitoring and reporting requirements
- Provide the construction contractor personnel and contractors with systems, procedures and documentation necessary to complete the project in accordance with environmental requirements
- Provide specific mechanisms to comply with applicable policies, approvals, licences, permits, consultation agreements and legislation
- Estimates of type, quantities and classifications of main streams of demolition and construction waste
- Outline a procedure for observation of visual and/or olfactory signs of contamination
- Provide specific mitigation and management measures and controls that can be applied onsite to avoid or minimise adverse environmental impacts
- Identify control for asbestos management, and unexpected finds protocol (if applicable)
- Provide planning appropriate environmental mitigation and management measures

This CEMP is the overarching document in the environmental management system for The New Primary School at Warnervale that includes a number of management documents. It is applicable to all staff and sub-contractors associated with the construction of the Project. The Environmental Management System is further outlined in Section 1.4 of this document.

1.3 Project description

The key features of the project include:

- New Core 35 Hall
- New Core 21 Administration & Staff Building
- New Core 21 OOSH
- New Core 21 Canteen

- New Core 21 Library
- New Core 21 (2x) Special Programs
- New Teaching Spaces 20 (Includes 2 Special Education Teaching Spaces)
- New Core 21 Student Amenities
- New Core 21 COLA
- Considerations for Future Expansion
- Staff Carpark 21 Spaces
- Visitor 5 Spaces
- Accessible 2 Spaces
- Related Road Works & Drop off/pick up Zone
- New Games Court

The design is intended to account for the possibility of future expansion of teaching and core facilities for up to 1,000 students.

1.3.1 Timing and scheduling of activities

The proposed timing and scheduling of activities will be described by the construction contractor in this section once the construction program is issued. The current expected completion date is late 2021.

1.4 Environmental Management System overview

1.4.1 Environmental Policy

The contractor to update in accordance with their respective Environmental Management System (EMS) and include the environmental policy.

1.5 Preparation and availability of the CEMP

The CEMP for this Project has been prepared in accordance with the *Guideline for the Preparation of Environmental Management Plans* (DIPNR) and incorporates the requirements of relevant legislation and guidelines.

The CEMP has been developed to address the requirement to develop a draft Construction Environmental Management Plan as part of the documentation to be submitted with the Environmental Impact Statement (EIS).

Once the EIS is approved, the CEMP would be updated to include the Project conditions of approval. During construction, the CEMP would be available to all personnel and sub-contractors.

2 Planning

2.1 Regulatory requirements and compliance

2.1.1 Legislation

Pursuant to clause 15(2) of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011*, the development will be categorised as State Significant Development (SSD) as the capital investment value exceeds \$20 million. The SEARs #9439 are used to inform the Environmental Impact Statement (EIS), which is required to accompany an application for SSD, pursuant to Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*. The CEMP has been developed to address the requirement to develop a draft Construction Environmental Management Plan as part of the documentation to be submitted with the Environmental Impact Statement (EIS).

A register of legal and other requirements for the Project is contained in Appendix A. This register will be reviewed at regular intervals, such as during management reviews, and updated with any applicable changes. Any changes made to the legal requirements register will be communicated to the wider project team, including subcontractors where necessary through toolbox talks, specific training and other methods detailed in Section 3 of this CEMP.

2.1.2 Approvals, permits and licences

A number of approvals, permits and licences have and/or will be obtained for the project. Appendix A contains a register of all relevant environmental approvals, permits and licences, including the SEARs #9439. The register will be maintained by the Environment Manager and will be reviewed prior to the commencement of construction and/or stages of construction, and at regular intervals during construction and at least annually as part of the management review.

All necessary licences, permits and approvals required for the development of the work will be obtained and maintained as required throughout the life of the work. Copies of the above documents are included in Appendix A.

2.2 Environmental objectives and targets

As a means of assessing environmental performance during construction of the Project, environmental objectives and targets have been established. The objectives and targets are consistent with the Project environmental policy and will assist in monitoring whether the commitments of the policy are being met.

The performance of the Project against the objectives and targets would be documented in the Project construction compliance reports and at least on an annual basis as part of the management review.

Environmental objectives and targets for the Project are incorporated into relevant environmental management sub plans and a summary is provided in Table 2-1 below.

Table 2-1 Environmental objectives and targets

Objective	Target	Reporting/monitoring
Construction of the project in accordance with environmental approvals	Full compliance with statutory approvals	Audits, construction compliance reporting, management reviews
Compliance with all legal requirements	No regulatory infringements or prosecutions.	Compliance with all legal requirements

2.3 Work Method Statement and Environmentally Sensitive Area Plans

Work Method Statements or Safe Work Method Statement (SWMS) will be prepared for high risk activities. High risk activities are expected to be identified in the EIS, Submissions Report, conditions of approval and contract specifications where relevant. SWMS will incorporate relevant mitigation measures and controls, including those from relevant management sub plans. SWMS are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

SWMS will be prepared progressively prior to the commencement of relevant construction activities, and throughout construction in consultation with relevant members from the Project team.

As a minimum, SWMS will be prepared for the following activities:

- Site compound establishment
- Public road accesses and managing mud tracking
- Vegetation clearing
- Asbestos removal

The SWMS will include at least the following elements:

- Description of the work activity, including any plant and equipment to be used
- Outline of the sequence of tasks for the activity, including interfaces with other construction activities
- Identification of any environmental and/or socially sensitive areas, sites or places
- Identification of potential environmental risks/impacts due to the work activity
- Mitigation measures to reduce the identified environmental risk, including assigned responsibilities to site management personnel
- Process for assessing the performance of the implemented mitigation measures.

Environmentally sensitive area plans would be developed and included as part of the SWMS. The sensitive area plans would include the following aspects of concern:

- Flora
- Fauna
- Heritage
- Contamination
- Erosion and sediment controls

The sensitive area plans would be developed once the project receives approval, the aspects updated in accordance with the conditions of approval, where required.

All construction personnel and sub-contractors undertaking a task governed by an SWMS will participate in training on the SWMS as outlined in Section 3 of this CEMP and will acknowledge that they have read and understood their obligations by signing an attendance record prior to commencing work.

As outlined in Section 4.6 of this CEMP, regular monitoring, inspections and auditing of compliance with the SWMS will be undertaken by Project management and environmental personnel. This will ensure that all controls are being implemented, non-conformances are recorded and corrective actions are undertaken.

A register of SWMS will be maintained in a Document Register.

2.4 Resources, responsibilities and authority

The key environmental management roles and responsibilities for the construction phase of the Project are described below.

2.4.1 Contractor Project Manager

The environmental responsibilities of the Project Manager include (but are not limited to) the following:

- Ensure all works comply with relevant regulatory and Project requirements
- Ensure the requirements of this CEMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements
- Endorse and support the Project environmental policy attached at Appendix B
- Liaise with government authorities as required
- Participate and provide guidance in the regular review of this CEMP and supporting documentation
- Provide adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of this CEMP
- Ensure that all personnel receive appropriate induction training, including details of the environmental and community requirements
- Ensure that complaints are investigated to ensure effective resolution

- Stop work immediately if an unacceptable impact on the environment is likely to occur.

2.4.2 Construction Manager

The environmental responsibilities of the Construction Manager include (but are not limited to) the following:

- Plan construction works in a manner that avoids or minimises impact to environment
- Ensure the requirements of this CEMP are fully implemented
- Ensure construction personnel manage construction works in accordance with statutory and approval requirements
- Support the Construction Environmental Manager in achieving the project environmental objectives
- Ensure environmental management procedures and protection measures are implemented
- Ensure all Project personnel attend an induction prior to commencing works
- Liaise with government authorities as required
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

2.4.3 Superintendent

The environmental responsibilities of the superintendent include (but are not limited to) the following:

- Communicate with all personnel and sub-contractors regarding compliance with the CEMP and site-specific environmental issues
- Ensure all site workers attend an environmental induction prior to the commencement of works
- Co-ordinate the implementation of the CEMP
- Co-ordinate the implementation and maintenance of pollution control measures
- Identify resources required for implementation of the CEMP
- Support the Construction Environmental Manager in achieving the project environmental objectives, including on ground implementation of the SWMS and Erosion and Sediment Control Plan (ESCP)
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the construction Environment Manager / Environment Officers
- Co-ordinate action in emergency situations and allocate required resources
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Construction Manager and construction Environmental Manager.

2.4.4 Contractor Communications Manager

The environmental responsibilities of the Communications Manager include, but are not limited to, the following:

- Ensure that all community consultation activities are carried out with liaison with SINSW (School Infrastructure NSW)
- Report any environmental issues to the Environmental Manager and Superintendent raised by stakeholders or members of the community
- Communicate general Project progress, performance and issues to stakeholders including the community
- Maintain complaints register.

2.4.5 Contractor Project/Site Engineers

The environmental responsibilities of the site / Project engineers include (but are not limited to) the following:

- Provide input into the preparation of environmental planning documents as required
- Ensure that instructions are issued and adequate information provided to employees that relate to environmental risks on-site
- Ensure that the works are carried out in accordance with the requirements of the CEMP and supporting documentation, including the implementation of all environmental controls
- Identify any environmental risks
- Identify resource needs for implementation of CEMP requirements and related documents.
- Ensure that complaints are investigated to ensure effective resolution

- Take action in the event of an emergency and allocate the required resources to minimise the environmental impact
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent and construction Environmental Manager.

2.4.6 Foreman

The environmental responsibilities of the foreman include (but are not limited to) the following:

- Undertake any environmental duties as defined by the superintendent or Project/site engineer
- Control field works and implement/maintain effective environmental controls
- Where required, undertake environmental risk assessment of works prior to commencement
- Ensure site activities comply with SWMS and relevant records are kept
- Ensure all site workers are site inducted prior to commencement of works
- Attend to any spills or environmental incidents that may occur on-site
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent and Environmental Manager
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Manager, Construction Manager, Superintendent or construction Environmental Manager.

2.4.7 Wider project team (including sub-contractors)

The environmental responsibilities of the wider project team (including sub – contractors) include (but are not limited to) the following:

- Comply with the relevant requirements of the CEMP, or other environmental management guidance as instructed by a member of the Project's management
- Participate in the mandatory Project/site induction program
- Report any environmental incidents to the foreman immediately or as soon as practicable if reasonable steps can be adopted to control the incident
- Undertake remedial action as required to ensure environmental controls are maintained in good working order
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Manager, Construction Manager, Superintendent or construction Environmental Manager.

2.5 Selection and management of subcontractors

All sub-contractors are required to work in accordance with the approved CEMP. All sub-contractors are required to attend Project and/or site inductions where the requirements and obligations of the CEMP are communicated. A record of all sub-contractors inducted would be maintained as part of the Project induction and training register.

A standard monitoring form will be developed that will be used to assess:

- The sub-contractor's general work practices
- The effectiveness of the sub-contractor's environmental protection measures
- The sub-contractor's compliance with the requirements of this CEMP
- The maintenance of environmental measures.

All environmental documentation submitted by contractors will be subject to review to ensure compliance with the CEMP before works may begin. Environmental requirements and responsibilities are to be specified to sub-contractors in the contract documentation. As part of the selection process, consideration will also be given to their past environmental performance.

3 Competence, training and awareness

To ensure that the CEMP is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements of the CEMP. The construction Environmental Manager will coordinate the environmental training in conjunction with other training and development activities (e.g. safety).

3.1 Environmental induction

All personnel (including sub-contractors) will attend a compulsory site induction that includes an environmental component prior to commencement on-site. This is done to ensure all personnel involved in the Project are aware of the requirements of the CEMP.

Short-term visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times. A visitors' induction will also be undertaken for visitors onsite for short periods as agreed with the Safety Manager.

Temporary visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times.

The project site induction will include an environmental component must cover all elements of the CEMP and will include as a minimum:

- Relevant details of the CEMP including purpose and objectives
- Requirements of due diligence and duty of care
- Conditions of environmental licences, permits and approvals
- Potential environmental emergencies on Site and the emergency response procedures
- Reporting and notification requirements for pollution and other environmental incidents
- High risk activities and associated environmental safeguards
- Specific environmental management requirements and responsibilities
- Mitigation measures for the control of environmental issues
- Incident response and reporting requirements
- The existence of SWMS for high risk activities
- Information relating to the location of environmental constraints.
- Key environmental issues.

A record of all environment inductions will be maintained and kept on-site. The construction Environmental Manager may authorise amendments to the induction at any time. Possible reasons for changes to the induction may be Project modifications, legislative changes or amendments to this CEMP or related documentation.

3.2 Toolbox talks, training and awareness

Toolbox talks will be one method of raising awareness and educating personnel on issues related to all aspects of construction including environmental issues. The toolbox talks are used to ensure environmental awareness continues throughout construction.

Toolbox talks will include details of SWMSs for relevant personnel. Toolbox talks will also be tailored to specific environmental issues relevant to upcoming works.

Relevant environmental issues include (but are not limited to):

- Erosion and sedimentation control
- Hours of work
- Emergency and spill response
- Aboriginal and non-Aboriginal heritage
- Threatened species, endangered ecological communities, clearing controls and vegetation protection
- Weed management
- Dust control
- Incident reporting requirements and complaints handling

- Working near or over water and water pollution controls
- Noise and vibration control
- Storage and handling of chemicals
- Management of concrete pours
- Results / actions from any site inspections or audits.

Records of training and toolbox meetings will be retained by Project Construction Contractors and provided on a monthly basis to the construction contractor Environment Manager and the training manager. Toolbox attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact. Topics covered may include those detailed above, or others deemed necessary in the lead up to or during construction.

Key personnel who control construction work impacting erosion and sedimentation would undertake training in the Managing urban stormwater: soils and construction Volume 1, Landcom, 2004 (the 'Blue Book') (or an approved equivalent training). In addition, a practical one-day training course the Blue Book, and how it applies to the work, will be presented to all personnel engaged in earthworks and sediment control on the site.

Another way to inform construction personnel will be through the development and distribution of awareness notes. These will typically take the form of a poster, booklet, or similar and will be distributed to engineers, leading hands, foreman and others with a responsibility for managing specific work locations or activities. This documentation will be used to inform the broader workforce through either daily pre-starts meeting or provision in worker crib sheds / break facilities.

The project contractor's Environment Manager will establish a schedule of environmental training.

The CEMP will detail where the Training Register is kept.

3.3 Pre-Start Meetings

The pre-start meeting is a tool for informing the workforce of the day's activities, safe work practices, environmental protection practices, work area restrictions, activities that may affect the works, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

The Foreman will conduct a pre-start meeting with the site workforce prior to the commencement of environmentally sensitive work.

The environmental component of pre-starts will be determined by relevant foreman and environmental personnel and will include any environmental issues that could potentially be impacted by, or impact on, the day's activities. All attendees will be required to sign on to the prestart and acknowledge their understanding of the issues explained.

Pre-start topics, dates delivered, and a register of attendees will be recorded and kept, and the CEMP will include details of record location.

3.4 Working hours

Approved working hours on this project will likely be outlined in the EIS and Project Conditions of Approval.

The Interim Construction Noise Guideline (DECC, 2009) (ICNG) which are recommended standard hours for construction work are outlined below.

- 7.00am – 6.00pm Monday to Friday
- 8.00am – 1.00 pm Saturdays
- No work on Sundays or public holidays.

The majority of works would be carried out during standard working hours (i.e. 7am – 6pm Monday to Friday, 8am – 1pm Saturdays). Any work performed outside the standard construction hours would be subject to the conditions in the EIS and the Project Conditions of Approval.

Approvals for any changes will be included and attached to the CEMP.

4 Communication

4.1 Internal communication

Clear lines of communication throughout all levels and functions (e.g. management, staff and subcontracted service providers) are key to minimising environmental impacts and achieving continual improvements in environmental performance.

The project environmental team will meet regularly with investigation contractors to discuss any issues with environmental management on-site, and any amendments to plans that might be required or any new / changes to construction activities. The purpose of these meetings will be to communicate ongoing environmental performance and to identify any issues to be addressed.

In addition, project construction environment team members will participate in toolbox talks on a regular weekly basis. This forum will provide an opportunity for the environment team members to communicate on environmental performance, to advise on any upcoming sensitive environmental matters for future work areas and to receive feedback from on-site personnel.

Project Contractor's environmental personnel will participate in toolbox talks on a weekly basis. Contractor toolbox sessions will be used to communicate internal environmental matters and any matters advised by the construction contractor.

4.2 Liaison with EPA and government authority consultation

The construction Environmental Manager has the responsibility to report on the ongoing environmental performance of the Project to Roads and Maritime, and EPA. The construction Environmental Manager will report regularly to Roads and Maritime on progress and any key environmental matters and to the EPA through monthly EPL reports.

The Project Manager and construction Environmental Manager are the two 24-hour contacts. They have the authority to halt the progress of the works if necessary. They are the key emergency response personnel during an environmental site emergency.

The construction Environmental Manager is the authorised contact person for communications with the client and the EPA on environmental matters.

4.3 Community liaison and/or notification

A Community Communication Strategy (CCS) may be developed to provide an approach to stakeholder and community communication. The strategy would identify opportunities for providing information and consulting with the community and stakeholders during design and construction phases of the project and for 12 months following construction completion. The strategy would define:

- The engagement groups
- The key messages of the work
- The range of tools that will be used to interact with community and stakeholders
- The complaints management system
- Protocols, roles and responsibilities.

Communication tools defined in the strategy would include:

- Community brochure
- Community update
- Letters
- Media release through Council forums
- Static information display
- Staffed information display.

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 as a result of continuous improvement undertakings. This will be done in close consultation with the SINSW Senior Project Director, appointed Project Management Company and/or Contractor and SINSW Community Engagement Manager.

4.4 Complaints and enquiries management

A contact phone number would be provided for any complaints or enquiries during construction. All community enquiries and complaints related to the construction activities will be referred to the community information line. On the SINSW community contact card.

The telephone number and email address will be included on the notice to be located on the perimeter hoarding/fencing surrounding the Project.

Records of all complaints/communications received will be detailed in Principal Contractor's Complaints/Communication Register and include the following details:

- Date and time of the complaint/communication
- Method by which the complaint/communication was made
- Any personal details of the stakeholder
- The nature of the complaint/communication
- Action taken in relation to the complaint/communication and any follow up
- If no action taken, reasons why.

Attempts will be made to resolve all complaints in accordance with the Complaints and Enquiries Procedure. An initial response to complaints will be provided within 24 hours of a complaint being received. A further detailed response, including steps taken to resolve the issue(s) that lead to the complaint, will be provided within 10 days. All complaints will be closed off in the Complaints/Communication Register. The stakeholder will be kept informed of when they will receive a response.

The Environmental Manager will apply an adaptive approach to ensure that corrective actions are applied in consultation with the appropriate construction staff to allow modifications and improvements in the management of any environmental issues resulting in community complaints.

4.5 Emergency and Incident Planning

All incidents and complaints (including potential incidents) must be reported so that they can be investigated and prevented from recurring. Project Contractors will be required to investigate their environmental incidents in accordance with the CEMP. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident. All efforts will be undertaken immediately to avoid and reduce impacts of incidents and suitable controls put in place.

The construction contractor will be responsible for any external notification of environmental incidents. Project Contractors are required to inform the construction contractor Environment Manager of any incidents that may require notification to the EPA.

The EPA will be notified of any pollution incidents on or around the site via the EPA Environment Line (telephone 131 555) in accordance with Part 5.7 of the Protection of the Environment Operations Act 1997 (NSW) (POEO Act). The circumstances where this will take place include:

- it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
- it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations).

Where an incident involves a potential impact to an Aboriginal site, the Office of Environment and Heritage, and Registered Aboriginal Parties will be notified and their input sought in closing out the incident.

Table 4-1 identifies key emergency contacts.

Table 4-1 Key emergency contacts

Position	Name	Phone
EPA pollution hotline	TBC	131 555
Fire and Rescue NSW	TBC	000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
The Ministry of Health	TBC	Nepean Blue Mountains Local Health District 4734 2022
SafeWork NSW	TBC	131 050
Central Coast Council	TBC	General phone number is 1300 463 954
Project 24 hour community information line	TBC	
Construction Environmental Manager	TBC	
Project Manager	TBC	
Superintendent	TBC	

4.5.1 Incident investigation

Where required, due to the severity or ongoing nature of the incident, investigations will be conducted, and action plans established to ensure that the event does not occur again. Environmental investigations will include:

- Identification of the cause, extent and responsibility of the incident
- Identification and implementation of the necessary corrective action
- Identification of the personnel responsible for carrying out the corrective action
- Implementation or modification of controls necessary to avoid a repeat occurrence of the incident
- Recording of any changes in written procedures required
- Advising the relevant government agencies if any substantial pollution has occurred.

Where there are lessons learnt from the investigation or current procedures are identified as being ineffective, the CEMP will be revised by the Environmental Manager to include the improved procedures or requirement.

The emergency and incident response would be updated in accordance with the approved EIS, Submissions Report (where applicable) and the Project Conditions of Approval.

4.6 Monitoring, inspections and auditing

4.6.1 Environmental inspections

Regular inspections will be carried out during construction of the Project area by the construction/environmental team. Details are described in the following sections. Copies of all environmental inspection reports prepared by construction environmental staff will be kept with the project records and closed out within the agreed timeframes.

Inspections would be undertaken pre and post rainfall, where required, to evaluate the effectiveness of the environmental controls. Pre-rainfall inspections are undertaken and before any long weekends or RDO where the site

will close for a longer period, to prepare for significant rainfall events whereas, post rainfall inspections are undertaken after more than 20mm of rain in a 24-hour period measured at the on-site weather station. The Environmental Coordinator records inspection findings on an inspection checklist form or mobile software application.

Observed deficiencies in maintenance, environmental controls or standard of environmental performance are recorded on the checklist form. Details of any maintenance required, the nature of the deficiency, any actions required, and an implementation priority will be recorded. Actions will be closed out in accordance with the identified priority and evidence of close out would be kept on file.

4.6.2 Pre-work inspections

Prior to the commencement of each shift, the Foreman would inspect the environmental controls in place for the work to ensure they are operating as designed. Walkthrough of sites with key subcontractors, Project Engineers and an Environmental Coordinator may also occur where high-risk works are proposed. Work will not commence unless the results of the inspections are found to be satisfactory.

4.6.3 Environmental monitoring

Monitoring will be undertaken to validate the impacts predicted for the Project, to measure the effectiveness of environmental controls and the implementation of this CEMP. Monitoring requirements are summarised in Table 4-2; full details concerning monitoring and reporting are presented in the corresponding environmental management sub-plans attached to this CEMP.

Should a non-conformance be detected or monitoring results directly attributable to the Project exceed the target set in the plans, a non-conformance Environmental Incident Report and/or Environmental Improvement Notice may be issued by the Environmental Manager in response to the non-conformance if it is found to be construction-related. The timing for any improvement will be agreed between the relevant Engineer/Superintendent and Environmental Manager based on the level of risk (e.g. a significant risk will require immediate action). Environmental monitoring equipment will be maintained and calibrated according to the manufacturer's specifications and appropriate records kept.

Table 4-2 Summary of environmental monitoring requirements

Mitigation Measure	Description	Relevant Sub-Plan or CEMP Chapter	Reporting Requirements
TBC			

4.6.4 Auditing

Table 4-3 presents auditing requirements that are applicable to the Project.

4.6.4.1 Contractor internal audits

Internal auditing would be undertaken generally on a six-monthly basis throughout the Project. The purpose of auditing is to verify compliance with:

- This CEMP and Sub Plans
- Approval requirements
- Any relevant legal and other requirements (e.g. licenses, permits and regulations,)
- An audit checklist will be developed and amended as necessary to reflect changes to this CEMP, subsequent approvals and changes to Acts, regulations or guidelines.

4.6.4.2 Independent external audits

External auditing will be undertaken by an independent environment auditor in accordance with ISO 19011:2014 - Guidelines for Quality and/ or Environmental Management Systems Auditing.

Table 4-3 Audit requirements

No	Audit	Requirement	Timing	Responsibility	Receipt
1	Internal Audit	Verify compliance with approval and legal requirements, Roads and Maritime specifications and construction documentation	The first audit within three months of the commencement of construction and then at six monthly intervals thereafter. The final submitted within five working days of contract completion date.	Construction Environmental Manager	Project manager, Roads and Maritime

4.6.5 Other reporting

Table 4-4 sets out the reporting requirements applicable to the Project, timing of the reporting, who is responsible for managing preparation of the reports and the intended recipient(s).

Additional reporting may be necessary as the works progress. In such a circumstance, Table 4-4 will be amended to reflect these changes.

Table 4-4 Reporting requirements

No	Report	Requirement	Timing	Responsibility	Receipt
1	Monthly environmental report				

4.7 Environmental non-conformances and improvement opportunity

Any member of the Project team may raise a non-conformance or improvement opportunity. The Quality Plan describes the process for managing non-conforming work practises and initiating corrective/preventative actions or system improvements.

A non-conformance is the failure or refusal to comply with the requirements of this CEMP and supporting documentation.

For each non-conformance identified a corrective/preventative action (or actions) must be implemented. In addition any environmental management improvement opportunities can be initiated as a result of incidents or emergencies, monitoring and measurement, audit findings or other reviews. Improvement opportunities may also result in the implementation of corrective/preventative actions.

Corrective/preventative actions and improvement opportunities will be entered into the contractor's quality system database and include detail of the issue, action required and timing and responsibilities. The record will be updated with date of close out and any necessary notes. The database will be reviewed regularly to ensure actions are closed out as required.

Non-conforming activities may be stopped, if necessary, by the construction Environmental Manager, Environmental Officers or Project / Site Engineer following consultation with the Construction Manager or delegate. The works will not commence until a corrective / preventative action has been closed out. In such circumstances a non-conformance report must be prepared in accordance with the Quality Plan.

The CEMP will detail where procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management are also documented in the will be tracked.

4.8 Records of environmental activities

4.8.1 Environmental records

The construction Environmental Manager is responsible for maintaining all environmental management documents and records as current at the point of use. Types of documents and records include:

- All site monitoring, inspection and compliance reports/records
- Correspondence with public authorities
- Internal and external audit reports

- Induction and training records
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action
- Community engagement information
- Minutes of CEMP and construction environmental management system review meetings and evidence of any action taken
- CEMP and Sub Plans
- SWMS.

All environmental management documents are subject to ongoing review and continual improvement. This includes times of change to scheduled activities or to legislative or licensing requirements.

Only the construction Environmental Manager, or delegate, has the authority to change any of the environmental management documentation. These documents will be held for five years after the actual completion date and be available to Roads and Maritime and EPA upon request.

4.8.2 Document control

The Environment Manager will coordinate the preparation, review and distribution, as appropriate, of the environmental documents and records listed above. During the Project, the environmental documents and records will be stored at the main site compound.

The Principal Contractor will implement a document control procedure to control the flow of documents within and between Department of Planning and Environment, stakeholders and subcontractors. The procedure will ensure that documentation is:

- Developed, reviewed and approved prior to issue
- Issued for use
- Controlled and stored for the legally required timeframe
- Removed from use when superseded or obsolete
- Archived.

A register and distribution list will identify the current revision of particular documents, records or data.

4.9 Management review

Management reviews are undertaken as part of the continual improvement process. The management review can consist of group reviews, or executive reviews. Table 4-5 below outlined the meeting requirements.

A group review is initiated by the contractors Environment Manager and includes relevant project team members and stakeholders. The project environment team also meet as required to review environmental management issues for the investigation. The environment team meeting can be run in conjunction with a wider group meeting if the Contractor Environment Manager deems it appropriate.

The outcomes of the group and executive reviews could include amendments to the CEMP and related documentation, revision to the project's environmental management system, risk assessment review, re-evaluation of the project objectives and targets as well as feeding into other project documents.

Table 4-5 Project environmental management review meetings

Meeting	Purpose	Frequency	Attendees
TBC			

4.10 CEMP/Sub Plan revision

A document review process ensures that environmental documentation including this CEMP is updated as appropriate for the specific works that are occurring on-site. This includes the management review process described in Chapter 4.9.

Should the document review process identify any issues or items within the documents that are either redundant or in need of updating, it is the responsibility of the construction Environmental Manager or construction Environmental Officers to prepare the revised documents.

The revised document will then be issued to the Project Manager, SINSW and staff for endorsement of the changes.

5 Construction - Operational control

A number of environmental management sub-plans support the CEMP. These documents would be prepared to identify requirements and processes applicable to specific impacts or aspects of the activities described in the EIS. They would address requirements of the EIS, submission report, and all licences/approvals and permits and other measures identified in the environment assessment documentation.

Environmental strategies may also be developed as required throughout the Project. These will also guide environmental management of potential impacts on-site.

A list of construction sub-plans and strategies for the Project, and their approval requirements, will be updated and provided in Table 5-1.

Table 5-1 Environmental management sub plans

Document name	Document number
Erosion and Sediment Control Management Plan	
Flora and Fauna Management Plan	
Traffic and Pedestrian Management Plan	
Heritage Management Plan	
Noise and Vibration Management Plan	
Air Quality Management Plan	
Emergency Management Plan	

5.1 Project refinements

Any design changes or changes in scope of works should be communicated to the Environmental Manager. Where required, the Environmental Manager will then undertake an additional environmental assessment and consistency review to determine the approval pathway and responsibility.

Refinements to the Project may result from detailed design refinement or changed circumstances throughout construction. The Project Manager and Environmental Manager will be responsible for ensuring any changes are consistent with the Project approval. The Environmental Manager is responsible for incorporating any new environmental impacts and/or new statutory approval requirements into the appropriate environmental management documentation.

5.2 Project completion

Following commissioning and prior to demobilisation from site, the Environmental Manager shall identify the environmental issues associated with the finalisation of works.

In particular, the following completion practices shall be performed:

- Environmental approval/licence closeout
- Post construction land assessment
- Subcontractor Assessment
- Lessons learned

5.3 Restoration of the Project area

On completion of the work, all areas disturbed by construction activities (including the site compound, materials storage, access and haul roads) will be reinstated and restored to conditions identified in the pre-construction land assessment or as agreed with the landowner.

Appendix A Regulatory requirements

The table below outlines the relevant legislation, policies and guidelines applicable to implementing the CEMP. This table would be updated once the project is approved and sub-plans confirmed.

Reference	Relevance
Legislation	
<i>Environmental Planning and Assessment Act 1979</i> <i>Secretary's Environmental Assessment Requirements</i>	Secretary's Environmental Assessment Requirements have been prepared for the Project #9439. The requirements outline the key issues that must be addressed including a draft construction environmental management plan
<i>Protection of the Environment Operations Act 1997</i>	<p>Aims to minimise impacts, including noise, air and waste pollution, on the environment.</p> <p>Do not operate plant if it emits noise caused by poor maintenance or operation.</p> <p>Do not cause noise by failing to properly and efficiently deal with materials.</p> <p>Do not cause or permit land pollution other than under authority of a licence or regulation. (However it is not a land pollution offence to place virgin excavated natural material or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the EPA as an unlicensed landfill and which is operated in accordance with the regulations.)</p> <p>Do not litter in a public place or an open private place. Do not litter from a vehicle.</p> <p>Only deposit advertising material in receptacles provided for mail or newspapers or under the door of the premises.</p> <p>Do not deposit advertising material on or in vehicles.</p>
<i>Protection of the Environment Operations (General) Regulation 2008</i>	Contains penalty notice provisions for infringements of the Protection of the Environment Operations (Waste) Regulation 2005 (as amended) and the NSW PEO Act.
<i>Protection of the Environment Operations (Waste) Regulation 2017</i>	<p>Provides regulations for the storage, management and transport of waste.</p> <p>Comply with general requirements for the transport of waste. For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.</p> <p>Comply with record keeping requirements in relation to the transport of certain types of waste.</p>

Reference	Relevance
<i>Environmentally Hazardous Chemicals Act, 1985</i>	Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.
<i>Dangerous Goods (Road and Rail Transport) Act 2008</i>	Ensure that dangerous goods are transported in a safe manner.
<i>Waste Avoidance and Resource Recovery Act 2001 (WARR Act)</i>	Supplementary legislation aimed at reducing waste and resource consumption, defining the waste hierarchy and promoting its adoption across NSW.
<i>Environmentally Hazardous Chemicals Act 1985</i>	Controls the movement, storage, and disposal of chemical waste. Administered by EPA and the Hazardous Chemicals Advisory Committee.
<i>Contaminated Land Management Act 1997</i>	<p>Provides a process for investigation and where appropriate, remediating land that is considered contaminated including the duty to report contamination and undertake site audits.</p> <p>Notify the EPA if:</p> <ul style="list-style-type: none"> • Contaminants exceed thresholds contained in guidelines or the regulations where contamination has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water. • Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land. • Contamination meets other criteria that may be prescribed by the regulations.
<i>Biodiversity Conservation Act 2016</i>	Seeks to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development. Do not cause a significant impact to listed threatened species, populations or ecological communities, or their habitats.
<i>Biosecurity Act 2015 (formerly Noxious Weeds Act 1993)</i>	Control noxious weeds on the land as required under the control category or categories specified in relation to the weeds concerned. Notify relevant control authority within three days of becoming aware that a notifiable weed (W1 weed) is on land. (or ought reasonably to have known). Must not scatter or cause to scatter notifiable weed material.
<i>Environment Protection Biodiversity Conservation Act, 1999 (Commonwealth)</i>	Do not kill, injure or take a member of a listed threatened species without a permit. Comply with the terms of any EPBC Act approval for the project.
<i>National Parks and Wildlife Act 1974</i>	<p>Do not harm any animal that is of a threatened species population or ecological community, or its habitat except in accordance with a planning approval.</p> <p>Do not harm critical habitat except as in accordance with a planning approval.</p>

Reference	Relevance
	Do not harm native fauna (other than listed unprotected fauna) except in accordance with a planning approval or licence. Do not harm or desecrate an Aboriginal object or Aboriginal place without consent
<i>Heritage Act 1977</i>	Do not disturb or excavate land with knowledge or reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed; or do not disturb or excavate land on where a relic has been discovered or exposed.
<i>Water Management Act 2000</i>	Do not construct/use a water supply work, drainage work or flood work without the appropriate approval.
<i>Water Act 1912</i>	Approval may be required for developed on a designated floodplain, which can prevent land from being flooded or which can affect water flow to or from a river or lake.
<i>Waste Avoidance and Resource Recovery Act 2001</i>	Implement resource management options against a hierarchy of the following order; avoidance, resource recovery and resource, disposal.
Policies and Guidelines	
Noise	
NSW Noise Policy for Industry 2017 (EPA)	Ensure noise impacts associated with particular industrial developments are evaluated and managed in accordance with the policy Provides noise levels for assessing the potential impact of noise from industry and includes a framework for considering feasible and reasonable noise mitigation measures.
Interim Construction Noise Guideline (DECC)	Comply with the strategies to deal with the impacts of construction noise on sensitive receivers.
Assessing Vibration: A Technical Guideline 2006	Presents preferred and maximum vibration values for use in assessing human responses to vibration and provides recommendations for measurement and evaluation techniques.
Erosion and Sediment Control	
Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Blue book) (Landcom)	Implement erosion and sediment in accordance with the Blue Book during construction
Waste	

Reference	Relevance
NSW Waste and Resource Recovery Strategy 2014-21 (EPA, 2014)	Strategy to minimise waste generation, increase recycling, divert waste from landfill, reduce litter and combat illegal dumping.
Waste Classification Guidelines (EPA, 2014)	Outlines steps to correctly determine the classification of waste in accordance with the <i>Protection of the Environment Operations Act 1997</i> .
Air Quality	
National Environment Protection Council's (NEPC) – National Environment Protection Measure (NEPM) for Ambient Air Quality Guidelines 1998	Guides the formulation of strategies for the management of human activities that may affect the environment.
Heritage	
Investigating Heritage Significance (Draft Guideline) (NSW Heritage Office 2002)	Guidelines on investigating the places and items that appear to be of heritage significance.
Assessing Heritage Significance (NSW Heritage Office 2001)	Guidelines on producing a succinct statement of significance, which summarises an item's heritage values.
Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (Office of Environment and Heritage, 2010)	Outlines requirements for undertaking test excavation as a part of archaeological investigation without an Aboriginal Heritage Impact Permit (AHIP) and establish the requirements that must be followed when carrying out archaeological investigation in NSW where an application for an AHIP is likely to be made.
Assessing Significance for Historical Archaeological Sites and "Relics" (NSW Heritage Branch, Department of Planning, 2009)	To identify whether an archaeological resource, deposit, site or feature is of cultural value – a 'relic'. The assessment will result in a succinct statement of heritage significance that summarises the values of the place, site, resource, deposit or feature.
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (Office of Environment and Heritage, 2011)	The investigation and assessment of Aboriginal cultural heritage is undertaken to explore the harm of a proposed activity on Aboriginal objects and declared Aboriginal places and to clearly set out which impacts are avoidable and which are not. Harm to significant Aboriginal objects and declared Aboriginal places should always be avoided wherever possible. Where harm to Aboriginal objects and declared Aboriginal places cannot be avoided, proposals that reduce the extent and severity of harm to significant Aboriginal objects and declared Aboriginal places should be developed.
Contamination	

Reference	Relevance
National Environment Protection Council (2013). National Environment Protection Measures for the Assessment of Site Contamination	Provide adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination.

Reference	Requirement
Conditions of Approval	
<i>This table would be completed once the EIS is approved and the Project conditions of approval are available</i>	

Appendix B Environmental Policy

Construction contractor to provide environmental policy

local people
global experience

SMEC is recognised for providing technical excellence and consultancy expertise in urban, infrastructure and management advisory. From concept to completion, our core service offering covers the life-cycle of a project and maximises value to our clients and communities. We align global expertise with local knowledge and state-of-the-art processes and systems to deliver innovative solutions to a range of industry sectors.