


# Construction Environmental Management Plan (CEMP)

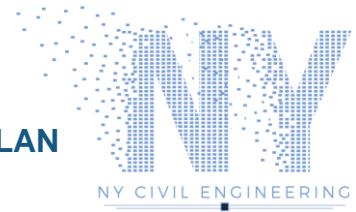
*Proposed Warehouse*

*238-258 Captain Cook Drive, Kurnell*

Issue:	A
Endorsed By (Name):	Nader Zaki
Signature (Wet Sign):	 _____
Date:	23/09/2019

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

238-258 Captain Cook Drive, Kurnell

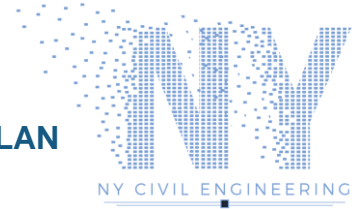


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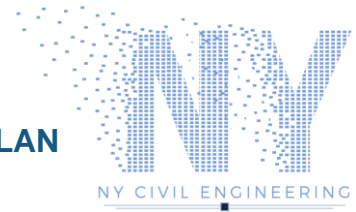


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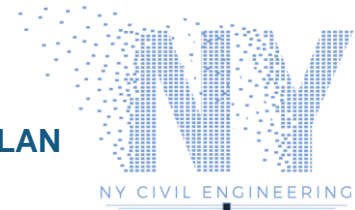
## TERMS AND DEFINITIONS

The Following terms, abbreviations and definitions are used in this plan.

Abbreviation	Meaning
CAR	Corrective Action Request
CAR	Chain of Responsibility
Client	Dicker Data
CRAW	Construction Risk Assessment Workshop
DECC	Department of Environmental Climate Change
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
CEMP	Construction Environmental Management Plan
ERAP	Environmental Risk Action Plans
EPA	Environmental Protection Agency
ESC	Erosion and Sediment Control
HAZID	Hazard Identification
HP	Hold Points
JSEA	Job Safety and Environmental Analysis
OEH	Office of Environment and Heritage
CCon	Construction Contractor
PER	Project Environmental Representative
REF	Review of Environmental Factors
SDS	Safety Data Sheet
SWMS	Safe Work Method Statement
WIRES	Wildlife Information Rescues and Education Services
WMP	Waste Management Plan

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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## 1. INTRODUCTION

This Construction Environmental Management Plan (CEMP) has been prepared to provide a logical approach to manage the construction of a warehouse and distribution centre, carparking, landscaping and site subdivision. It outlines the key management systems, procedures and controls that the CCon will use to:

- Achieve all environmental objectives
- Achieve all project objectives
- Monitor and check the adequacy of controls as they are implemented during construction.
- Implement specific mitigation measures and controls to avoid or minimise negative environmental impacts

### 1.1 Project Objectives

The Clients objectives for the project are to deliver:

- Construct a high-quality architectural designed warehouse and distribution centre with associate office and to improve the visual appearance of the industrial area and landscaping surrounds;
- Develop and adopt strategies to protect the environment and human health and make the site suitable for commercial operational use;
- to minimise the impact on native vegetation and flora and fauna habitats and areas of environmental significance;
- maintain the natural groundwater hydrology and protect the quality of existing groundwater;
- to operate and maintain a functional warehouse and distribution centre with minimum impact on the environment.

### 1.2 Purpose

This CEMP and the set of management plans listed in appendix 5 have been prepared to comply with the Conditions of Consent SSD 8662 issued by the Department of Planning and Environment (DPE) for the Project, specifically Conditions C1, C2, C3 & C4. This CEMP is also intended to ensure that positive and negative effects on the environment are assessed and been developed to:

- Ensure that the needs and expectations of the client are met;
- Ensure that the project meets contractual, legal and other environmental requirements;
- Meet the requirements of ISO 14001 including the need for continual improvement;
- Provide a link between the corporate and project management system; and
- Provide all personnel with systems, procedures and documentation necessary to undertake the construction of this project while meeting the environmental requirements.

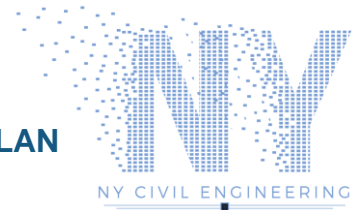
## 2. SCOPE

The Project site is located at 238-258 Captain Cook Drive, Kurnell, and is legally known as Lot 2 in DP1088703 and Lot 1 in DP225973. The area of the site is 169,030 m<sup>2</sup> and is bordered by Captain Cook Drive to the north; industrial development to the east; and vegetation to the south and west.

The Site is zoned IN1 General Industrial under Sutherland Shire Local Environment Plan 2015 (LEP 2015), and the general nature of the surrounding development is primarily industrial.

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Construction works associated with this Project includes the clearing of existing land in preparation for earthworks and construction of a warehouse and distribution centre with associated office, carparking, landscaping, services and site subdivision. The main scope of the Project includes:

- Clearing of existing bushland and landscaping,
- Establishing traffic control measures,
- Foundation preparations and compaction,
- Erection of warehouse, and office
- Priming of surfaces and asphaltting, and
- Installation of associated drainage and service
- Construction of an acceleration lane with a bus stop and island refuge

### 3. DISTRIBUTION POLICY

The CEMP will be available to all personnel via a project document control management system put in place prior to construction.

All paper copies of this CEMP must be considered as uncontrolled unless they have been allocated a copy with a red number. Where required, controlled copies of this CEMP will be published as a hard copy and allocated a copy number in red

As new amendments are issued it is the responsibility of the hard copy holders to discard the superseded pages and insert the updated pages.

#### 3.1 Issue, revision and re-issue

The CEMP must be reviewed by the HSE Manager of the CCon in order to confirm its concurrence with the requirements of the Environmental Management System and policy, contract, specifications and standards. Once the plan is deemed acceptable it shall then be approved for use on the project by the Project Manager. Signatures of the Project Manager and HSE Manager must be on the cover sheet to signify initial approval.

During the life of the project the CEMP may need updating to reflect the current state of affairs on site. These revisions may be called up due to identified deficiencies highlighted from:

- Management review
- Audit (either internal or by external parties)
- Client complaints or non-conformance reports

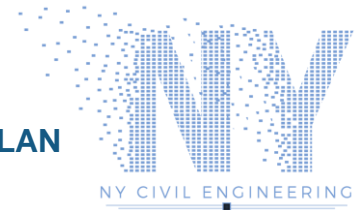
Subsequent revisions must be reviewed and approved by the Project Manager before issue. As previously stated, it is the responsibility of hard copy holders to discard the superseded pages and insert the updated pages.

### 4. OBJECTIVES AND TARGETS

Environmental Objectives and targets are established in order to assess the environmental performance of the project during construction. High-level objectives and targets for this project are listed in Table 1.

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OBJECTIVE	TARGET	MEASUREMENT TOOL
Effective site environmental controls	<ul style="list-style-type: none"> <li>• Set -up prior to starting work in the affected area</li> <li>• Maintain effective controls</li> </ul>	Inspection checklists
Environmental performance	<ul style="list-style-type: none"> <li>• No breaches or environmental infringement notices</li> <li>• No class 1 or 2 incidents</li> </ul>	Monthly reports
Compliance with legal requirements	<ul style="list-style-type: none"> <li>• No infringements</li> <li>• No formal warnings</li> </ul>	Monthly reports
Effective implementation of the environmental system	<ul style="list-style-type: none"> <li>• No non-conformances in relation to the CEMP and sub-plans</li> </ul>	Audit reports
Community issues carefully managed	<ul style="list-style-type: none"> <li>• Complainant contacted</li> <li>• Matter closed out</li> </ul>	Complaints form

**Table 1: Objectives and Targets**

Operational objectives and targets relating to significant environmental issues are contained within the operational control procedures provided in Appendix 3.

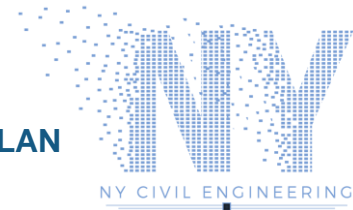
## 5. PROJECT ROLES, RESPONSIBILITIES AND CONTACTS

The key environmental management roles and responsibilities are outlined in Table 2.

POSITION	RESPONSIBILITIES
<b>Project Manager</b>	<ul style="list-style-type: none"> <li>• Ensure that well defined project responsibilities and authorities are communicated to all personnel</li> <li>• Liaise with Client and government authorities</li> <li>• Approval of the CEMP and to monitor its effectiveness</li> <li>• Appoint/nominate and provide support for the PER</li> <li>• Report on the performance of the system and environmental breaches</li> <li>• Take action to resolve environmental non-conformances and incidents</li> <li>• Ensure suppliers and subcontractors comply with requirements</li> <li>• Report environmental incidents to the local authorities as required</li> </ul>
<b>HSE Representative</b>	<ul style="list-style-type: none"> <li>• Ensure that independent audits of the system are conducted</li> <li>• Review audit outcomes and take action as necessary</li> <li>• Review environmental performance through the monthly reporting cycle.</li> <li>• Advise on environmental issues</li> </ul>
<b>Construction Manager</b>	<ul style="list-style-type: none"> <li>• Plan and supervise all site construction activities</li> <li>• Ensure all construction works meet environmental and other requirements</li> <li>• Organise and manage all personnel</li> <li>• Ensure site environmental controls are properly maintained and support the PER</li> <li>• Report all environmental incidents</li> <li>• Take action to resolve non-conformances and incidents</li> </ul>

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	<ul style="list-style-type: none"> <li>• Ensure all project personnel are properly inducted on site</li> </ul>
<b>Procurement Personnel</b>	<ul style="list-style-type: none"> <li>• Select suppliers and subcontractors based on their ability to meet environmental other stated requirements</li> <li>• Where practical, select environmentally friendly materials</li> </ul>
<b>Environment Officer</b>	<ul style="list-style-type: none"> <li>• Manage environmental records and files</li> <li>• Regular compliance checking as required by this CEMP</li> <li>• Ensure non-conformances and environmental incidents are recorded and written</li> <li>• Liaise with required stakeholders to confirm the required corrective action</li> <li>• Ensure that environmental compliance</li> <li>• Coordinate internal audits.</li> <li>• Ensure the effective establishment, implementation and maintenance of the CEMP</li> <li>• Certify compliance with all relevant regulations, procedures and policies</li> <li>• Liaise with the Project Manager on environmental issues</li> <li>• Ensure that all personnel on-site receive appropriate environmental induction and training</li> <li>• Report to the Project Manager on the performance of the system and improvement opportunities</li> <li>• Give support to all personnel in order to enable them to meet their environmental commitments</li> </ul>
<b>Subcontractors</b>	<ul style="list-style-type: none"> <li>• Participate in induction and training as directed</li> <li>• Report all incidents</li> <li>• Comply with all legal and contractual requirements</li> <li>• Comply with site environmental requirements</li> <li>• Comply with management/foreman directions</li> </ul>
<b>All personnel</b>	<ul style="list-style-type: none"> <li>• Comply with the relevant Acts, regulations and standards</li> <li>• Report any non-conformances and environmental incidents</li> <li>• Undergo induction and training in environmental awareness as directed by management</li> <li>• Report all incidents</li> <li>• Act in an environmentally-responsible manner.</li> <li>• Unexpected finds and human skeletal remains</li> </ul>

**Table 2: Roles and Responsibilities**

## 6. LEGAL AND COMPLIANCE OBLIGATIONS

Compliance requirements relevant to the project are outlined below. Environmental System Requirement - Compliance Obligations outlines the process that the organisation uses to determine legal and other mandatory requirements.

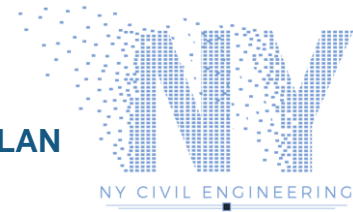
All personnel must comply with all relevant requirements including but not limited to:

- Laws (Acts, regulations and policies)
- Environment protection licence and permits



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- Development consents
- Relevant industry standards and codes.
- Contract requirements
- Other compliance obligations outline in this CEMP

A register of the relevant legislative requirements has been recorded in Appendix 2. A Licence, permits and approvals register must be developed at the start of the project to outline the full scope of the requirements for Government authority approvals. A copy of relevant permits, licences and any development approvals relevant must be kept on-site.

During the six-monthly management reviews the register must also be reviewed which is outlined in Section 15. It may also require review where there has been a change to relevant legislation.

The register must be reviewed and updated throughout the life of the project and ensure compliance with the relevant conditions. This CEMP has incorporated compliance conditions for items recorded on the Licenses Register and Project Permits. The details and controls can be found in the associated sub-plans and Environmental Risk Action Plans (ERAPs) in Appendix 4.

## 6.1 Project Planning Approval and Development Consent

This project has been assessed and approved under Section 89E of the Environmental Planning and Assessment Act 1979. The approval process includes specific planning conditions and commitments that must be addressed in this CEMP and delivered during the project.

This CEMP addresses requirements of CoA C1. The requirements of the condition are shown below in Table 3

CONDITION	REQUIREMENT	REFERENCE
C1	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	This plan
(a)	Detailed baseline data	Section 1 & 2
(bi)	Details of: The relevant statutory requirements (including any relevant approval, licence or lease conditions);	Appendix 1
(bii)	Any relevant limits or performance measures and criteria and;	Section 11
(biii)	The specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	Section 11
(c)	A description of the measure to be implemented to comply with relevant statutory requirements, limits, or performance measures criteria;	Section 13

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(di)	A program to monitor and report on the: impacts and environmental performance of the development; and	Section 13
(dii)	Effectiveness of the management measures set out pursuant to paragraph (c) above;	Section 13
(e)	A contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	Appendix 6
(f)	A program to investigate and implement ways to improve the Environmental performance of the development over time;	Section 15
(gi)	A protocol for managing and reporting any: incident and any non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);	Section 14
(gii)	Complaint;	Section 14
(giii)	Failure to comply with statutory requirements; and	Appendix 3
(h)	A protocol for periodic review of the plan.	Section 15

**Table 3: CEMP Requirements**

## 7. ENVIRONMENTAL RISK ASSESMENT AND CONTROL

Environmental Risk Management outlines the process where environmental aspects and effects are assessed.

The objective of the risk management is to identify activities that may have adverse impacts on the environment or health of personnel.

A summary of potential areas where a risk assessment should be conducted are outlined below:

- Obligations and requirements associated with the environmental approval conditions
- Emissions to air
- Releases to water
- Releases to land
- Waste management
- Contamination
- Emission of noise including vibration
- Impact on the natural environment including wildlife, biodiversity and cultural heritage
- Resource efficiency and the use of materials
- Consumption of energy

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Appendix 2 contains a list of environmental risks/issues related to the project and mitigation measure are provided to reduce the inherent risk

The assessment for significant environmental aspects is based on risk and opportunity assessment matrix.

Project risk and opportunity assessments must be reviewed and updated throughout the life of the project and ensure compliance with the relevant conditions. progresses and as a minimum as part of the Environmental Management Plan Management Review. The Project's Risk and Opportunity Register is to be maintained on a monthly basis or as required and must include project wide environmental risks and opportunities.

By way of definition, the following applies to this environmental risk and opportunity assessment process and the associated matrix.

Green Risk – environmental impacts associated with the action are generally constrained to the project site and in accordance with the environmental assessment documentation. There is a low probability of occurrence.

Orange Risk – environmental impacts associated with the actions have the potential to result in offsite impacts, where the environment recovers over the medium term. There is reasonable probability that the impact would occur with the absence of suitable controls.

Red Risk – environmental impacts that have significant offsite impacts. The environment recovers over the long term, there is impacts to the local community. There is a high probability that the impact would occur. Environmental impacts occur offsite are considered major. Impacts have resulted in the destruction of protected species, sensitive habits or other impacts not envisaged as part of the environmental assessment process. The environment is not able to recover without substantial intervention.

Significant environmental issues will be controlled to a degree which is commensurate with the level of risk and the level of influence which the Company has over these issues.

Environmental issue specific Sub-Plans have been developed for aspects or impacts representing an amber or red risk after the initial risk assessment. The Sub-Plans reference and address the strategic mitigation and control measures determined following the initial risk. In addition, an ERAP is required to be developed and implemented where an environmental obligation, environmental mitigation requirement or legal requirement dictates issues specific controls are required even though there may be a low risk to the environment. Activities, aspects and potential impacts considered to represent an extreme risk following the application of the strategic mitigation and control measures must be redesigned or re-sequenced or have the approval of the relevant HSE Leader or delegate.

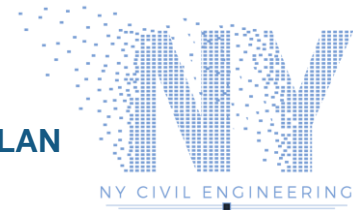
If additional risks are encountered on site during the delivery phase, these will be addressed by using a separate Environmental Risk Action Plans.

## 7.1 Severe Environmental Risk Controls

The Severe Environmental Risks (SERs) Controls Standard describes the various minimum mandatory requirements which must be in place, demonstrated and working effectively with the intent of managing severe environmental harm risks on the project. Severe environmental risks relevant to the project are outlined in Appendix 2.

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Severe Environmental Risks relate to environmental harm caused by site operations which can result in long term damage to the environment. The focus of these risks is on high consequence environmental harm risks rather than regulatory exposure.

The SERs Control Standard provides clear guidance on the required controls and expectations relating to preventing high consequence environmental impact. Additional SER controls have been included as necessary to address site specific conditions.

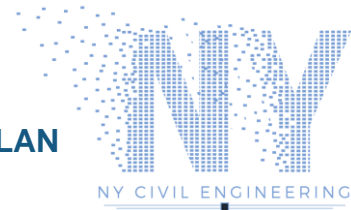
The applicable SERs on this project as determined by the risk assessment are as follows.

STANDARD SER	PROJECT SPECIFIC SER
<b>Biodiversity</b>	<ul style="list-style-type: none"> <li>• Unauthorised removal of vegetation outside of work area, potential to remove threatened species.</li> <li>• Removal of vegetation within site, potential for the wrong vegetation to be removed, uncontrolled run-off, build-up of sediment in surrounding vegetated areas and waterways, invasion of weeds, injury to native fauna.</li> <li>• Disturbance of pests and rodents onsite, potential to relocate into residential areas, increased health risks associated with increased presence of rodents.</li> </ul>
<b>Heritage</b>	<ul style="list-style-type: none"> <li>• Unexpected heritage items found, delayed work, additional studies, approvals required, damage to heritage item.</li> </ul>
<b>Water Quality and Wastewater Storage</b>	<ul style="list-style-type: none"> <li>• Sediment laden runoff from works leaving site, potential for degradation of local watercourses, increased turbidity in local waterways with impact to aquatic life.</li> <li>• Non-compliant water discharged from site, may lead to polluted water entering stormwater systems.</li> <li>• Incorrect management of contaminated or untreated materials, could result in non-compliant material entering surrounding waterways with loss of ecosystem health.</li> <li>• Storage of hazardous substances, leaking plant equipment and spillage from refuelling, could lead to pollution of stormwater systems/waterways.</li> <li>• Fuel contaminated runoff from works leaves site, potential for contaminated runoff to enter stormwater systems/waterways.</li> <li>• Disturbance of soils potentially containing acid sulphates, possibly leading to mobilisation of metals within runoff to levels toxic to natural systems, release of acidic runoff.</li> </ul>
<b>Erosion and Sedimentation</b>	<ul style="list-style-type: none"> <li>• Removal of vegetation and large areas of exposed, no vegetated ground associated with construction sites could lead to enhanced erosion of soils and build-up of sediments in run-off.</li> <li>• Sediment tracked onto surrounding roadways by construction vehicles, affecting surrounding environment and possibly resulting in complaints from neighbours.</li> <li>• Heavy rainfall events resulting in enhanced erosion and sediment-laden run-off demonstrate the site entering stormwater drains, with negative effects on surrounding waterways, water quality and aquatic life.</li> </ul>

The required elements for the successful completion of the monthly SER activities are described below.

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- The monthly field check should be recorded on the SER Field Report and form part of evidence to meet the monthly SER review. The field check is to be completed by a delegate from the operational team.
- System-based controls are to be reviewed for application and effectiveness on a monthly basis with the bounds of the project's construction environmental management plan.
- The monitoring activity frequency will be dependent on occurrence of activities with the potential to cause high-consequence environmental impact on the project and reflect the current construction risk processes and methodologies.
- If all aspects of the performance criteria are working effectively in all areas where the risk applies, then the risk can be deemed to be managed and controlled.
- The SER Field Report and SER Planning and Control Report shall be completed on a monthly basis
- SER outcomes shall be monitored monthly during the Portion/Project Review
- Impact will be used to document the completed monitoring activities.

The Severe Environmental Risks Control Adequacy Assessment Tool is to be used as guidance for the implementation of the standard.

The Severe Environmental Risks Control Adequacy Assessment Work Instruction defines the procedural requirements for completing the monitoring activities.

## 8. TRAINING, AWARENESS AND COMPETENCY

The Project Manager has the responsibility to ensure all personnel receive suitable environmental induction and training to ensure they are aware of their responsibilities and are competent to carry out the work. Environmental requirements must be explained to employees during site inductions and ongoing training via toolbox meetings, daily pre-start meetings and notifications. All employees including subcontractors will receive induction and training in the following:

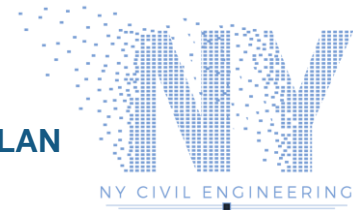
- Environmental Policy
- Site environmental objectives and targets
- Understanding individual authorities and responsibilities
- Site environmental rules
- Potential consequences of departure from rules
- Emergency procedure and response (for example, spill clean-up)
- Basic understanding of their legal obligations.

Personnel performing tasks which can cause significant environmental impacts will be competent on the basis of appropriate education, training and experience. The Environmental Representative for the project must establish a schedule of environmental training for all personnel.

Training in high-risk aspects will be undertaken as the project progresses. An outline of the proposed training is provided in Table 4. The training will be scheduled to reflect the requirements of the construction programme.

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ASPECT	TRAINING INCLUSION	PERSONNEL REQUIRED	TIMING/FREQUENCY/ MEANS
Emergency spill response	<ul style="list-style-type: none"> <li>• Use and location of spill kits</li> <li>• Spill control</li> <li>• Emergency response procedures</li> <li>• Presentation and assessment</li> <li>• Spill response drill</li> </ul>	Operational personnel	<ul style="list-style-type: none"> <li>• Project induction</li> <li>• Project toolbox talks</li> </ul>
Erosion and sediment control	<ul style="list-style-type: none"> <li>• Standard erosion and sediment controls from the Landcom Blue Book</li> <li>• Implementation of controls on-site</li> <li>• Erosion and Sediment Control Plans</li> </ul>	Operational personnel	<ul style="list-style-type: none"> <li>• Project induction</li> <li>• Project toolbox talks</li> </ul>
Heritage awareness	<ul style="list-style-type: none"> <li>• Stop works and reporting protocols for works around excavations</li> </ul>	Operational personnel	<ul style="list-style-type: none"> <li>• Project induction</li> <li>• Project toolbox talks</li> <li>• Protocol posted on message boards</li> </ul>
Contamination awareness	<ul style="list-style-type: none"> <li>• Contamination status of site induction</li> <li>• Stop works protocols for unidentified potential contamination</li> </ul>	Operational personnel	<ul style="list-style-type: none"> <li>• Project induction</li> <li>• Project toolbox talks</li> <li>• Protocol posted on message boards</li> </ul>
Environmental legal obligations	<ul style="list-style-type: none"> <li>• Protection of the Environment Operations Act 1997 and other project requirements</li> <li>• Applicable fines and prosecutions</li> </ul>	Operational personnel	<ul style="list-style-type: none"> <li>• Project induction</li> <li>• Project toolbox talks</li> </ul>
Energy and resource usage	<ul style="list-style-type: none"> <li>• Awareness training of energy and resource efficiency in the workplace including office/compound and site initiatives</li> </ul>	Operational personnel	<ul style="list-style-type: none"> <li>• Project induction</li> <li>• Project toolbox talks</li> </ul>
Community/Stake holder awareness	<ul style="list-style-type: none"> <li>• Adjacent community project involvement</li> <li>• Relevant project stakeholders</li> <li>• Accepted behaviours</li> <li>• Approved hours of work</li> </ul>	Operational personnel	<ul style="list-style-type: none"> <li>• Project induction</li> <li>• Project toolbox talks</li> </ul>

**Table 4: Training Requirement**

Environmental content will be included in toolbox talks and all training and toolbox meetings will be recorded. In addition, the project will deliver themed toolbox talks as required. All site staff are required to sign the CEMP acknowledgment form in Appendix 4.

## 9. COMMUNICATION

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

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## 9.1 Internal Communication

- Employee induction
- Toolbox sessions
- Briefings, notifications and alerts.
- Contract Reviews
- Audit reports
- Incident reports
- Noticeboards
- Site meetings
- Management reports
- Site inspection reports

## 9.2 External Communication

- Site meetings
- Discussions with adjoining land owners and the community who may be affected by the project.
- All significant incidents notified to the Client
- Project reports to the Client at progress meetings and in the project report
- Meetings and correspondence with interested parties (for example, local council and Environment Protection Authority (EPA) as necessary)

## 10. DOCUMENT CONTROL AND RECORDS

Workplaces and Projects shall establish a record management system that allows for the ready access to HSE information. This may include hard copy folders, server-based electronic systems or proprietary document management systems.

Personnel responsible for work packages must ensure that the proper maintenance and upkeep of the workplace / project record management system is observed. This includes but not limited to:

- Files and records are kept up-to-date
- Records are not lost, damaged or inadvertently destroyed
- Records are maintained in accordance with the contractual, statutory requirements and timeframes
- Kept as objective evidence of compliance with environmental requirements

## 11. OPERATION CONTROL

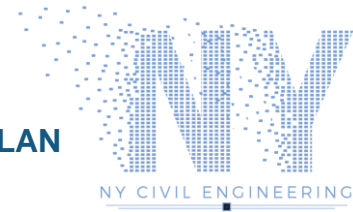
### 11.1 General

Activities and business processes that have the potential to significantly affect our environmental performance must be identified, planned, documented and controls measures implemented to ensure the Company's policy, objectives and compliance obligations are met.

Environmental Primary Standards have been developed from compliance obligations. These obligations provide the framework for eliminating or reducing risk of environmental harm as well as creating opportunity for environmental improvement.

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Specific operational controls are required to manage environmental issues, below are some tools in order to achieve the project objectives:

- ERAPs contained in Appendix 3
- Relevant Sub-plans Appendix 5
- Safe Work Method Statements (SWMS), EWMS, Job Safety and Environment Analysis (JSEA's), Hazard Identification (HAZID), Construction Risk Assessment Workshop (CRAW), Inspection and Test Plans (ITPs)/check sheets (as appropriate)
- Work instructions

## 11.2 Hold Points

A system of Hold Points (HP) will be used during construction of the Project to confirm that all high-risk activities are undertaken in accordance with the specified requirements. The environmental HPs for the Project will include but are not limited to:

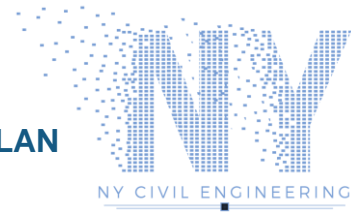
ITEM	PROCESS CHECK	ACCEPTANCE CRITERIA	APPROVAL RESPONSIBILITY
<b>CEMP</b>	Construction work	Site-specific CEMP has been developed, reviewed and approved	<b>Project Manager</b>
<b>Sediment and erosion control measures</b>	Construction activities involving ground disturbance	Sediment and Erosion Control Plan has been developed, reviewed, approved and implemented	<b>Construction Manager</b>
<b>Site clearing/vegetation removal</b>	Start of site clearing or vegetation removal	Clearing limits have been verified against the project approval, limits have been set out and vegetation to be retained has been delineated and/or protected	<b>Project Manager</b>
<b>Construction methodologies - direct delivery and subcontract works</b>	Construction process representing potential medium or high impact to the environment	Construction methodology, SWMS and JSEA have been reviewed by the WHSEQ Manager and addresses the requirements of the ERAPs	<b>Site Engineer</b>
<b>Dangerous goods</b>	Transport and storage of dangerous goods	Verification that transport vehicles meet the requirements, and all applicable licences are in place and verified, and landfill can lawfully receive the waste Verification that bunded storage is provided and offset distances are maintained for the storage area	<b>Project Manager</b> <b>Construction Manager</b>
<b>Controlled/hazardous waste</b>	Transport of controlled / hazardous waste from the site	Verification waste has been classified in accordance with the guidelines, transport licensing in place and landfill can lawfully receive the waste	<b>Project Manager</b>

Table 5: Operational Hold Points



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## 11.3 Design

Should there be any temporary works that require designing the following environmental issues should be considered:

- Conditions of approval and development consent requirements
- Mitigation measures outlined in the environmental assessments
- Minimising any adverse impacts on the environment including energy efficient operation, incorporation of sustainable or recycled materials
- Improving design efficiency to conserve natural resources
- Meeting environmental codes, regulations and other requirements.
- Contractual environmental design requirements and Scope of Works and Technical Criteria (SWTC)

These issues should be considered while taking into account the practicalities and economic realities of the project and site.

## 11.4 Procurement

The supply of goods/services via subcontractors and suppliers will be managed with the particulars below:

- Supply chain partners are required to nominate relevant environmental risks and proposed mitigation measures associated with their scope of work
- The environmental performance of subcontractors will be monitored during site inspections.
- Environmental issues should be taken into account when evaluating appropriate subcontractors and suppliers
- Supply, subcontract and consultancy agreements must address the relevant environmental compliance obligations. Agreements will outline the contractual requirements to be delivered by the supply chain through their scope of works and as outlined in the System Requirement Procurement and Supply Chain.
- Suppliers of chemicals and hazardous substances will be required to submit SDS's with delivery or prior to chemicals arriving at site.

## 11.5 Handling, Storage, packing and Transport

The storage and handling of dangerous goods and hazardous materials must be in accordance with Material SDS and the requirements of the Australian Dangerous Goods Code.

Specific requirements in the Dangerous Goods (Road and Rail Transport) Act includes details for the transport of dangerous goods. Where dangerous goods need to be transported the requirements of the Act must be complied with by the CCon.

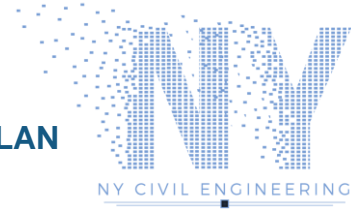
Transport documentation must include:

- Project/workplace name, contact number
- Transporter name, contact number
- Transport date, origin and destination
- Product name, classification, container type, quantity.

Upon deliver the dangerous goods must be stored in a safe area which will prevent or contain accidental spillage and harm to the environment. SDS must be stored along with or at the point of storage.

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## 11.6 Construction Processes

Environmental requirements, relating to manufacture, construction and fabrication processes, are defined in:

- Contract documents
- Environmental control procedures
- Construction methodologies, Safe Work Method Statements and JSEAs
- Inspection and Test Plans, Task Complete Checklists and associated documents

### 11.6.1 Environmental High-Risk Planning

Activities that have the potential to cause adverse environmental impacts or are identified as high-risk activities require the development and implementation of specific method statements.

The method statement is required to address the environmental high-risk activities and can be combined with any existing construction planning documentation. The environmental team, engineering team and relevant workplace supervisors are required to provide their input in the development of the method statements.

All workers involved in high risk activities shall be instructed on the key environmental risks and the required mitigation measures prior to the commencement of the activity.

## 12. EMERGENCY PREPAREDNESS AND RESPONSE

The types of environmental emergencies which could occur on this site are outlined in Appendix 6. The Client and relevant statutory and regulatory authorities are to be informed as necessary.

All environmental emergencies are to be handled as follows:

- Immediately report the incident to the Project Manager/Construction Manager who will assess the situation and manage the following steps
- Take all possible steps to contain further damage to personnel and the environment.
- Notify authorities as appropriate and in accordance with the regulatory
- Contact emergency service personnel as necessary
- Inform the Client as necessary and in accordance with contractual requirements
- Complete a detailed report of the incident using Environmental Incident Complaint Report
- Liaise with the Clients about corrective and preventive actions required
- The designated personnel will undertake the corrective and preventive actions.

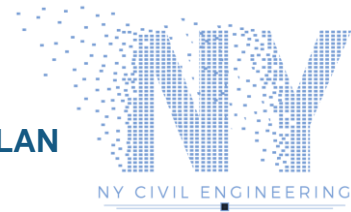
Contact numbers of all Emergency services must be displayed in the main site office. The emergency response process is to be tested via an environmental emergency drill no more than every 12 months.

### 12.1 Site Shutdown Plan

Site shutdown periods must be planned and coordinated to ensure the risk of environmental impact is minimised. Shutdown periods are considered to be any period in which construction activities are not planned to take place on the site for more than 3 consecutive days. This includes public holiday and RDO periods. Site shutdown planning must be undertaken in accordance with System Requirement Environmental Planning. Planning activities must ensure that inspections, resources and contingency measures are agreed and implemented for the shutdown period.

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## 13. MONITORING AND MEASUREMENT

Key characteristics of the project operations and activities which have a significant impact on the environment will be regularly monitored and measured. This will include:

- Recording information to track performance.
- Monitoring operational controls.
- Conforming to objectives and targets.

In order to monitor environmental issues on site an Environmental Inspection Report must be used and issued to the Project Manager on a fortnightly basis.

The site manager is to complete a fortnightly safety and environmental checklist to monitor environmental issues on-site and issue to the Project Manager for review and signing.

Issues identified during environmental inspection which require further action must be recorded and logged for further action.

Non-conformance with operational control procedures or the EMS that cannot be rectified immediately will be recorded and addressed.

Where deemed necessary by the WHSEQ Manager and as a result of revisions to project scope or changes to project risks, additional ERAPs to control potential impacts will be developed.

### 13.1 External Monitoring and Compliance

In addition to the above standard monitoring and measurement requirements, this specific project has been conditioned under C14-C20 to undertake staged project lifecycle monitoring and audits.

#### 13.1.1 Independent Environmental Audit

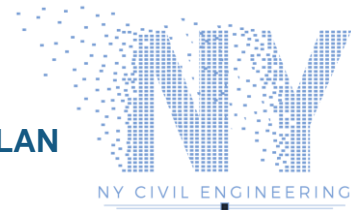
To fulfil the planning conditions, the environmental audit will be a combination of documentation review (Management plans) as well as completing a site visit to confirm the implementation of relevant management plans and procedures.

In accordance with the requirements for an Independent Audit Methodology and Independent Audit Report in the Independent Audit Post Approval Requirements (Department 2018). the following information is to be reviewed:

1. An assessment of compliance with:
  - a. Conditions of consent applicable to the stage of the development that is being audited;
  - b. All post approval documents prepared to satisfy the conditions of consent, including an assessment of the implementation of Environmental Management Plans and Sub-Plans;
  - c. All environmental licenses and approvals applicable to the development excluding environmental protection licenses issued under the Protection of the Environment Operations Act 1997;
2. An assessment of the environmental performance of the development, including but not limited to, an assessment of:
  - a. Actual impacts compared to predicted impacts documented in the environmental impact assessment
  - b. The physical extent of the development in comparison with the approved boundary, and any potential off-site impacts;

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- c. Incidents, non-compliances and complaints that occurred or were made during the audit period;
  - d. The performance of the development having regard to agency policy and any particular environmental issues identified through consultation carried out when developing the scope of the audit;
  - e. Feedback received from the Department, and other agencies and stakeholders, including the community on the environmental performance of the project during the audit period;
3. The status of implementation of previous independent Audit findings, recommendations and actions;
  4. A high-level review of the project's environmental management system, including assessment of any third-party certification of them, the type, nature and scope of the systems having regard to the nature and scale of the development, and the implementation of the systems. It is not expected that an Independent Audit comprises a management system audit, however any key deficiencies identified in the system should be discussed;
  5. A high –level assessment of whether Environmental Management Plans and Sub-plans are adequate; and
  6. Any other matters considered relevant by the auditor or the Department taking into account relevant regulatory requirements and legislation and knowledge of the development's past performance.

The assessment of the implementation of each of the main management plans associated with the construction works include:

- Construction Environmental Management Plan
- Construction Noise and Vibration Management Plan (including any tested results)
- Dust mitigation measures
- Erosion and sediment control plans (including containment of surface water runoff from site and mitigation of mud tracking off site from vehicles)

The audit will also review the construction contractor management including:

- Monthly environmental reports
- Complaints register and correspondence
- Incident reporting
- Rectification of non-conformances from internal audits and complaints
- Waste receipts for contaminated soil removed from site
- General management of site
- Internal audits

A summary report will be provided within two weeks upon the initial site visit. The report will identify where good environmental practices were observed, as well as identify where non-conformances were identified and improvements can be achieved. The report will include relevant photos and will comply with the scope audit as defined by the planning condition.

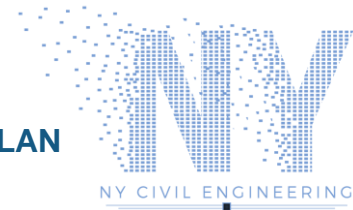
## 13.1.2 Independent Compliance Monitoring

To fulfil the planning condition and supplement environmental audits, the Compliance Monitoring and Reporting Program has been proposed for this project in accordance with the Compliance Reporting Post Approval Requirements, (Department 2018).

The Compliance Monitoring and Reporting Program will contain a compliance table that:

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- Identifies the requirements in all conditions of consent that must be complied with during each phase of the development;
- Sets out the compliance monitoring and methodology that will be used to assess compliance with each compliance requirement: and
- Sets out the type of data or evidence that is to be collected to assess whether compliance has been achieved.

## 13.2 Corrective Actions

Corrective actions are differentiated by risk ranking. The nominated timeframes to resolve items on the CAR register are as shown in Table 6.

CAR RISK RANKING	TIMEFRAME FOR RESOLUTION
1	Action needs to be commenced immediately to resolve issue
2	Action needs to be resolved within one week
3	Action needs to be resolved within one month

Table 6: Corrective Action Timeframe

Refer to the Section 14 for further detail.

## 13.3 Monthly Environmental Reporting and measurement

The CCon must conduct monthly environmental reporting which is to be completed by the Project Leader or who is responsible for ensuring environmental performance information is included in each months report this includes but not limited to:

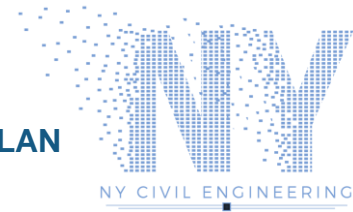
- Summary discussion on project risks and opportunities – to be read in conjunction with the risk register
- Environmental performance outcomes, improvement initiatives or corrective measures
- Client and stakeholders engagement and interface. In particular, client feedback on project environmental performance.
- Environmental incident and event management including the outcomes from incident investigations and corrective actions
- Content for the environmental project dashboard

Client reporting requirements are to be included in this Construction Environmental Management Plan (CEMP). Subcontracts and supply chain agreements must include supply chain reporting requirements as necessary. This may include the following:

- Environmental management reporting requirements and key performance indicators
- Waste management reporting
- Project specific conditions of approval or environmental compliance reporting requirements
- Greenhouse gas and life cycle reporting
- Supply chain environmental performance reporting shall be used as necessary to inform project and workplace environmental reporting.

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## 13.3.1 Monthly Project Environmental System Self-Checks

On a monthly basis, the project will assess the performance and implementation of the project environmental system through the project Environmental System Self-check. Outcomes of the project environmental system self-check are to be retained in the project records.

The table below outlines the requirement and criteria to be revised and the relevant frequency.

SYSTEM REQUIREMENT	CRITERIA	FREQUENCY
Severe Environmental Risk Program	Program implemented and actions complete	Monthly
Site inspection implementation	Site inspections have been completed in accordance with the environmental management plan requirements.	Monthly
Event management	Environmental incidents have been reviewed, investigations completed and actions closed out.	Monthly
Environmental Monitoring Programme	Environmental monitoring has been completed and reviewed for compliance. Non-compliances have been actioned and closed out	Monthly
Waste management	Project waste management register is up to date including spoil management and disposal	Monthly
Conditions of Approval tracking	Conditions of approval compliance matrix has been reviewed and updated demonstrating compliance with conditions	Quarterly
Environmental Licences	Environmental licence compliance has been reviewed and reporting completed as nominated.	Quarterly

Table 7: Frequency of Plan Review

## 13.3.2 Supply Chain Environmental Compliance Obligations Review

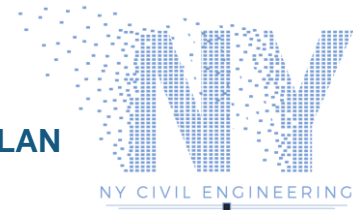
Suppliers and subcontractors operating on the project will be subject to environmental performance requirements.

Environmental performance requirements will apply to all suppliers and subcontractors in accordance with the supply or subcontract agreements.

To ensure supply chain environmental performance requirements are being met on the project the following will be implemented:

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- Supply chain audits - audits of the implementation of supply chain environmental systems on projects will be undertaken. Supply chain audits will verify implementation of the environmental requirements from their respective agreements.
- Environmental inspections on the project will review supply chain performance.
- Monthly Environmental Reports - as required to report on environmental performance and as outlined in supply chain agreements
- Waste disposal reporting - all supply chain partners operating on site with obligations for waste disposal will maintain waste disposal records and provide reports on a monthly basis
- Environmental Monitoring - where required by their supply chain agreement environmental monitoring to verify environmental performance targets are being met is to be undertaken and reported.

## 14. INCIDENTS, COMPLAINT, CORRECTIVE AND PREVENTATIVE ACTION

The management, investigation, reporting and notification process for environmental events, including positive events is to be undertaken in accordance with the System Requirement Event Management and Reporting.

All incidents, potential incidents and complaints must be reported so they can be investigated and prevented from recurring. The Environmental Incident and Complaint Report will be completed and issued to the Project Manager for all potential or actual Class 1 or Class 2 incidents. The completion the Report for Class 3 incidents is at the discretion of the Project Manager.

The Environmental Leader, HSE General Manager and Head of Legal will be notified by telephone as soon as practical after any actual or potential Class 1 and Class 2 incidents with the potential to result in regulatory action.

Environmental incident is classified into three classes, as shown in Table 8.

CLASS	DESCRIPTION
Class 1	<ul style="list-style-type: none"><li>•Environmental incidents that create permanent or long-term damage to the environment. This damage will result in the environment taking 12 months or more to return to pre-existing conditions.</li><li>• Major environmental investigation and potential for large prosecution.</li></ul>
Class 2 (including potential)	<ul style="list-style-type: none"><li>•Environmental incidents that create short to medium-term damage to the environment. This damage will result in the environment taking up to 12 months to return to pre-existing conditions.</li><li>•Potential for prosecution or infringement notice.</li></ul>
Class 3	<ul style="list-style-type: none"><li>•Environmental incidents that typically cause short-term or nuisance damage. The damage is easily rectified usually within one day.</li><li>•Class 3 incidents do not cause medium or long-term damage.</li></ul>

Table 8: Environmental Incident Rating

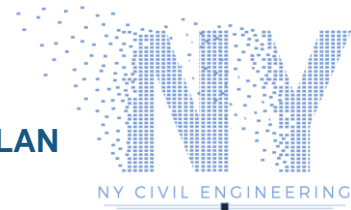
### Class 3 Incidents

Where a Class 3 incident has occurred, the Site Manager or immediate supervisor is to be informed.

### Actual or Potential Class 2 Incidents

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Where an actual or potential Class 2 incident has occurred, Group Management is to be informed via the Project Leader. Class 2 incidents are to be investigated using a recognised investigation protocol.

## **Class 1 Incidents**

Where a Class 1 incident occurs the Environmental Leader – Australia Hub, HSE General Manager and the Head of Legal are to be informed immediately.

All Class 1 & Class 2 incidents will be reported to the relevant State & Federal Authorities as required under relevant Acts & Regulations. Further details are provided in the section External Incident Reporting below.

Complaints will be reported to external authorities in accordance with specific licence/permit or approval requirements.

HSE Internal Incident Notification shall be completed for all Actual & Potential Class 1 & Class 2 Incidents within 24 hours of the incident occurring and sent (email/fax) to the Distribution List as below:

- Project Environmental Representative
- Project Leader
- Director
- Area Manager
- HSE General Manager
- Head of Legal

## **14.1 Incidents and Complaints Reporting**

Environmental incidents and complaints are to be investigated, documented, actioned and closed out as per the details provided in the investigation process above.

An Environmental Incident and Complaint Report shall be completed for all environmental incidents and complaints within 2 working days of the incident and forwarded to the Project Leader.

The CCon shall provide notification of the incident to the Client's Representative as required and in accordance with the contract.

Class 1 and Class 2 reportable incidents will be reviewed by the Environmental Leader – Australia Hub, HSE General Manager and Head of Legal before formal correspondence is issued to external parties or regulatory authorities.

Management system non-conformances and recurring environmental incidents will be handled in accordance with the CCon Continual Improvement Corrective and Preventative Action Plan.

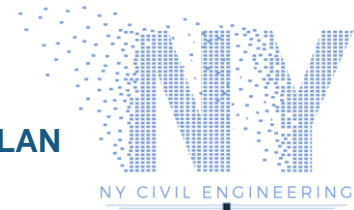
Where an environmental non-conformance or incident is identified, corrective and preventive actions will be developed and may include:

- Reviewing and improving existing environmental controls and JSA/work method statements
- Undertaking site rehabilitation
- Increasing site inspections and monitoring



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- Modifying construction or installation methods
- Increasing environmental awareness including re-training and toolbox meetings.

Note: where a Class 1 incident has occurred the HSE General Manager will initiate the investigation and allocate responsibilities, an external consultant may be engaged. Authorities will be notified in accordance with the legislative timeframes in the applicable state.

## 14.1.1 Senior Leaders Environmental incident review

For all Class 1 & Class 2 incidents, within 3 days the Project Leader will convene a briefing with the relevant Senior Business Leader/Area/Operations Manager to provide an update on the incident investigation and to allow the Area/Operations Manager to be actively involved in the investigation process. The briefing will include discussion on the progress of the investigation and any specific initial findings. A status report on any rectification work or maintenance activities to the relevant environmental controls will also be provided.

The following information relating to the incident investigation shall be forwarded to the Senior Business Leader/Area/Operations Manager and HSE Manager.

- The condition of the environment and the status of any rectification or remediation works,
- The completed incident investigation report, including appropriate causal analysis and corrective actions,
- Program for the implementation of the corrective actions and any maintenance activities,
- A completed HSE Learning Bulletin template to be included in the monthly Learning Bulletin,
- Any other relevant information.

## 14.2 External Incident Notification

### 14.2.1 State Matters

The EPA must be notified immediately of all pollution incidents that cause or threaten material harm to the environment.

Harm to the environment is “material” if the effect (or potential effect) from an incident on the health or safety of humans or ecosystems is not trivial and or the results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceed \$10,000.

Incidents requiring notification to the EPA must also be immediately notified to the Environmental Leader and the Head of Legal.

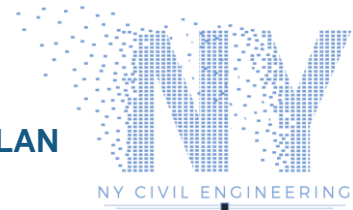
If an incident presents an immediate threat to human health or property, 000 will be called.

The EPA environment line will be contacted on 131 555. The notification will need to include information on:

- The time, date, nature, duration and location of the incident

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- The location of the place where pollution is occurring or is likely to occur
- The nature, the estimated quantity or volume and the concentration of any pollutants involved
- The circumstances in which the incident occurred (including the cause of the incident, if known)
- The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution
- Other information prescribed by the regulations.

In addition to notifying the EPA of pollution incidents, other authorities must also be notified immediately including:

- The Ministry of Health (via the local Public Health Unit – (02) 9391 9000)
- SafeWork NSW (13 10 50)
- Sutherland Shire Council ((02) 9710 0333)
- Fire and Rescue NSW (000).

Regardless of the actual or potential impact, these authorities must be notified under the amended legislation for all notifiable pollution incidents. Further information about the incident must be provided immediately if it becomes available after the initial notification.

Records of contact with and details of the information provided to external authorities must be maintained in the project records.

## 14.3 Client Complaints

All Public complaints must be handled using an Environmental Incident and Complaint Report form.

Management system non-conformances and recurring environmental incidents will be handled in accordance with the EMS – Corrective and Preventive which may include:

- Undertaking site remediation and rehabilitation
- Increasing site inspections and monitoring
- Increasing environmental awareness (re-training, toolbox meetings)
- Reviewing and improving existing environmental controls and JSA/work method statements.

## 15. MANAGEMENT REVIEW

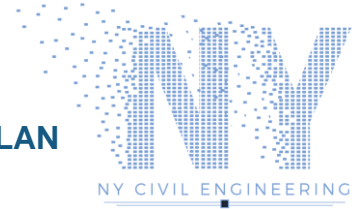
Management reviews will be undertaken as part of the continual improvement process. The reviews will be initiated by the Environmental Manager and includes relevant project team members and stakeholders. The environment team will meet at least monthly, to review environmental management issues for the Project. The environment team meeting can be run in conjunction with a wider project team meeting if the Environmental Manager deems it appropriate.

The reviews will include:

- Consideration of the general progress of work and the level of overall environmental risk;
- Consideration of monitoring, inspection and audit results
- Consideration of recent and relevant incidents and any lessons learnt
- Consideration of any new regulatory obligations

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- Consideration of any recorded pollution complaints
- A review of the effectiveness of environmental controls, including erosion and sediment controls
- Consideration of changes in operational needs such as resourcing
- Feedback from relevant stakeholders.

The outcomes of the environmental reviews may trigger the amendments to this CEMP and related documentation, revision to the Project's environmental management system, review of the risk assessment, re-evaluation of the project objectives and targets as well as input into other project documents.

## 16. ENVIRONMENTAL MANAGEMENT SYSTEM AUDIT

Auditing of the project Environmental Management System will be carried out in accordance with the System Requirement Compliance, Review and Assurance. The audit will evaluate compliance with this CEMP and associated documentation including legal, contractual and other requirements.

It is expected that the project will be audited within 3 months of commencing on site and approximately every 3-6 months. The relevant HSE Leader, in consultation with the project leadership team, will decide on the frequency, scope and timing of project/site audits.

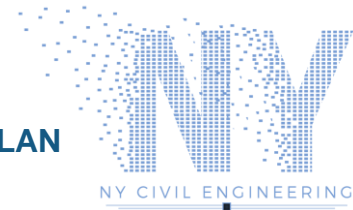
An audit report will be issued to management for action. Actions will be followed up for close-out of actions within 1 month of the issue of the audit report.

## Appendix 1: Legal requirements

LEGAL REQUIREMENT	SUMMARY OF OBLIGATION	RELEVANCE TO PROJECT
<b>Environmental Planning and Assessment Act 1979</b>	This Act establishes a system of environmental planning and assessment of development proposals for the State. This project has been assessed and approved under Section 89E of the Environmental Planning and Assessment Act 1979.	<b>High relevance</b> The Development Application conditions and obligations are incorporated into the specification documents and this CEMP.
<b>Local Government Act 1993</b> <b>Local Government (General) Regulation 2005</b>	The Local Government Act and Local Government (General) Regulation provide a legal framework for an environmentally responsible system of local government including the responsibility to administer various regulatory systems (for example, environmental planning, development consents and conditions of approval).	<b>Medium relevance</b> Sutherland Shire Council (the local government body for this area) has a number of powers to control local issues including development applications. The project is approved by NSW Department of Planning and Environment as a State Significant Development.
<b>Roads Act 1993</b> <b>Roads (General) Regulation 2000</b>	This Act and Regulation primarily provide for the opening and closing of public roads, identification of road boundaries and road widening, road levels, classification of public roads, road work, protection of public road and regulation of traffic, regulation of work, structures and activities.	High relevance This Act applies to activities that impact roads and require temporary/ permanent changes to traffic or infrastructure (Roads and Maritime Services for state and councils for local roads).
<b>Soil Conservation Act 1938</b>	This Act makes provision for the conservation of soil resources, farm water resources and the mitigation of erosion. The Act is binding on the Crown; however, the Crown is not liable for prosecution. The Act provides for notification in the government gazette catchments where erosion is liable to cause degradation of rivers and lakes (i.e. protected land).	No relevance This Act has low relevance as the site is not located within “protected land”. Further, such notification has not been given to the owner of the land.
<b>Environment Protection and Biodiversity Conservation Act 1999 (Cwth)</b>	The main purpose of this Act is to provide for the protection of the environment especially those aspects that are of national environmental importance and to promote ecological sustainable development. The Act binds the Crown. Do not take, use, keep or	Low relevance This Act is of little relevance to this project as it has been determined not to trigger the provisions of the act.

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

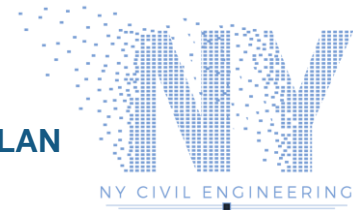
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	interfere with “nationally significant” cultural and natural resources, protected wildlife and protected plants without approval.	
<b>Native Vegetation Act 2003 Native Vegetation Regulation 2013</b>	<p>This Act and Regulation provide for the conservation and management of native vegetation by requiring Development Consent to be obtained for the clearing of native vegetation. Section 12 of the Native Vegetation Act 2003 excludes the clearing of land carried out in accordance with consent under Division 3 of Part 9 of the Roads Act 1993. Clearing of native vegetation required for construction of the work under the contract would be covered by such consent.</p> <p>The Native Vegetation Regulation 2013 allows for the development of self-assessable codes for clearing of feral species, clearing of invasive species, environmental works, thinning native vegetation, clearing of paddock trees and clearing of mulga.</p>	<p>Low relevance</p> <p>Significant impact to native vegetation is not required for this project.</p>
<b>Land and Environment Court Act 1979</b>	<p>The Land and Environment Court is constituted under this Act. The jurisdiction of the Court is divided into numerous classes. The relevant classes for the project cover matter such as the prosecution for offences under various environmental legislation and to appeal against conditions of approvals, permits or orders.</p>	<p>Low relevance</p> <p>The relevance of this Act would only apply to work under the contract if the CCon was prosecuted for an environmental offence.</p>
<b>Greenhouse Gas Emissions National Greenhouse and Energy Reporting Act 2007</b>	<p>Corporations emitting more than 50kT of carbon dioxide equivalent units are required to register and report their Scope 1 and Scope 2 emissions for all facilities in which they have operational control. Facilities emitting more than 25kT of carbon dioxide equivalent units must register and report Scope 1 and Scope 2 emissions.</p>	<p>High relevance</p> <p>If the CCon is a registered entity under this Act. The Scope 1 and Scope 2 emissions associated with the project must be reported. This includes the collation and reporting of subcontractors site emissions.</p>
<b>Contaminated Land Management Act 1997</b>	<p>This Act provides for a process to investigate and remediate land that has been contaminated and presents a significant risk of harm to human health. Section 60 of the Act is a “duty to report contamination”. This duty applies to owners of land and persons who become aware their activities have contaminated the land.</p>	<p>Medium relevance</p> <p>The relevance of this Act will be in the event that suspected or potentially contaminated ground is found during construction activities.</p>
<b>Rural Fires Act 1997</b>	<p>This Act is intended to prevent, mitigate and suppress bush and other fires. It places a duty on the occupier of the site to extinguish fires during bushfire danger periods or if unable to</p>	<p>High relevance</p> <p>This project site and surrounding areas are prone to bushfires.</p>

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	do so, notify appropriate firefighting authorities of the existence of the fire and its location.	
<b>Environmentally Hazardous Chemicals Act 1985</b>	This Act prohibits the manufacturing, processing, keeping, distributing, conveying, using, selling or disposing of an environmentally hazardous chemical or waste (prescribed activity) except under the provisions of a chemical control or a licence. The EPA is required to prepare inventories of environmentally hazardous chemicals and declared chemical wastes.	Low relevance It is not anticipated any environmentally hazardous chemicals or declared chemical waste will be used or stored on the site. The Act therefore has little relevance to the site other than being aware of the existence of registers of declared chemical wastes and environmentally hazardous chemicals.
<b>Dangerous Goods (Road and Rail Transport) Act 2008</b>	The purpose of this Act is to regulate the transport of dangerous goods by road and rail to promote public safety and protect property and the environment. The transport of dangerous goods is required to be appropriately licensed (both vehicle and driver). Depending on the quantities being transported, the Act outlines specific requirements for including appropriate placards on the transport vehicle, emergency procedures, personal protective equipment, manifest documentation and fire extinguishers.	High relevance The relevance of the Act is in respect to the transport of dangerous goods to and from the site. The project will require the use of a variety of dangerous goods. The CCon will need to review and ensure dangerous goods requirements are addressed where transported by its vehicles, plant and equipment, with appropriate licences to be in place.
<b>Water Management Act 2000 Water Management (General) Regulation 2004</b>	This Act repeals the Rivers and Foreshores Improvement Act, 1948 and the Water Act, 1912. The provisions of both the aforesaid Acts are progressively rescinded as Water Management Plans are prepared and gazetted for catchment areas within the State. This Act and Regulation provide for the protection, conservation and ecologically sustainable development of water sources of the State and in particular to protect, enhance and restore water sources and their associated ecosystems.	Medium relevance This Act has some relevance due to sites proximity to water.
<b>Coastal Protection Act 1979</b>	This Act requires public authorities to notify the Coastal Council of NSW of any information, proposed activity or work that in the opinion of the public authority is relevant to the exercise of the function of the Coastal Council. It further empowers the Minister for the Department of Commerce to	No relevance The project is not located in areas associated with this Act.

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

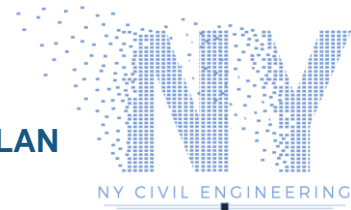
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	require public authorities to obtain consent prior to carrying out development in the coastal zone or giving consent to a person to occupy or carry out development in the coastal zone.	
<b>National Parks and Wildlife Act 1974</b>	The relevance of this Act is firstly in respect to the protection and preservation of Aboriginal artefacts. Discovery of material on-site suspected as being of Aboriginal origin must be reported and protected pending assessment and direction by the Clients representative. Secondly it is an offence under Part 8A of this Act to pick or harm threatened species. (Refer to the notes under the Threatened Species Conservation Act for more information)	Low relevance No identified Aboriginal artefacts have been identified within the construction area. The only relevance would be if new previously unknown artefacts were discovered during construction.
<b>Threatened Species Conservation Act 1995</b> <b>Threatened Species Conservation Regulation 2002</b> <b>Threatened Species Conservation (Savings and Transitional) Regulation 1996</b>	This Act and Regulations provide for obtaining licenses to harm or pick threatened species populations or ecological communities whether plant or animal or to damage any critical habitat. The offence of picking or harming any threatened species is covered under the National Parks & Wildlife Act Part 8A. It is a defence under Part 8A of that Act if the offence was essential to carrying out development that is in accordance with a Development Consent within the meaning of the Environmental Planning and Assessment Act 1979 or an approval within the meaning of Part 5 of the Environmental Planning and Assessment Act 1979.	No relevance No threatened species of flora or fauna listed in the schedules of this Act have been identified within the area of the proposed work.
<b>Fisheries Management Act 1994</b>	This Act is applicable to all waters within the State including private and public waters and all permanent and intermittent waters. The Act is most relevant in respect to maintaining water quality and ensuring no polluted water from site works enters streams, creeks and waterways. In addition, this Act also has relevance for the removal of marine vegetation.	Medium relevance Along with the Protection of the Environment Operations Act 1997, water discharging from the site must not pollute the adjacent streams or watercourses.
<b>Marine Pollution Act 1987</b>	This Act creates offences for discharges of oil, oily mixtures and noxious liquid substances from ships into State waters.	No relevance
<b>Noxious Weeds Act 1993</b>	This Act provides for the classification and control of noxious weeds. Declared noxious weeds are classified as Class 1, State	Low relevance

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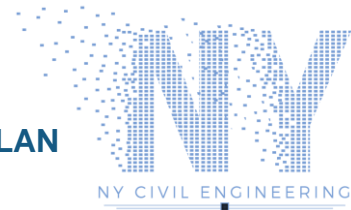


	prohibited weeds; Class 2, Regionally prohibited weeds; Class 3 Regionally controlled weeds, Locally controlled weeds; Class 4 and Class 5 Restricted plants. The characteristics of each class is given in Section 8 (2) of the Noxious Weeds Amendment Act 2005. Class 1, 2 and 5 weeds are referred to in the Act as “notifiable weeds”.	
<b>Water Act 1912</b>	This Act provides for licences to extract water for construction purposes either from surface or artesian sources. Should construction water be extracted from surface (other than sedimentation ponds) or artesian sources, a licence will be required.	Low relevance It is not proposed that construction water will be obtained from surface (for example, creeks, lakes) or artesian sources.
<b>Heritage Act 1977</b>	This Act provides for the preservation and conservation of heritage items such as building, works, relic, places of historic interest, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance. Under this Act a relic means any deposit, object or material evidence which is 50 or more years old and relates to the settlement of the area (not being an Aboriginal settlement). It is an offence under this Act to wilfully and knowingly damage or destroy items of heritage value. Do not demolish damage, move or develop around any place, building, work, relic, moveable object, precinct, or land that is the subject of an interim heritage order or listing on the State Heritage Register or heritage listing in a Local Environmental Plan without an approval from the Heritage Council (NSW) or local council.	Low relevance Only one item of heritage has been identified in early studies and has been marked to be relocated as part of the project works.
<b>Wilderness Act 1987</b>	An Act to provide for the permanent protection and proper management of wilderness areas and to promote the education of the public in the appreciation, protection and management of wilderness. The Act and associated Regulations provides a mechanism for the identification and declaration of wilderness areas.	No relevance This project is not within or immediately adjacent to a declared wilderness area. This Act has little or no relevance to the project.
<b>Australian Heritage Council (Consequential &amp; Transitional Provisions)</b>	The Australian Heritage Council (Consequential and Transitional Provisions) Act 2003 repealed the Australian Heritage Commission Act 1975.	No relevance The site is not on the Register of the National Estate of places.



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<p><b>Act 2003</b> <b>Australian Heritage Council Act 2003 (Cwth)</b></p>	<p>The Australian Heritage Council Act 2003 establishes the Australian Heritage Council. The Council is required to identify places to be included in the National Estate and to maintain a Register of the National Estate of places.</p>	
<p><b>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cwth)</b></p>	<p>This Act provides for the preservation and protection from injury or desecration to areas and objects of particular significance to Aboriginals. Areas and objects can be protected by Ministerial declaration and it is then an offence to contravene such a declaration.</p>	<p>No relevance No areas or objects within the works site have been identified as being subject to such a declaration and this Act is of little relevance to the project.</p>
<p><b>Ozone Protection Act 1989</b></p>	<p>This Act provides for a system of controls and to regulate and prohibit the manufacture, sale, distribution, use, emission, re-cycling and disposal of stratospheric ozone-depleting substances and articles that contain these substances. The impact is that appropriately qualified people in accordance with this Act must undertake all servicing and maintenance of this type of equipment.</p>	<p>Low relevance The relevance of this Act will relate to the use of refrigerators and air conditioning units in site buildings and vehicles which still contain CFCs. Such items are unlikely to be found on-site.</p>
<p><b>Protection of the Environment Operations Act 1997</b></p>	<p>This Act is of most relevance to work being carried out under this contract. It integrates into one Act all the controls necessary to regulate pollution and reduce degradation of the environment, provides for licensing of scheduled development work, scheduled activities and for offences and prosecution under this Act.</p>	<p>High relevance The Act provides for the issuing of environmental protection notices to control work and activities not covered by licences. Section 148 of the Act requires a pollution incident-causing or threatening material harm to the environment to be notified to the EPA and other authorities immediately.</p>
<p><b>Sydney Water Act 1994</b></p>	<p>This Act establishes the Sydney Water Corporation as a statutory State-owned corporation. The functions of the Sydney Water Corporation is to supply and store water, provide sewerage services, provide stormwater drainage and dispose of wastewater within its area of operations.</p>	<p>Medium relevance Coordination may be required with Sydney Water Corporation during the works.</p>
<p><b>Sydney Water Catchment Management Act 1999</b></p>	<p>This Act establishes the Sydney Catchment Authority as a statutory corporation representing the Crown. The role of the Sydney Catchment Authority is to manage and protect the catchment areas and catchment infrastructure works, be a bulk</p>	<p>Medium relevance This project has slight impact on areas regulated by the Sydney Catchment Authority.</p>

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	water supplier and to regulate activities within or affecting the catchment areas.	
<b>Pesticides Act 1999 Pesticides Regulation 1995</b>	This Act and Regulation establish a legislative framework to regulate the use of pesticides. They have the objective to promote the protection of human health, the environment, property and trade in relation to pesticides. It is an offence under this Act and Regulation to wilfully or negligently misuse pesticides.	Low relevance It is not envisaged that pesticides will be used on the project
<b>Waste Avoidance and Resource Recovery Act 2001</b>	This Act repeals the Waste Minimisation and Management Act, 1995. The purpose of the Act is to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecological sustainable development. The Act provides for the making of policies and strategies to achieve these ends. It is an offence under the Protection of the Environment Operations Act 1997 to wilfully or negligently dispose of waste in a manner that harms or is likely to harm the environment.	Medium relevance The relevance of the Act to this project is to implement the strategies by adopting the hierarchy of avoidance; avoidance of unnecessary resource consumption; resource recovery (including reuse, reprocessing, recycling and energy recovery) and disposal (as a last resort).

Table 9: Environmental Planning Legislation

## Appendix 2: Risk Assessment

All environmental issues have been assessed in accordance with Table 10 below.

Risk assessment rankings: >17 = Extreme | 10–16 = High | 5–9 = Medium | 1–4 = Low

Environmental issues which have an initial risk ranking of medium or high will require the development and implementation of ERAPs. Issues which have an initial extreme risk will require the development and implementation of an issue specific sub-plan.

The risks must be reassessed following the consideration of control measures. An owner for the implementation of the management measures must be nominated.

Issues or activities that represent an extreme risk after the application of control measures are not to be undertaken.

### RISK ASSESSMENT MATRIX

		CONSEQUENCE				
		1	2	3	4	5
LIKELIHOOD		Insignificant	Minor	Moderate	Major	Catastrophic
5	Almost certain	5	10	15	20	25
4	Likely	4	8	12	16	20
3	Moderate	3	6	9	12	15
2	Unlikely	2	4	6	8	10
1	Rare	1	2	3	4	5

- Extreme risk; immediate action required
- High risk; senior management attention needed
- Moderate risk; management responsibility must be specified
- Low risk; manage by routine procedures

Table 10: Risk Assessment Ratings

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
<b>Approvals and licensing</b>									
Not identifying appropriate approvals/licenses required or proceeding without them	Works delayed, infringements, poor client relations and reputational loss	4	3	12	Check Environmental Assessment and statutory documentation Check contract documentation Document requirements in CEMP Establish a register of approvals, licenses, permits	2	3	6	Project Manager
<b>Noise</b>									
Noise from general construction activities resulting in impact to residents	Disturbance to wildlife and neighbouring businesses Potential for complaints	3	3	9	Develop and implement a Noise and Vibration Management Plan Consult with the community in relation to upcoming activities that may result in concern Establish noise targets and monitor for compliance as the works progress at receiver locations Provide periods of respite for high noise generating activities Apply noise mitigation measures during entire project Noise efficient equipment to be used on site	2	3	6	Construction Manager

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
<b>Water quality, erosion and sedimentation</b>									
Sediment laden runoff from construction works leaving site	Degradation of local watercourses. Increased turbidity in local waterways resulting in impact on aquatic life Fines for sediment escaping site	3	3	9	Develop Erosion Sediment Control Plan Develop and implement sediment and erosion control measures including sediment basins, water collection and dispersal systems Ensure measures are inspected and maintained as the works progress and also prior to and post rainfall events Provide training and awareness on the need to prevent pollution Relevant people to undertake erosion and sediment control training	2	3	6	Construction Manager WHSEQ Manager
Stockpiling of vegetation and topsoil	Wind and water erosion causing weed/seed dispersion offsite Location of stockpiling next to waterways causing weeds/seeds to disperse from construction site	3	3	9	Develop environmental control maps to show stockpile areas Appropriate locations for stockpiling (away from waterways, watercourses, drains) Designated vegetation stockpiling areas Minimise stockpiling/Use temporary stockpiling Cover stockpiles if left for extended periods	2	3	6	Construction Manager
Non-compliant water from construction works discharged from site	Non-compliant water entering stormwater system waterways (i.e. polluting - not compliant with discharge criteria)	3	3	9	Induction and toolbox talks Toolbox training on-site procedures for water discharge Educate site staff on licence conditions and consequences of prosecution	2	3	6	Construction Manager WHSEQ Manager

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
					WHSEQ Manager/ representative to approve all water discharges from site				
<b>Waste</b>									
Waste disposal during construction	Incorrect disposal of waste, further costs incurred for classifications and disposal, fines may be issued.	3	2	6	Develop CEMP Identify opportunities to incorporate recovered materials into the permanent works Provide facilities on-site for source separation and recycling Ensure accurate waste records are retained Removal of wastes from the site would only be undertaken by a licensed contractor as required by the <i>Protection of the Environment Operations Act 1997</i> and with appropriate approvals, if required, for contaminated materials All material to be recovered off-site to be appropriately classified in accordance with the resource recovery exemptions All material that requires off-site disposal to be appropriately tested and classified against the Waste Classification Guidelines (Department of Environmental Climate Change (DECC) 2008)	2	2	4	Construction Manager

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
Earthworks spoil disposal	Incorrect classification of waste (spoil) resulting in incorrect/illegal disposal/re-use	3	3	12	Inductions on designated washout areas Subcontractors agreements to include project compliant waste management principles	1	3	3	Construction Manager Foreman
<b>Hazardous materials</b>									
Storage of hazardous substances, leaking plant and equipment and spillage from refuelling	Localised ground contamination/ pollution of stormwater and requiring clean-up and/or receiving fines Risk of igniting volatile substances Unauthorised access to site/ potential vandalism/damage leading to pollution	4	3	12	Induction, toolbox talks and training on appropriate handling and storage of liquids All stormwater drains should be identified prior to works Storage areas to be away from sensitive areas and appropriately bunded SDS approved prior to bringing hazardous substances on-site including risk assessment Plans showing storage locations and associated controls (for example, spill kits). (environmental control maps) Training in use of spill kits Contingency plans would be developed to deal with any spills which might occur during construction Clearly label containers Regular auditing and inspection of storage areas and materials Make storage areas restricted access areas Reduce/eliminate need for hazardous substances	2	3	6	Foreman

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
					Ensure all work sites are secure before leaving the site All liquids (i.e. fuels, paint) are to be securely locked away at the end of each day				
Fuel contaminated runoff from construction works leaving site	Fuel contaminated runoff entering stormwater, watercourse, groundwater (i.e. polluting – not compliant with discharge criteria)	3	4	12	All stormwater drains should be identified prior to works and controls implemented Refuelling of vehicles away from culverts, water courses Appropriate bunding/storage of substances Toolbox on-site procedures for sediment controls and chemical storage Educate site staff on project conditions and consequences of prosecution	1	4	4	Construction Manager Foreman
<b>Biodiversity</b>									
Vegetation trimming/clearing required outside approved work area	Unauthorised works/removal of vegetation outside defined work area, possibility of removing threatened species, fines incurred	3	5	15	Induction and toolbox training on clearance zones and required protection measures Inspections during clearing activities Fencing in place/clear marking of trees to be retained and cleared/demarcation areas/ plans showing clearing areas Pre-clearing checklist to be completed before any clearing of vegetation	1	5	5	Construction Manager Foreman



## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
					Arboriculture report/arborist supervision				
Clearing and grubbing of vegetation within work site	Erosion of soils, uncontrolled runoff, sediment deposited into surrounding vegetated areas and water courses, and invasion of weeds Wrong vegetation removed Potential for injury to native fauna	4	4	16	Inductions and toolbox training on erosion and sediment controls Where possible works to be staged so environmental controls can be implemented after clearance works Approved Erosion and Sediment Control Plans in place prior to starting works Where applicable, mature trees and other native vegetation to be retained would be clearly delineated, with all construction activities excluded from these areas Pre-clearing checklist to be completed before any clearing of vegetation	1	4	4	Construction Manager Project/site engineers Foreman
<b>Air Quality</b>									
General construction works; site establishment, demolition, earthworks	High dust activity in close proximity to surrounding businesses, dust deposition at sensitive receivers, repairs and clean-up needed, complaints received	4	2	8	Inductions and toolbox training on dust and air quality management Include provision for air quality monitoring during the works Provide dust mitigation measures through water sprays/misting when demolition is taking place Use of water carts during dry weather on haulage roads and excavations/batters				Construction Manager Project/site engineers Foreman

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
					<p>Install dust controls immediately and continually through the project</p> <p>Erosion and Sediment Control Plans approved before works commence. Controls are then reviewed for maintenance.</p> <p>Physical barriers to be erected at right angles to the prevailing wind direction or placed around or over dust sources to prevent wind or activity from generating dust emissions</p> <p>The surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that runoff occurs</p> <p>All vehicles carrying spoil or rubble to or from the site will at all times be covered to prevent the escape of dust or other material</p> <p>All equipment wheels to be washed before exiting the site using manual or automated sprayers and drive-through washing bays</p> <p>Gates to be closed between vehicle movements and fitted with shade cloth</p> <p>Cleaning of footpaths and roadways will be carried out regularly</p> <p>Materials must not be burnt on the site</p> <p>Vehicles entering and leaving the site with soil or fill material must be</p>				

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
					covered				
Exhaust equipment	Emissions resulting in air pollution	3	2	6	Inductions and toolbox training on dust and air quality management Well maintained equipment and pre-start checks and servicing Non-complaint vehicles removed from site/repared	2	2	4	Foreman
<b>Heritage</b>									
Unexpected heritage items encountered	Work delays, additional studies, approvals required, damage to heritage item	3	4	12	General inductions toolbox training on heritage management protocols Label any known heritage items on environmental control maps If suspected heritage item encountered, works to stop immediately and WHSEQ Manager contacted Engaging with Campus Infrastructure Services Heritage Manager to identify any items of significance and developing a Heritage Impact Assessment	2	4	8	Construction Manager Project/site engineers
<b>Traffic</b>									
General construction traffic disturbing public access between local roads	Disturbance to local residents resulting in complaints being made, limited access, potential for delays at local road access points resulting in	2	2	4	Approved traffic management plans in consultation with relevant authorities. Detour routes to be advertised/notified Approved access routes, detailed traffic control plans	2	2	4	Construction Manager Project/site engineers Stakeholder Manager

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
	complaints				Clear notifications/signage				
Management of heavy vehicles/ haulage routes	Complaints from sensitive receivers due to increased level and frequency of noise	3	2	6	Designated haulage routes Approved traffic management plans Community notifications Pedestrian management with traffic controller in place where required	2	2	4	Construction Manager Stakeholder Manager
Truck deliveries out of normal working hours (unapproved)	Non-conformance with project requirements Noise impact to community/potential complaints	3	3	9	Personnel training of noise awareness to community included in induction and toolboxes Induction on construction hours for deliveries Communication of delivery times to suppliers Community notifications on project activities occurring locally Code of conduct/selection criteria in place for subcontractors Out of hours works approval required Approved traffic/haulage routes Planning and staging of works in approved hours as much as practical	2	3	6	Project Manager Construction Manager Project/site engineers Stakeholder Manager
<b>Resources and energy use</b>									
Water usage during construction activities	Excess usage of potable water for construction activities leading to a decline in the amount of potable water for residents	3	2	6	Include water conservation measures and verifiable targets Capture and reuse rainfall and runoff for site activities	2	2	4	Construction Manager Foreman

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

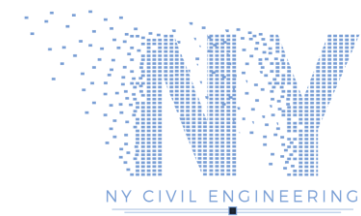
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Aspect	Potential environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating			RESPONSIBLE (to ensure management method is applied)
		P X	C =	T		P X	C =	T	
Resource usage (for example, building materials, water, fuels, packaging), waste generation and disposal	Depletion of resources due to wastage (for example, waste water/no recycling, poor management of procurement, ineffective removal of offcuts, waste/i.e. no recycling)	2	4	8	Waste management undertaken in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i> Recycling of materials in accordance with the University's Sustainability Framework Managing urban stormwater: soils and construction. Odour suppression measures must also be carried out where appropriate so as to prevent nuisance occurring at adjoining properties	2	2	4	Construction Manager Project/site engineers Foreman

Table 11: Risk Assessment

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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## Appendix 3: Operation Controls

HERITAGE		
<b>Objective(s)</b>	<ol style="list-style-type: none"> <li>To minimise the impacts of development, operation and maintenance of the Project on the heritage values in the Project area.</li> <li>To comply with contractual and legislative requirements and ensure that existing and undiscovered heritage and archaeological items are protected from construction activities.</li> </ol>	
<b>Management Strategy</b>	Ensure heritage impacts are minimised, and impacts outside of the approved disturbance area are avoided. Unknown or undocumented heritage sites not knowingly destroyed, defaced or damaged	
		<b>Responsibility</b>
<b>Control(s)</b>	Identify heritage values within the project area (desktop research, consultation and surveys as appropriate). Ensure personnel undertake appropriate inductions. Develop and implement a Cultural Heritage Management Plan (CHMP) in consultation with relevant stakeholders i.e. Traditional Owners, Statutory Authorities (such as Department of Aboriginal Affairs, Heritage Council). The CHMP should include but not be limited to: <ul style="list-style-type: none"> <li>• Identification all known heritage values within a development area;</li> <li>• Strategies to avoid/minimise impacts such as buffer zones, fencing, signage, inductions, blast mats, salvage, relocation etc...;</li> <li>• Site impact process i.e. consultation, surveys, statutory applications; and</li> <li>• Heritage incident response procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• All personnel on-site are to ensure that archaeological and heritage items are protected from damage or disturbance</li> <li>• The PER will ensure all site personnel undertake toolbox talks in relation to protection of nominated items that were previously unknown.</li> </ul>
<b>Performance Indicator(s)</b>	No disturbance of heritage values outside of the approved disturbance area. No complaints or allegations of unauthorised disturbance of heritage values.	
<b>Monitoring</b>	Monitoring of first ground disturbance at terrestrial heritage sites. Daily monitoring of disturbance footprint. Regular monitoring of all heritage sites for impacts.	

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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HERITAGE		
<b>Reporting</b>	<p>Incidents are to be reported immediately to the Project Manager and the Environment and Heritage Manager.</p> <p>Copies of all heritage survey reports, statutory approval applications, ACHMPs and any subsequent consents are to be provided to the Environment and Heritage Manager.</p> <p>Copies of all report backs required by statutory approvals are to be provided to the Environment and Heritage Manager.</p> <p>Copies of incident investigations and outcomes are to be provided to the Environment and Heritage Manager.</p>	
<b>Corrective Action(s)</b>	<p>Cease works in the impact area immediately.</p> <p>Implement measures outlined in CHMP.</p> <p>Review and modify procedures/CHMP if necessary.</p>	
<b>Timeframe</b>	Throughout construction activities	

NOISE AND VIBRATION MANAGEMENT		
<b>Objective(s)</b>	<ol style="list-style-type: none"> <li>3. To minimise the impacts of noise on the amenity of the surrounding areas.</li> <li>4. Construction activities undertaken in accordance with AS 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites.</li> <li>5. Construction activities undertaken in accordance with Environmental Protection (Noise) Regulations 1997</li> <li>6. To comply with contractual requirements and ensure that noise and vibration from construction activities does not cause environmental nuisance</li> </ol>	
<b>Management Strategy</b>	Noise to be managed primarily through administrative and equipment controls during the construction phase.	
		<b>Responsibility</b>

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

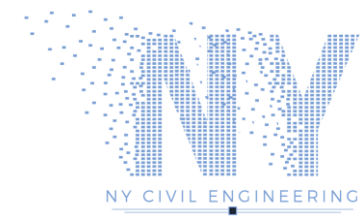
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NOISE AND VIBRATION MANAGEMENT		
<b>Control(s)</b>	<p>All equipment used during the construction phase to be regularly maintained to ensure efficient operation;</p> <p>Pre-start checks and maintenance schedules to ensure equipment performance is as required;</p> <p>Noise-dampening equipment to be used on equipment with excessive noise generating characteristics;</p> <p>No work will be undertaken outside of the agreed hours without prior approval</p> <p>Construction activities in accordance with AS2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites.</p>	<ul style="list-style-type: none"> <li>• The Construction Manager will ensure construction activities comply with these requirements and implement the control measures.</li> <li>• The Construction Manager/Project Manager will obtain approval to work outside approved hours.</li> </ul>
<b>Performance Indicator(s)</b>	No complaints from adjacent commercial premises and/or community.	
<b>Monitoring</b>	<p>Daily inspection of works sites to occur</p> <p>Service logs for equipment/machinery used on site</p>	
<b>Reporting</b>	Any complaints or incidents to be reported to Construction manager.	
<b>Corrective Action(s)</b>	<p>Investigate cause of excessive noise</p> <p>Implement corrective measures prior to the recommencement of site works</p> <p>Reschedule of noise-generating activities to reduce noise annoyance</p>	
<b>Timeframe</b>	Duration of site work	



# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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DUST MANAGEMENT		
<b>Objective(s)</b>	<ol style="list-style-type: none"> <li>1. To ensure the impacts of dust on adjacent areas and the community are minimised.</li> <li>2. To comply with contractual requirements and ensure that dust and other air emissions from construction activities do not cause impacts on sensitive receivers and equipment.</li> </ol>	
<b>Management Strategy</b>	Dust issues managed principally by emission controls at source, and administrative controls during works.	
		<b>Responsibility</b>
<b>Control(s)</b>	<p>Area to be disturbed minimised. Clearance lots to be approved by Project Manager.</p> <p>Where dust is identified as an issue, dust control measures will be implemented. These will primarily be the use of water carts, but may include surface treatments.</p> <p>Vehicle movements controlled (Traffic Management Plan) and kept to established tracks and haul roads.</p> <p>Remove mud from haul vehicles prior to entering public roads</p> <p>Provide shaker grids or rumble strip at site egress points. Note where aggregate is used, minimum size is 150mm</p> <p>Reprogram dust-generating work during periods of high wind</p> <p>Dust awareness issues in environmental induction process</p>	<ul style="list-style-type: none"> <li>• The Construction Manager/Project Manager to implement the requirements of this ERAP</li> <li>• Construction Manager to inspect the works at regular intervals to identify areas of dust generation.</li> </ul>
<b>Performance Indicator(s)</b>	No complaints from adjacent commercial premises and/or community.	
<b>Monitoring</b>	<p>Daily inspection of works sites to occur, including:</p> <ul style="list-style-type: none"> <li>• visual check for dust crossing the site boundaries</li> </ul>	

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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DUST MANAGEMENT		
	<ul style="list-style-type: none"> <li>visual check of high potential dust areas, such as haul roads, stockpiles and operational areas.</li> </ul>	
<b>Reporting</b>	Any complaints or incidents to be reported to Construction manager.	
<b>Corrective Action(s)</b>	Investigate cause of excessive dust Implement controls immediately (e.g. water carts) Implement corrective measures prior to the recommencement of site works Implement administrative controls if required, such as rescheduling of dust generating activities to more favourable weather conditions.	
<b>Timeframe</b>	Duration of site work	

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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WATER QUALITY, EROSION AND SEDIMENT CONTROL		
<b>Objective(s)</b>	<ol style="list-style-type: none"> <li>To ensure that the effects of erosion and sedimentation on the environment and biological communities are minimised.</li> <li>Minimise soil disturbance, degradation and erosion.</li> <li>To comply with contractual and legislative requirements and ensure that water discharged off-site from construction and erosion and sediment control (ESC) activities does not cause environmental nuisance/harm.</li> </ol>	
<b>Management Strategy</b>	Ensure that direct impacts (land disturbance) are limited to the works area, and that secondary impacts do not impact adjacent areas.	
		<b>Responsibility</b>
<b>Control(s)</b>	<p>Disturbance area will be minimised and clearly demarcated.</p> <p>Works will only be conducted within the works zone.</p> <p>Vehicle movements will be restricted to the defined roads/tracks.</p> <p>Where possible, works area will be designed to ensure stormwater runoff drains into the site.</p> <p>Where runoff from the site is required, it will be via the longest flow path possible to ensure maximise sediment retention. Flows to undisturbed areas will be prioritised.</p> <p>Where required, sediment controls will be put in place. These will include, but not be limited to, rock check dams, sediment basins, sediment fences and silt socks.</p> <p>Sediment controls will be reviewed during site inspections and/or after significant rainfall (more than 10mm in 24hrs resulting in site runoff).</p>	<ul style="list-style-type: none"> <li>All staff to ensure adequate ESC devices are installed and maintained</li> <li>PER will undertake “at least weekly” inspections of on-site ESC devices, plus prior to expected rainfall and after rainfall</li> <li>Construction Manager responsible for the repair/management of any damage or additional ESC devices, as required.</li> </ul>
<b>Performance Indicator(s)</b>	No evidence of significant sediment deposition outside the works area. No evidence of significant gullies or other instances of run-off erosion.	
<b>Monitoring</b>	<p>Daily inspection of work site to occur.</p> <p>Sediment controls will be reviewed during site inspections and/or after significant rainfall (more than 10mm in 24hrs resulting in site runoff). Review will include removal of accumulated sediments as required.</p>	
<b>Reporting</b>	<p>Incident report for non-conformance of sediment control</p> <p>Logging of sediment control structures - location and condition during weekly site inspection</p>	

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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WATER QUALITY, EROSION AND SEDIMENT CONTROL		
<b>Corrective Action(s)</b>	Investigate cause of sediment control failure Review flow path and determine most appropriate controls are in place, additional controls which can be placed in-stream and/or changes that can be made to flow path Review similar controls on-site (even though these may not have failed) for similarities	
<b>Timeframe</b>	Duration of site work	

DANGEROUS GOODS		
<b>Objective(s)</b>	<ol style="list-style-type: none"> <li>To comply with contractual and legislative requirements in relation to the transport of dangerous goods</li> <li>To comply with contractual and legislative requirements in relation to the storage of chemicals, fuels and oils on the site</li> <li>To ensure contractual and legislative requirements in relation to hazardous substances and dangerous goods are adequately addressed for all operations - there are specific additional requirements relating to the storage and transport of dangerous goods.</li> </ol>	
<b>Management Strategy</b>	Reduce quantity of dangerous materials stored to that required, implement appropriate controls and provide appropriate training and resources for a spill response.	
		<b>Responsibility</b>
<b>Control(s)</b>	<p>All hydrocarbons to be stored in an appropriate bund that is capable of holding 110% of a spill from the largest container, or 10% of total volume of stored liquids, whichever is greater.</p> <p>Ensure transporters of these materials are appropriately licensed. This includes relevant licenses for vehicles and drivers</p> <p>Refuelling of vehicles/equipment will be undertaken on land (not over water), unless the task is not possible.</p> <p>To reduce the impact of a spill, the lowest volume of hydrocarbons required will be stored in proximity to the marine environment and in the onshore lay down areas.</p> <p>A copy of the current hydrocarbon MSDS will be kept at an appropriate location on site.</p>	<ul style="list-style-type: none"> <li>Engineering personnel responsible for identification of requirement to transport dangerous goods</li> <li>Relevant Project Manager or Construction Manager responsible for ensuring all vehicles carry appropriate placards, licenses, emergency equipment and procedures</li> <li>Construction Manager to ensure that sufficient bunds are available and material stored appropriately</li> </ul>

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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DANGEROUS GOODS		
	<p>Drip trays shall be placed under mechanical stationary equipment such as gensets if such equipment is not internally banded.</p> <p>Onsite spill response training will be carried out on a periodic basis. All deficiencies identified through training and testing of the procedures will be documented and rectified immediately.</p> <p>All equipment will be regularly serviced to reduce emissions and reduce the chance of oil leaks on site and in marine environments. Appropriate controls in place to contain hydrocarbon leaks should they occur whilst servicing. Controls may include use of drip trays when changing oil and transporting waste oils in banded containers.</p> <p>Only qualified personnel are to carry out services on plant, equipment and vessels.</p> <p>A prescribed Isolation procedure must be followed prior to work on any plant or equipment.</p> <p>Training / awareness to be included in site induction (including all staff, contractors, subbies etc.).</p> <p>Appropriate volume and type of spill response materials will be available at each work site</p> <p>Spill will be contained and cleaned-up immediately. Resultant wastes (soils, rags and absorbent material) appropriately stored and disposed of by an appropriately licenced waste contractor as controlled waste.</p> <p>All spills reported and investigated as required.</p>	<ul style="list-style-type: none"> <li>• Engineering personnel responsible to ensure SDS and other relevant documentation are obtained</li> <li>• The Project Safety Advisor responsible for ensuring the chemicals, fuels/oils and hazardous substances register maintained.</li> </ul>
<b>Performance Indicator(s)</b>	<p>Minor spills (&lt;10L) to land contained, controlled and all contamination removed / cleaned-up within 24 hours.</p> <p>No spills to marine waters.</p> <p>Reporting within timeframes specified below</p> <p>No contamination of soil or surface / ground waters.</p> <p>No spills that require an emergency response</p>	
<b>Monitoring</b>	<p>Incident report outlining corrective actions taken and preventative measures to be implemented sent to Client with 48 hours</p> <p>Statistics reported to the Client in weekly meetings and monthly reports.</p>	

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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DANGEROUS GOODS		
<b>Reporting</b>	<p>The following incidents must be reported to Project Safety Advisor on a monthly basis (e.g. at KPI meetings)</p> <ul style="list-style-type: none"> <li>• If there is less than 10L spilt, the spill is contained on site and it is able to be fully cleaned up.</li> </ul> <p>Project risk assessments Weekly inspections to be recorded Register of chemicals, fuels/oils and hazardous materials Incidents or spills to be recorded on form Environmental Incident and Complaint Report Storage areas are to be inspected by the Foreman weekly.</p> <p>The following types of spill incidents must be reported to the Environment and Heritage team immediately (including a follow-up incident investigation report within 48 hours):</p> <ul style="list-style-type: none"> <li>• Any spill greater than 10L;</li> <li>• Any spill which cannot be fully cleaned up / contained immediately; OR</li> <li>• Any spill which leaves the lease area (e.g. as liquid discharge or dust emission).</li> </ul>	
<b>Corrective Action(s)</b>	<p>Stop work immediately, contain spill (if safe). Investigate cause of spill and assess. Implement improvements as required.</p> <p>Investigate and assess adequacy of response – implement improvements as required.</p> <p>Implement corrective measures prior to the recommencement of site works.</p>	
<b>Timeframe</b>	Duration of operation	

WASTE	
<b>Objective(s)</b>	Reduce waste volume, maximise recycling, reuse and recovery, prevent any construction waste/litter entering the environment.
<b>Management Strategy</b>	Minimise environmental impacts through appropriate controls and site inductions of employees and sub-contractors.

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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WASTE		Responsibility
<b>Control(s)</b>	<p>Provide appropriate waste bins, type, volume and service frequency to accommodate anticipated waste streams.</p> <p>All loads arriving or leaving the site will be appropriately secured.</p> <p>Provide information regarding waste management in site specific inductions, including waste separation and importance of securing vehicle loads.</p> <p>Ensure licensed contractors are used to collect controlled wastes</p>	<ul style="list-style-type: none"> <li>The Construction Manager will ensure waste is correctly stored, classified, recorded, tracked and minimised at all times</li> <li>The Project Manager is accountable for ensuring lawful waste disposal</li> <li>All personnel are responsible for ensuring waste is placed in the bins provided.</li> </ul>
<b>Performance Indicator(s)</b>	<p>Hazardous materials all appropriately disposed.</p> <p>Recycling of all recyclable construction metal waste</p> <p>Records kept of waste leaving site.</p>	
<b>Monitoring</b>	<p>Daily inspection of work site to occur. Review of waste bins (% full, time to next service).</p> <p>Waste volumes leaving site from waste contractors</p>	
<b>Reporting</b>	<p>Environmental incident reports.</p>	
<b>Corrective Action(s)</b>	<p>Investigate cause of inappropriate waste disposal</p> <p>Review cause of issue and develop response, such as variation to bin size, service schedule or waste separation awareness.</p> <p>Implement controls</p>	
<b>Timeframe</b>	<p>Duration of site works</p>	

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

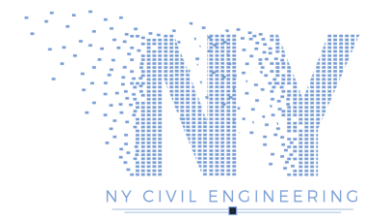
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FLORA & FAUNA		
<b>Objective(s)</b>	To comply with contractual and legislative requirements and ensure that native fauna and flora are protected from construction activities.	
<b>Management Strategy</b>	Ensure impacts to flora & fauna are minimised, and impacts outside the disturbance zone are avoided.	
		<b>Responsibility</b>
<b>Control(s)</b>	<p>Provide site specific information on flora &amp; fauna within the Environmental Induction</p> <p>Include identification sheets in prominent locations for priority species</p> <p>Include identification of feral species in prominent locations</p> <p>Include toolbox talks for site specific flora &amp; fauna information during project to ensure currency of information</p> <p>Ensure no activities outside the works zone through clear delineation of the works area, and communication in site inductions</p> <p>Ensure traffic is restricted to established tracks and roads, and speed limits observed.</p> <p>Where excavations are created which may entrap fauna, suitable escape measures are put in place, and excavation are checked for fauna before backfilling.</p> <p>Contact wildlife carer groups/vet for injured fauna</p> <p>Domestic animals prohibited on-site</p> <p>Ensure appropriate waste management (lidded bins), including food scraps, to reduce potential for feral species to become established on-site</p> <p>No fires on-site.</p>	<p>All personnel are responsible for ensuring that the clearing limits are addressed and native flora and fauna species are protected.</p> <p>All site personnel to undertake toolbox talks in relation to the reporting process for injury/death to fauna or clearing of flora occurring beyond the required limits for construction.</p>
<b>Performance Indicator(s)</b>	<p>No disturbance outside the disturbance zone</p> <p>No injury or death of any fauna caused by vehicles or excavations</p> <p>No injury or death of protected fauna.</p> <p>No domestic animals on-site</p> <p>No disturbance of vegetation communities outside the disturbance zone</p>	



# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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FLORA & FAUNA		
	No introduction of weed species	
<b>Monitoring</b>	Daily inspection of work site to occur Weekly environmental inspection report.	
<b>Reporting</b>	Sightings and incidents reported in weekly contractor meetings. Injured native fauna to be reported to Environment and Heritage team	
<b>Corrective Action(s)</b>	Investigate cause of incident Review opportunities/constraints for further minimisation of potential incidents given work procedure parameters Implement corrective measures prior to the recommencement of site works	
<b>Timeframe</b>	Duration of works	

Table 12: ERAP

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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## Appendix 4: Staff Acknowledgement Register

NAME	POSITION	SIGNATURE	DATE

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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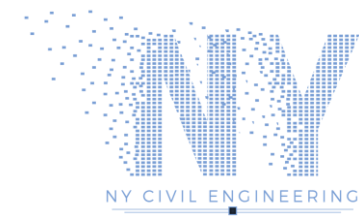
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## Appendix 5: Relevant Management Plans

DOCUMENT NAME	DATED	AUTHOR
Ground Management Plan for Construction	03/05/2019	Reditus Consulting
Flood Emergency Response Plan	02/05/2019	FloodMit
Community Consultation & Complaints Handling Management Plan	06/06/2019	Dicker Data
Aboriginal Cultural Heritage Management Plan	06/06/2019	Coast History & Heritage
Construction Traffic Management Plan	25/07/2019	Ason Group

# CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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## Appendix 6: Emergency Preparedness and Response

EMERGENCY	PREPERATION	RESPONSE	RESPONSIBILITY
<p>Significant adverse dust event due to weather conditions: High winds</p>	<p>Monitor meteorological conditions for the area - develop contingency for wind speeds in excess of 16m/s (55km/h) High wind 'stop works' protocols in place Establish contingency strategy for additional dust control measures, additional water carts, dust suppressants, stockpile covers</p>	<p>Dust-generating activities will cease under direction of the PER or Foreman until adverse conditions subsides Deploy additional mitigation measures to exposed areas stockpiles and other dust generating items will be water sprayed or covered</p>	<p>Site Manager</p>
<p>Flooding</p>	<p>Monitor meteorological conditions - develop contingency strategy for rainfall &gt; 100mm in 24 hours or potential for &gt; 1in 5 ARI All chemicals, fuels and other hazardous substances to be in secured containers and stored within a sealable shipping container Remove plant and equipment from low lying areas Secure plant that cannot be removed Review site drainage flow paths Redirect site drainage to prevent flooding of residential/business premises Ensure site drainage does not concentrate surface flow Review and address the potential for excess water entering the site Review and maintain erosion and sedimentation controls</p>	<p>Recover materials washed from site including sediment and other waste Check effectiveness of erosion and sedimentation devices and other flood controls, maintain where required and safe to do so</p>	<p>Site Manager</p>

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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<p>Temporary erosion and sediment controls are damaged during rainfall</p>	<p>Plan controls to be suitable for expected conditions Ensure sufficient materials, labour and plant are available for additional controls</p>	<p>A review of the site to be undertaken by WHSEQ Manager and Foreman. Controls to be repaired or replaced within 24 hours of detection, immediately if inclement weather current</p>	<p>Site Manager</p>
<p>Spill of hazardous or toxic substance (&lt; 10L)</p>	<p>Awareness training of appropriate response and procedures to be incorporated into project induction SDS on-site for all materials and kept up-to-date Adequate supply of absorbent materials available in the site compound and on vehicles at work location</p>	<p>Report spills immediately to Construction Manager and/or the WHSEQ Manager Attempts to be made to limit or contain the spill using sand bags to construct a bund wall, use of absorbent material, temporary sealing of cracks or leaks in containers, use of geotextile or silt fencing to contain the spill Construction Manager and Foreman to coordinate the response, clean-up and disposal of the material Material to be disposed of in accordance with the manufacturers' recommendations and applicable legislation</p>	<p>Site Manager</p>
<p>Major spill of hazardous or toxic substance off site or to environmentally sensitive area (&gt; 10L)</p>	<p>Awareness training of appropriate response and procedures to be incorporated into environmental and safety induction SDS on-site for all materials and kept up-to-date Adequate supply of absorbent materials available in the site compound and on vehicles in work location Emergency telephone numbers for emergency response organisations/fire brigade prominently displayed around office and issued to Foreman Initial contact to be made with relevant organisations at project commencement</p>	<p>Report spill immediately to Project Manager and/or Construction Manager who will notify the Client Attempts to be made to limit or contain the spill using sand bags to construct a bund wall, use of absorbent material, temporary sealing of cracks or leaks in containers, use of geotextile or silt fencing to contain the spill, transferring remaining material Implement procedures to notify the relevant authorities Construction Manager to coordinate the response, clean-up Fire brigade or emergency organisations should be called if spill cannot be controlled by site resources Evacuation procedures are to be implemented to remove non-essential personnel from the affected area On-site client personnel are informed of the incident, internal reporting as per potential Class 1 matter</p>	<p>Project Manager Site Manager</p>

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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		<p>Access and egress to the area is established to ensure the appropriate vehicles have effective access and congestion is minimised</p> <p>Senior Officer from fire brigade/emergency organisation assumes control of the operation</p>	
Fire	<p>Awareness training of appropriate response and procedures to be incorporated into environmental and safety induction</p> <p>Fire extinguishers maintained, clearly labelled and distributed around site compound and vehicles</p> <p>Training in the use of fire extinguishers and which one to use for each type of fire</p> <p>First Aid supplies are stocked and adequate</p> <p>Emergency telephone numbers for emergency response organisations/fire brigade prominently displayed around office and issued to Foreman</p> <p>Initial contact to be made with relevant organisations at project commencement</p>	<p>For small fires, attempts to be made to extinguish the fire or limit its spread with available fire extinguishers or water hoses if appropriate</p> <p>Foreman is to be informed immediately</p> <p>Foreman to contact University and external services where necessary (fire, ambulance) as a precautionary measure</p> <p>All personnel in the vicinity to be assembled in the Evacuation Assembly Area and a head count performed</p> <p>Any resulting fuel or chemical spill to be handled as detailed above</p> <p>Foreman to coordinate with emergency services and provide assistance as required</p>	Site Manager
Unapproved clearing/ damage to protected vegetation - threatened/endangered species	<p>Clearly demarcate site boundaries</p> <p>Clearly demarcate clearing areas and brief site personnel</p> <p>Identify/mark vegetation to be retained or protected</p> <p>Identify species that may be impacted, include material within the project induction</p> <p>Included requirements within construction planning documentation</p>	<p>Immediately cease activities</p> <p>Engage consultant to assess damage to vegetation and presence of any endangered or threatened communities</p>	Site Manager
Injury/death to protected/endangered/ threatened fauna	<p>Identify potentially impacted species prior to commencement on-site</p> <p>Identify species that may be impacted, include material within the project induction</p>	<p>Immediately cease activities upon discovery of injured fauna</p> <p>Implement procedure for short-term stabilisation and</p>	Site Manager

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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	<p>Review/inspect vegetation to be cleared prior to clearing - use ecologist/spotter where there is the potential for endangered/threatened species</p> <p>Engage with local vet/Wildlife Information Rescue and Education Service (WIRES) representative on the appropriate contact/procedure</p> <p>Site procedure for the short-term management of injured fauna</p>	<p>transport to vet or WIRES Undertake additional vegetation inspection to identify any remaining fauna prior to recommencement</p>	
<p>Damage/destruction of indigenous heritage item</p>	<p>Ensure site investigations detail any heritage items on or in proximity to the site</p> <p>Include awareness material within the project induction</p> <p>Develop a 'stop works' protocol for any heritage find on-site</p>	<p>Cease works and stabilise the area, under the direction of the WHSEQ Manager or Foreman. The WHSEQ Manager is to report the remnants to the University and regulatory authority</p> <p>Request an archaeologist to assess the significance and archaeological potential of the uncovered feature</p>	<p>PER</p>

**Table 13: Emergency Preparation and Response Plan**