




Construction Environmental Management Plan

Albion Park Rail bypass (Stage 2 – Princes Motorway between Yallah and Oak Flats)

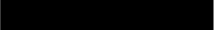
September 2020

Document control

Approval and authorisation

Title	Construction Environmental Management Plan Albion Park Rail bypass (Stage 2 – Princes Motorway between Yallah and Oak Flats)
Accepted on behalf of NSW Transport for NSW by	Transport for NSW Environmental Officer
Signed	
Dated	29 September 2020

Endorsement

Endorsed by the Environmental Representative	Toby Hobbs
Signed	
Dated	30 September 2020

Document status

[illegible]

Revision	Date	Description	Approval
1	2023-01-01	Initial design and requirements gathering.	
2	2023-01-15	Updated design based on client feedback.	
3	2023-02-01	Final design approved and ready for development.	
4	2023-02-15	Development phase completed.	
5	2023-03-01	Testing and deployment phase initiated.	

List of emergency and key contacts

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*contactable by EPA on a 24 hours basis.

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Glossary/Abbreviations

Abbreviation	Expanded text
ASS	Acid Sulfate Soils
CEMP	Construction Environmental Management Plan
CEMS	Contractors Environmental Management System
Commonwealth	Commonwealth Government and Agencies; Federal or National Government Bodies
Compliance audit	Verification of how implementation is proceeding with respect to a construction environmental management plan (CEMP) (which incorporates the relevant approval conditions).
CoA	Conditions of approval (State and Federal). State CoA are the NSW Minister for Planning's conditions of approval. Federal CoA are the Federal Minister for the Environment and Energy's conditions of approval.
DPIE	Department of Planning, Industry and Environment
DPI	Department of Primary Industries
EIS	Environmental Impact Statement
EEC	Endangered Ecological Community
Ecologically sustainable development	Using, conserving and enhancing the community's resources so that the ecological processes on which life depends are maintained and the total quality of life now and in the future, can be increased (Council of Australian Governments, 1992)
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EPL	Environment Protection Licence
ER	Environmental Representative
ERG	Environmental Review Group – comprising representatives of TfNSW, the Environmental Representative, Fulton Hogan, regulatory authorities and councils. The ERG will be maintained for the duration of the Project and will meet regularly and carry out environmental inspections. The role of the ERG is to provide proactive advice on environmental management issues and review the environmental performance of the Project.
EMS	Environmental Management System
Environmental aspect	Defined by AS/NZS ISO 14001:2015 as an element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Defined by AS/NZS ISO 14001:2015 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Environmental incident	An unexpected event that has, or has the potential to, cause harm to the environment and requires some action to minimise the impact or restore the environment.

Abbreviation	Expanded text
Environmental objective	Defined by AS/NZS ISO 14001:2015 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.
Environmental policy	Statement by an organisation of its intention and principles for environmental performance.
Environmental target	Defined by AS/NZS ISO 14001:2015 as a detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met to achieve those objectives.
Environmental Representative	A suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction. The principal point of advice in relation to all questions and complaints concerning environmental performance.
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)
ESCP	Erosion and sediment control plan
EWMS	Environmental work method statement
Federal Minister, the	Federal Minister for the Environment and Energy
Hold point	A verification point that prevents work from commencing before approval from TfNSW Services
IERP	Incident and Emergency Response Plan
NSW Minister, the	NSW Minister for Planning
Non-compliance	Failure to comply with the requirements of the Project approval or any applicable licence, permit or legal requirements.
Non-conformance	Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation.
OEH	Office of Environment and Heritage
PIRMP	Pollution Incident Response Management Plan
Principal, the	Transport for NSW
POEO Act	<i>Protection of the Environment Operations Act 1997</i> (NSW)
Project, the	Albion Park Rail bypass
Project approval, the	State and Federal approval for the Albion Park Rail bypass, including CoA.
REMM	Revised Environmental Management Measures
REF	Albion Park Rail bypass - Utility works review of environmental factors and associated addendums
Roads and Maritime	Roads and Maritime Services – All references to Roads and Maritime should be interpreted as Transport for NSW (formerly Roads and Maritime Services)
ROL	Road occupancy licence
SAP	Sensitive area plan

Abbreviation	Expanded text
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of NSW Department of Planning and Environment
SPIR	Submissions and Preferred Infrastructure Report - A report developed to respond to submissions raised during the exhibition of the EIS and assess changes from the EIS
SSI	The State Significant Infrastructure, as generally described in Schedule 1 [SSI 6878], the carrying out of which is approved under the terms of the state project approval.
TfNSW	Transport for NSW

1 Introduction

1.1 Background

Transport for NSW (formerly Roads and Maritime Services) is extending the M1 Princes Motorway between Yallah and Oak Flats to bypass Albion Park Rail. The motorway would complete the 'missing link' for a high standard road between Sydney and Bomaderry.

The project is known as the Albion Park Rail bypass (Stage 2 – Princes Motorway between Yallah and Oak Flats). The project will provide motorists with a more consistent travel experience between Sydney, Wollongong and the NSW South Coast. It will increase the capacity of the road network to cope with the additional traffic generated by current and future residential development in the area.

The project has been assessed under Part 5.1 (State significant infrastructure - now Division 5.2) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The NSW Department of Planning Industry and Environment (DPIE) placed the '*Albion Park Rail bypass Environmental Impact Statement*' (Roads and Maritime, October 2015) (EIS) on public exhibition between 28 October and 27 November 2015. Submissions received during the exhibition were responded to in the '*Albion Park Rail Bypass Submissions and Preferred Infrastructure Report*' (Roads and Maritime, 2017) (SPIR). The report also assessed changes to the project from the EIS.

Utility works for the Project were assessed separately under Part 5 of the EP&A Act within the '*Albion Park Rail bypass – Utility Works: Review of environmental factors*' (Roads and Maritime, May 2016) (REF). It was contemplated that these works would be carried out as an early works package before completion of the EIS and thus, the reason for the separate environmental assessment. However this did not occur and the utility works will now be carried out as part of the project. Subsequent to the REF determination, an addendum REF (Roads and Maritime, April 2018) was prepared to include amendments to utility works boundaries, additional water and sewerage infrastructure, and two new ancillary facilities.

The Commonwealth determined the project to be a 'controlled action' under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), as it was considered likely that the project could have a significant impact on listed threatened species and communities (EPBC Act referral 2017/7909). EPBC approval was granted on 29 May 2018.

The Project consists of a new motorway bypassing the Albion Park Rail township from the Oak Flats Interchange to Yallah, connecting with the existing Princes Highway at the Duck Creek bridge. This project, as part of the Princes Highway upgrade, would improve traffic flow and maximise the benefits of upgrading the Princes Motorway and Princes Highway corridor between Sydney and south of Nowra.

Construction started in early 2019 and will continue for about three years. The design of the project has carefully considered the requirement to minimise impact on existing traffic, enable safe construction access and egress, and minimise the duration of construction.

1.2 Purpose of this CEMP

This Construction Environmental Management Plan (CEMP) and Sub-plans have been prepared to outline and describe how Fulton Hogan will, during the construction of Albion Park Rail bypass, comply with the requirements of the Ministers' Conditions of Approval (CoA), the environmental management measures listed in the Albion Park Rail Bypass Environmental Impact Statement (EIS), as amended by the Submissions and Preferred Infrastructure Report, including the Revised Environmental Management Measures (REMM) listed in the SPIR and all applicable legislation.

Additionally, it describes how Fulton Hogan will minimise the environmental risks, and achieve environmental outcomes on the project by providing a structured approach to ensure appropriate environmental control measures are implemented.

A detailed description of the Project is provided in Chapter 2.

The CEMP has been prepared in accordance with:

- The Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004)
- Transport for NSW QA Specification D&C G36, G38 and G40
- The Project approval
- AS/NZS ISO 14001.

This CEMP:

- Describes the Project in detail including activities to be carried out and relative timing
- Provides specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impact
- Provides specific mechanisms for compliance with applicable policies, approvals, licences, permits, consultation agreements and legislation
- Describes the environmental management related roles and responsibilities of personnel.
- States objectives and targets for issues that are important to the environmental performance of the Project
- Presents environmental performance outcomes and how they will be achieved
- Outlines a monitoring regime to check the adequacy of controls as they are implemented during construction

The requirements of the Project approval and where they are met in this CEMP are shown in Table 1-1.

Table 1-1 CoA requirements for CEMP

CoA	Requirement	Reference
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN		
C1	A Construction Environmental Management Plan (CEMP) must be prepared in accordance with the Department's <i>Guideline for the Preparation of Environmental Management Plans</i> to detail how the performance outcomes, commitments and mitigation measures specified in the EIS as amended by the SPIR will be implemented and achieved during construction	This CEMP
C2	The CEMP must provide: (a) a description of activities to be undertaken during construction (including the scheduling of construction)	Section 2.1 Section 2.3 Section 2.4
	(b) details of environmental policies, guidelines and principles to be followed in the construction of the SSI	Section 3.1.2 Section 3.1.3 Section 3.1.4
	(c) a schedule for compliance auditing	Section 3.7.3
	(d) a program for ongoing analysis of the key environmental risks arising from the activities described in subsection (a) of this condition, including an initial risk assessment undertaken before the commencement of construction of the SSI;	Section 3.1.1 Section 3.1.2 Section 3.1.5 Section 3.7

CoA	Requirement	Reference
		Appendix A2
	<p>(e) details of how the activities described in subsection (a) of this condition will be carried out to:</p> <ul style="list-style-type: none"> i. meet the performance outcomes stated in the EIS as amended by the SPIR ; and ii. manage the risks identified in the risk analysis undertaken in subsection (d) of this condition 	<p>Section 3.1.1 Section 3.1.2 Section 3.1.4 Section 3.1.5 Appendix A2 Appendix B1-B9 (CEMP Sub-Plans)</p>
	(f) an inspection program detailing the activities to be inspected and frequency of inspections	Section 3.7.1
	<p>(g) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> i. incidents; and ii. non-compliances with this approval and with statutory requirements 	<p>Section 3.6 Section 3.8</p>
	(h) procedures for rectifying any non-compliance with this approval identified during compliance auditing, incident management or at any time during construction	Section 3.8
	(i) a list of all the CEMP sub-plans required in respect of construction, as set out in Condition C4. Where staged construction of the SSI is proposed, the CEMP must also identify which CEMP sub-plan applies to each of the proposed stages of construction	Chapter 4
	(j) a description of the roles and environmental responsibilities for relevant employees and their relationship with the ER	Section 3.2
	(k) for training and induction for employees, including contractors and sub-contractors, in relation to environmental and compliance obligations under the terms of this approval; and	Section 3.4
	(l) for periodic review and update of the CEMP and all associated plans and programs.	<p>Section 1.6 Section 3.10</p>
C3	The CEMP must be endorsed by the ER and then submitted to the Secretary for approval no later than one (1) month before the commencement of construction or within another timeframe agreed with the Secretary.	Section 1.4
C4	The following CEMP Sub-plans must be prepared in consultation with the relevant government agencies	Section 1.3

CoA	Requirement	Reference																					
	<p>identified for each CEMP Sub-plan and be consistent with the CEMP referred to in Condition C1.</p> <p>Table 3: CEMP Sub-plan Consultation Requirements</p> <table> <tr> <th></th><th>Required CEMP Sub-plan</th><th>Relevant government agencies to be consulted for each CEMP Sub-plan</th></tr> <tr> <td>a)</td><td>Traffic and transport</td><td>Relevant Council(s)</td></tr> <tr> <td>b)</td><td>Noise and vibration</td><td>EPA</td></tr> <tr> <td>c)</td><td>Fauna and Flora</td><td>OEH and DPI Fisheries</td></tr> <tr> <td>d)</td><td>Soil and water</td><td>EPA and DPI Water and Fisheries</td></tr> <tr> <td>e)</td><td>Heritage</td><td>OEH, Relevant Council(s), Registered Aboriginal Parties</td></tr> <tr> <td>f)</td><td>Flooding and Hydrology</td><td>OEH and Relevant Council(s)</td></tr> </table>		Required CEMP Sub-plan	Relevant government agencies to be consulted for each CEMP Sub-plan	a)	Traffic and transport	Relevant Council(s)	b)	Noise and vibration	EPA	c)	Fauna and Flora	OEH and DPI Fisheries	d)	Soil and water	EPA and DPI Water and Fisheries	e)	Heritage	OEH, Relevant Council(s), Registered Aboriginal Parties	f)	Flooding and Hydrology	OEH and Relevant Council(s)	
	Required CEMP Sub-plan	Relevant government agencies to be consulted for each CEMP Sub-plan																					
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c)	Fauna and Flora	OEH and DPI Fisheries																					
d)	Soil and water	EPA and DPI Water and Fisheries																					
e)	Heritage	OEH, Relevant Council(s), Registered Aboriginal Parties																					
f)	Flooding and Hydrology	OEH and Relevant Council(s)																					
C5	<p>The CEMP Sub-plans must state how:</p> <ul style="list-style-type: none"> (a) the environmental performance outcomes identified in the EIS as amended by the SPIR as modified by these conditions will be achieved (b) the mitigation measures identified in the EIS as amended by the SPIR as modified by these conditions will be implemented (c) the relevant terms of this approval will be complied with (in particular Part E of this approval) (d) the identification of the relevant environmental specific training and induction processes for construction personnel; and (e) issues requiring management during construction, as identified through ongoing environmental risk analysis, will be managed. 	Appendix B1 – B9																					
C6	<p>The CEMP Sub-plans must be developed in consultation with relevant government agencies identified in Table 3 of Condition C4 of this approval. Where an agency(ies) request(s) is not included, the Proponent must provide the Secretary justification as to why. Details of all information requested by an agency to be included in a CEMP Sub-plan as a result of consultation, including copies of all correspondence from those agencies, must be provided with the relevant CEMP Sub-Plan.</p>	Section 1.3																					
C7	<p>Any of the CEMP Sub-plans may be submitted to the Secretary for approval along with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before commencement of construction.</p>	Section 1.4																					
C8	<p>Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Secretary. The CEMP and CEMP Sub-plans, as approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where the SSI is being staged, construction of that stage is not to commence until the relevant CEMP and sub-plans have been approved by the Secretary, unless otherwise agreed by the Secretary.</p>	Section 1.4																					
CONSTRUCTION MONITORING PROGRAMS																							

CoA	Requirement	Reference															
C9	<p>The following Construction Monitoring Programs must be prepared in consultation with the relevant government agencies identified for each Construction Monitoring Program to compare actual performance of construction of the SSI against predicted performance:</p> <p>Table 4: Construction Monitoring Program Consultation Requirements</p> <table> <tr> <th></th><th>Required Construction Monitoring Programs</th><th>Relevant government agencies to be consulted for each Construction Monitoring Program</th></tr> <tr> <td>a)</td><td>Air Quality</td><td>EPA</td></tr> <tr> <td>b)</td><td>Groundwater</td><td>DPI Water</td></tr> <tr> <td>c)</td><td>Surface Water</td><td>EPA and DPI Fisheries</td></tr> <tr> <td>d)</td><td>Noise</td><td>EPA</td></tr> </table>		Required Construction Monitoring Programs	Relevant government agencies to be consulted for each Construction Monitoring Program	a)	Air Quality	EPA	b)	Groundwater	DPI Water	c)	Surface Water	EPA and DPI Fisheries	d)	Noise	EPA	<p>In accordance with CoA C16, the relevant Construction Monitoring Program has been incorporated into that CEMP Sub-plan as follows:</p> <p>For (a) Air Quality refer to Appendix B6</p> <p>For (b) Groundwater and (c) Surface Water refer to Appendix B4</p> <p>For (d) Noise refer to Appendix B3</p>
	Required Construction Monitoring Programs	Relevant government agencies to be consulted for each Construction Monitoring Program															
a)	Air Quality	EPA															
b)	Groundwater	DPI Water															
c)	Surface Water	EPA and DPI Fisheries															
d)	Noise	EPA															
C10	<p>Each Construction Monitoring Program must provide:</p> <p>(a) details of baseline data available</p> <p>(b) details of baseline data to be obtained and when</p> <p>(c) details of all monitoring of the project to be undertaken</p> <p>(d) the parameters of the project to be monitored</p> <p>(e) the frequency of monitoring to be undertaken</p> <p>(f) the location of monitoring</p> <p>(g) the reporting of monitoring results</p> <p>(h) procedures to identify and implement additional mitigation measures where results of monitoring are unsatisfactory</p> <p>(i) any consultation to be undertaken in relation to the monitoring programs.</p>	<p>Refer to the relevant CEMP Sub-plan as above.</p>															
C11	<p>The Construction Monitoring Programs must be developed in consultation with relevant government agencies as identified in Condition C9 of this approval and must include, to the written satisfaction of the Secretary, information requested by an agency to be included in a Construction Monitoring Programs during such consultation. Details of all information requested by an agency including copies of all correspondence from those agencies, must be provided with the relevant Construction Monitoring Program.</p>	<p>Refer to Section 1.4 of the relevant CEMP Sub-plan.</p> <p>Appendix A5</p>															
C12	<p>The Construction Monitoring Programs must be endorsed by the ER and then submitted to the Secretary for approval at least one (1) month prior to the commencement of construction or within another timeframe agreed with the Secretary.</p>	<p>In accordance with CoA C16, the relevant Construction Monitoring Program has been incorporated into that CEMP Sub-plan.</p>															

CoA	Requirement	Reference
		The Construction Monitoring Programs are endorsed by the ER by virtue of endorsement of this CEMP in accordance with Section 1.4.
C13	Construction must not commence until the Secretary has approved all of the required Construction Monitoring Programs, and all relevant baseline data for the specific construction activity has been collected.	Section 1.4 Appendix B6 Appendix B4 Appendix B3
C14	The Construction Monitoring Programs, as approved by the Secretary including any minor amendments approved by the ER in accordance with Condition A22(j) must be implemented for the duration of construction and for any longer period set out in the monitoring program or specified by the Secretary, whichever is the greater.	Appendix B6 Appendix B4 Appendix B3
C15	The results of the Construction Monitoring Programs must be submitted to the Secretary, and relevant regulatory agencies, for information in the form of a Construction Monitoring Report at the frequency identified in the relevant Construction Monitoring Program.	Section 3.7.5 Item No. 9
C16	Where a relevant CEMP Sub-plan exists, the relevant Construction Monitoring Program may be incorporated into that CEMP Sub-plan.	The relevant Construction Monitoring Program has been incorporated into that CEMP Sub-plan as follows: For Air Quality refer to Appendix B6 For Groundwater and Surface Water refer refer to Appendix B4 For Noise refer to Appendix B3.

This CEMP is the overarching document in the environmental management system for the Albion Park Rail bypass that includes a number of management documents and processes as described in Section 3.1. It is applicable to all staff and sub-contractors associated with the construction of the Project.

1.3 Consultation

In accordance with the requirements of Condition C4 of the project approval, the CEMP and Sub-plans have been prepared in consultation with the relevant government agencies identified in each Sub-plan. The list of agencies consulted includes:

- Wollongong City Council
- Shellharbour City Council
- Environment Protection Authority (EPA)
- Office of Environment and Heritage (OEH)
- Department of Primary Industries Fisheries
- Department of Primary Industries Water (formerly NSW Office of Water)
- Registered Aboriginal Parties.

The main comments and issues raised during the CEMP consultation are provided in Appendix A5. A response and cross-reference to where the issues raised are addressed in the CEMP is also provided in Appendix A5 where applicable.

Consultation will continue throughout the construction phase of the Project with relevant stakeholders and agencies in accordance with the Community Communication Strategy (CCS).

1.4 CEMP approval

This CEMP (including Construction Monitoring Programs) must be endorsed by the Environmental Representative (ER) and accepted by the Transport for NSW Representative and Transport for NSW Environment Officer before submission to the Secretary of the Department of Planning, Industry and Environment (DPIE).

Submission of the CEMP (including Construction Monitoring Programs) for approval of the Secretary is required no later than one (1) month before the start of construction or within another timeframe agreed with the Secretary.

Any of the CEMP Sub-plans may be submitted to the Secretary for approval along with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before start of construction.

Construction will not commence until written approval of the CEMP (including Sub-plans and Construction Monitoring Programs) has been received from the Secretary.

The CEMP (including Sub-plans and Construction Monitoring Programs), as approved by the Secretary, including any minor amendments approved by the ER will be implemented for the duration of construction.

Where the State Significant Infrastructure (SSI 6878) is being staged, construction of that stage is not to start until the relevant CEMP and sub-plans have been approved by the Secretary, unless otherwise agreed by the Secretary.

1.5 Distribution

This CEMP is available to all personnel and sub-contractors via the Project document control management system.

This CEMP will be made available for public inspection on request. Confidential information, which may include the location of threatened species, Aboriginal objects or places and personal contact details, will be removed from all documents provided or made available to the public. An electronic copy can be found on the Project website.

The document is uncontrolled when printed. One controlled hard copy of the CEMP and supporting documentation will be maintained by the Quality Manager at the Project office.

Registered copies will be distributed to:

- Project Director
- Environmental Representative
- Construction Manager
- Environmental Manager
- Community Relations Manager
- Transport for NSW Representative
- Transport for NSW Environment Officer.

1.6 Revision

A document review process is implemented to ensure that environmental documentation, including this CEMP and Sub-plans, are updated as appropriate for the specific works that are occurring on-site. Review of the CEMP (including Sub-plans) will be undertaken at least annually as a result of any of the following:

- The management review process described in Section 3.10
- When there is a change in the scope of the project
- When there is a need to improve performance in an area of environmental impact
- At the completion of environmental audits
- As a result of changes in environmental legislation applicable to the project.

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

The revised document will then be issued to the TfNSW Representative and the ER for approval of the changes.

In accordance with CoA A24, the ER can approve “minor” amendments to the CEMP and Sub-plans including those that:

- are editorial in nature e.g. typographical or cross-referencing errors, staff and agency/authority name changes;
- do not increase the type or magnitude of impact on the environment when considered individually or cumulatively; or
- do not compromise the ability of the Project to meet approval or legislative requirements.

Where the amendment is not “minor”, the revised CEMP/ Sub-plan(s) will be forwarded to the Secretary of the DPIE for approval. Revised versions of the CEMP/ Sub-plan(s) will be made available through the process described in Section 1.5.

1.7 Changes to the Project

Refinements to the Project may result from detailed design refinement or changed circumstances throughout construction. TfNSW is responsible for formally seeking approval from the Minister for any Project modifications and for documenting refinements that are consistent with the approved Project.

The TfNSW Environment Officer is responsible for the assessment of Project refinements and management of the consistency assessment process. The Environmental Manager is responsible for incorporating any new environmental impact and/or new statutory approval requirements into the appropriate environmental management documentation.

Any design changes or changes in scope of works must be communicated to the Environmental Manager. The Environmental Manager or Environmental Officer will then carry out an additional environmental assessment and consistency assessment (where necessary) in consultation with the TfNSW Environment Officer to determine if a Project modification may be required.

Should the consistency assessment determine that a Project modification may be required i.e. the impact are of a nature and scale that it is not considered consistent with the Project approval, the Environmental Representative will be informed immediately and modification application under Section 115Z(2) of the EP&A Act will be prepared and submitted to the Secretary of DPIE for determination.

The relevant TfNSW Director will approve all refinements that are deemed consistent with the Project approval.

2 Project description

2.1 General features

The Project consists of a new motorway bypassing the Albion Park Rail township from the Oak Flats Interchange to Yallah, connecting with the existing Princes Highway at the Duck Creek bridge.

The project is located in the Wollongong and Shellharbour local Government areas, in the Illawarra region, about 85 kilometres south of Sydney's central business district. Albion Park Rail is situated on the southern shores of Lake Illawarra, about seven kilometres inland from the coast, and about eight kilometres east of the southern portion of the Illawarra escarpment. It is about 18 kilometres south-west of Wollongong, which is the major regional centre for the Illawarra. Figure 2-1 shows the location of the project within the region.

The features of the project include:

- Two lanes in each direction divided by a median (with capacity to upgrade to three lanes in each direction in the future)
- Two interchanges provided at Albion Park and Oak Flats to connect the local road network with the motorway
- Bridges to carry the motorway over Duck Creek, Macquarie Rivulet, Frazers Creek, the Princes Highway, Tongarra Road, and the South Coast Rail Line
- Bridges to carry local roads, and ramps over the motorway
- Bridges to provide improved floodwater conveyance and flood immunity
- An upgrade to Yallah Road between Larkins Lane and the Princes Highway
- The motorway would replace the existing East West Link
- A new local service road would be built parallel to the motorway, connecting the Oak Flats interchange with Croome Road and replacing the East West Link
- Changes and upgrades to the local road network for minor realignments and creation of cul-de-sacs
- Shared user paths in all locations where motorway and local road bridge crossings are proposed
- Cyclists would have access along the motorway in both directions via motorway shoulders or separated cycle lanes, accessible via motorway ramps.
- Emergency stopping bays would be provided along the road alignment at a spacing of one to two kilometres
- Maintenance access would be provided to bridge abutments, basins, utilities and cut benches
- Directly impacted sporting facilities at the Croom Regional Sporting Complex would be replaced, including sporting fields and associated amenities
- Changes would be made to the southern access of the sporting complex. There would be new and reconfigured internal roads, pedestrian/cycle paths and parking provided
- Adjustments to the Green Meadows detention basin would ensure an appropriate flood storage volume would be maintained. An additional detention basin is proposed adjacent to Croome Road to mitigate flooding impact in smaller flood events
- The establishment of temporary ancillary sites to enable construction activities to be carried out.

The sporting facilities at the Croom Regional Sporting Complex impacted by the Project (including the sporting fields and associated amenities) will not form part of the scope of this plan as they form part of Stage 1 and will be relocated and/ or replaced under a separate contract managed by TfNSW. There will be a requirement for the design and construction contractor to interface with the Croom Regional Sporting Complex contractor in this area.

The northern interchange (Stage 3 – Yallah Interchange) is not included in the scope of the Project (i.e. Stage 2 – Princes Motorway between Yallah and Oak Flats). The northern interchange provides entry and exit ramps connected to two roundabouts on the Princes Highway, on either side of the motorway, to provide access to and from Albion Park Rail, Dapto and Yallah to the motorway.

The overall approved SSI (SSI 6878), as assessed in the SPIR, is shown in Figure 2-2.

The Project (i.e. Stage 2 – Princes Motorway between Yallah and Oak Flats) is shown in Figure 2-3.

For additional details on staging, refer to Section 2.2.

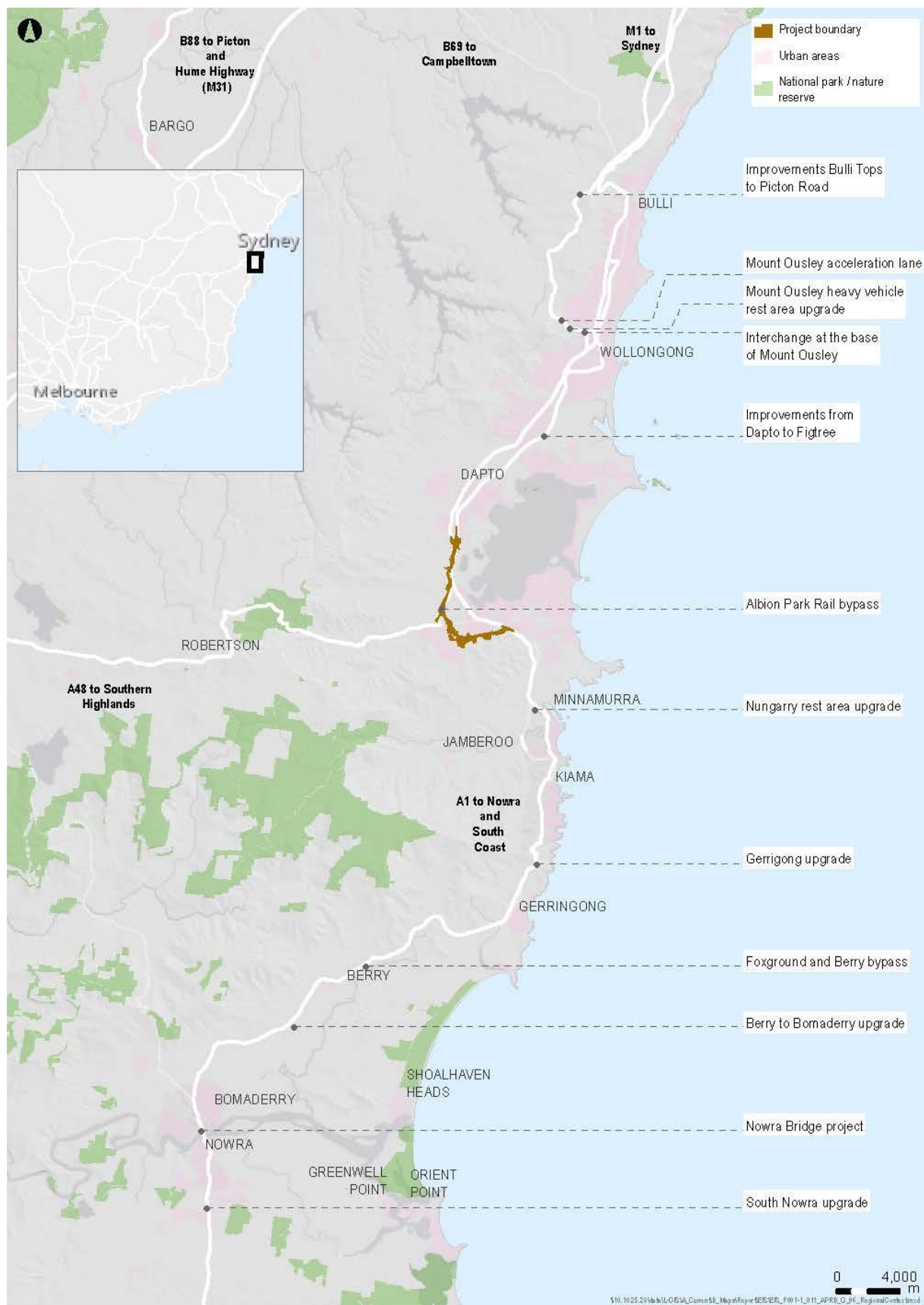


Figure 2-1 Regional context of the Project



Figure 2-2 Schematic showing overall extent of SSI 6878 as assessed in the SPIR



Figure 2-3 Albion Park Rail bypass (Stage 2 – Princes Motorway between Yallah and Oak Flats) – extent of the Project

2.2 Staging

The Project forms Stage 2 of the overall approved SSI (SSI 6878). Stage 2 comprises the extension of the Princes Motorway between Yallah and Oak Flats and all associated works including bridges, interchanges (excluding Stage 3 - Yallah Interchange) and local road changes or upgrades (excluding any work as part of Stage 1 - Croom Regional Sporting Complex reconfiguration). For additional details refer to the *Albion Park Rail bypass Staging Report* (Roads and Maritime, March 2018).

2.3 Project Program

Construction of the Project is expected to start by early 2019 and continue for about three years. Pre-construction low impact work to be carried out in 2018 will include but not necessarily be limited to enabling works (such as survey works, baseline noise monitoring, investigative drilling and investigation, salvage, potholing, at-property architectural treatments), service relocation and protection, and site establishment. The indicative program is provided in Figure 2-4 below.

Activities	2018				2019				2020				2021			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Enabling Works																
Relocation and Protection of Services																
Site Establishment																
Bulk Earthworks																
Drainage Works																
Bridge Construction																
Pavement Works																
Road Furniture																
Noise Walls																
Landscaping and Restoration																
Finishing Works																
Demobilisation																

Figure 2-4 Indicative program of construction works

2.4 Construction activities and sequence

Table 2-1 provides an overview of the anticipated sequence of construction activities associated with the project. The need to complete each activity will depend on the location and nature of construction and what work needs to take place in a given area.

Table 2-1 Anticipated construction activities

Component	Typical activity
Enabling works	<ul style="list-style-type: none"> Progressive installation of environmental controls Progressive installation of temporary and permanent fencing Progressive installation of at-property architectural noise treatments

Component	Typical activity
	<ul style="list-style-type: none"> • Conduct pre-clearing vegetation fauna surveys (to allow for utility adjustments) • Clearing of vegetation and processing of materials (to allow for utility adjustments) • Pre-construction surveys and inspections • Non-aboriginal heritage archival recording and salvage • Aboriginal heritage salvage • Geotechnical investigations • Service investigations • Site survey • Rail corridor – Service locating and geotechnical investigations.
Relocation and protection of services	<ul style="list-style-type: none"> • Preclearance checks • Gas main relocations. • Gas main protection works. • Water main relocations. • Electrical relocations. • Telecommunications infrastructure relocations. • Demolition of existing Vodafone tower.
Site establishment	<ul style="list-style-type: none"> • Installation of boundary fencing • Establishment of construction facilities • Establishment of stockpile sites and ancillary facilities • Installation of environmental controls • Pre-clearing vegetation fauna surveys • Demolition of existing buildings and structures. • Temporary traffic management arrangements • Construction of access roads • Construction of diversion and catch drains along the formation and sedimentation control basins or swales (where required) • Clearing of vegetation and processing of materials • Removal of harvestable timber
Bulk earthworks	<ul style="list-style-type: none"> • Implementation and construction of local roadworks and any local road diversions including any construction of side roads to maintain existing traffic movement (where required) • Stripping topsoil and stockpiling it for reuse in landscaping • Embankment foundation or soft soils treatments, such as the installation of wick drains and drainage blankets

Component	Typical activity
	<ul style="list-style-type: none"> • The installation of settlement monitoring devices and equipment. • Excavation of cuttings, including the processing i.e. hammering, crushing and screening, stockpiling or haulage of material; blasting activities and stabilisation of batters • Screening and crushing activities using a mobile crushing and /or screening machine for the sizing of coarse excavated natural material for aggregate reuse onsite as structural fill within road pavements • Construction of embankments, including foundation drainage.
Drainage and structures	<ul style="list-style-type: none"> • Installation of cross-drainage, including culverts and inlet and outlet work including any channel diversions and scour protection work • Construction of subsurface drainage • Installation of longitudinal and vertical drainage in cuttings and embankments.
Bridge construction	<ul style="list-style-type: none"> • Additional geotechnical works • Establishment of bridge work compounds • Installation of rock caissons or cofferdams or temporary access roads/ platforms across waterways • Installation of bridge foundations (driven or bored piles, pile caps and footings) • Construction of bridge abutments and piers • Construction of bridge superstructure including deck and pavement work • Construction of scour protection along the waterway or waterfront land.
Pavement work	<ul style="list-style-type: none"> • Construction of base and select layers of materials • Construction of pavement layers • Construction of pavement drainage, including kerb and gutter. • Construction and adjustment of property access pavements
Road furniture	<ul style="list-style-type: none"> • Installation of signage. • Installation of structural signs, including piling and concrete footings. • Line marking. • Installation and commissioning of traffic control signals. • Construction of safety barriers, including concrete barriers, wire rope fencing and guardrails.
Noise walls	<ul style="list-style-type: none"> • Construction of noise wall treatments, including piling, foundation works and the installation of prefabricated wall panels.
Landscaping and restoration	<ul style="list-style-type: none"> • Reuse of topsoil • Planting of plants and seeding disturbed areas with native and cover crops species (note this will take place throughout construction, as

Component	Typical activity
	elements of the work are complete where ongoing disturbance is not anticipated).
Finishing works	<ul style="list-style-type: none"> • Electrical and signage testing • Commissioning and final checks • Remove construction environmental controls • Opening of roads to traffic.
Demobilisation	<ul style="list-style-type: none"> • Decommissioning of construction facilities. • Removal of temporary site facility buildings and containers. • Removal of temporary hard-stand and access pavements. • Remove environmental controls. • Reinstatement of disturbed areas. • Post-construction surveys and inspections.

2.5 Temporary ancillary facility sites

Temporary ancillary facility sites will be required to enable the construction of the project. An ancillary facility is defined in the project Approval as:

'A temporary facility for construction of the project including an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory and material stockpile area

Note: Where an approved Construction Environmental Management Plan contains a stockpile management protocol, a material stockpile area located within the construction footprint is not considered to be an ancillary facility'.

2.5.1 Ancillary facility sites previously identified in the EIS as amended by the SPIR

The EIS identified 13 potential locations for ancillary facilities. However, the number of potential locations was reduced to nine within the SPIR. Table 2-2 details these changes and the potential uses of each ancillary facility. The ancillary facility sites are shaded red in Figure 2-5.

These potential ancillary facility sites have been previously identified and assessed in the EIS, as amended by the SPIR.

Table 2-2 Potential ancillary facility sites as amended by the SPIR, and their locations and potential uses

Ancillary site ID - EIS	Ancillary site ID - SPIR	Location description	Potential uses
AS01	AS01	West of the interchange at Yallah	<ul style="list-style-type: none"> • Material stockpile
AS02*	Not included in current design	East of the interchange at Yallah	<ul style="list-style-type: none"> • Material stockpile
AS03	AS03	Near Yallah Bay Road	<ul style="list-style-type: none"> • Material stockpile

Ancillary site ID - EIS	Ancillary site ID - SPIR	Location description	Potential uses
AS04	AS04	Near the existing Princes Highway and South Coast Rail Line	<ul style="list-style-type: none"> • Bridge construction support
AS05*	Not included in current design	West of Illawarra Highway intersection	<ul style="list-style-type: none"> • Bridge construction support
AS06	AS06	East of Illawarra Highway intersection	<ul style="list-style-type: none"> • Material stockpile • Main project offices • Possible workshop for plant servicing
AS07*	Not included in current design	Near interchange at Albion Park	<ul style="list-style-type: none"> • Bridge construction support • Double-handling laydown
AS08	AS08	Near Tongarra Road bridge	<ul style="list-style-type: none"> • Bridge construction support • Double-handling laydown
AS09	AS09	At Croom Regional Sporting Complex	<ul style="list-style-type: none"> • Bridge construction support
AS10	AS10	Near Croom Regional Sporting Complex	<ul style="list-style-type: none"> • Works associated with Croom Regional Sporting Complex only (refer to CoA A21)
AS11	AS11	Near East West Link	<ul style="list-style-type: none"> • Bridge construction support • Proximity to intensive work zone between Croome Road and Oak Flats
AS12*	Not included in current design	Near East West Link	<ul style="list-style-type: none"> • Bridge construction support • Proximity to intensive work zone between Croome Road and Oak Flats
AS13	AS13	Near East West Link	<ul style="list-style-type: none"> • Double-handling laydown

*Note: Sites shaded grey no longer identified as ancillary facility sites in the EIS as amended by the SPIR

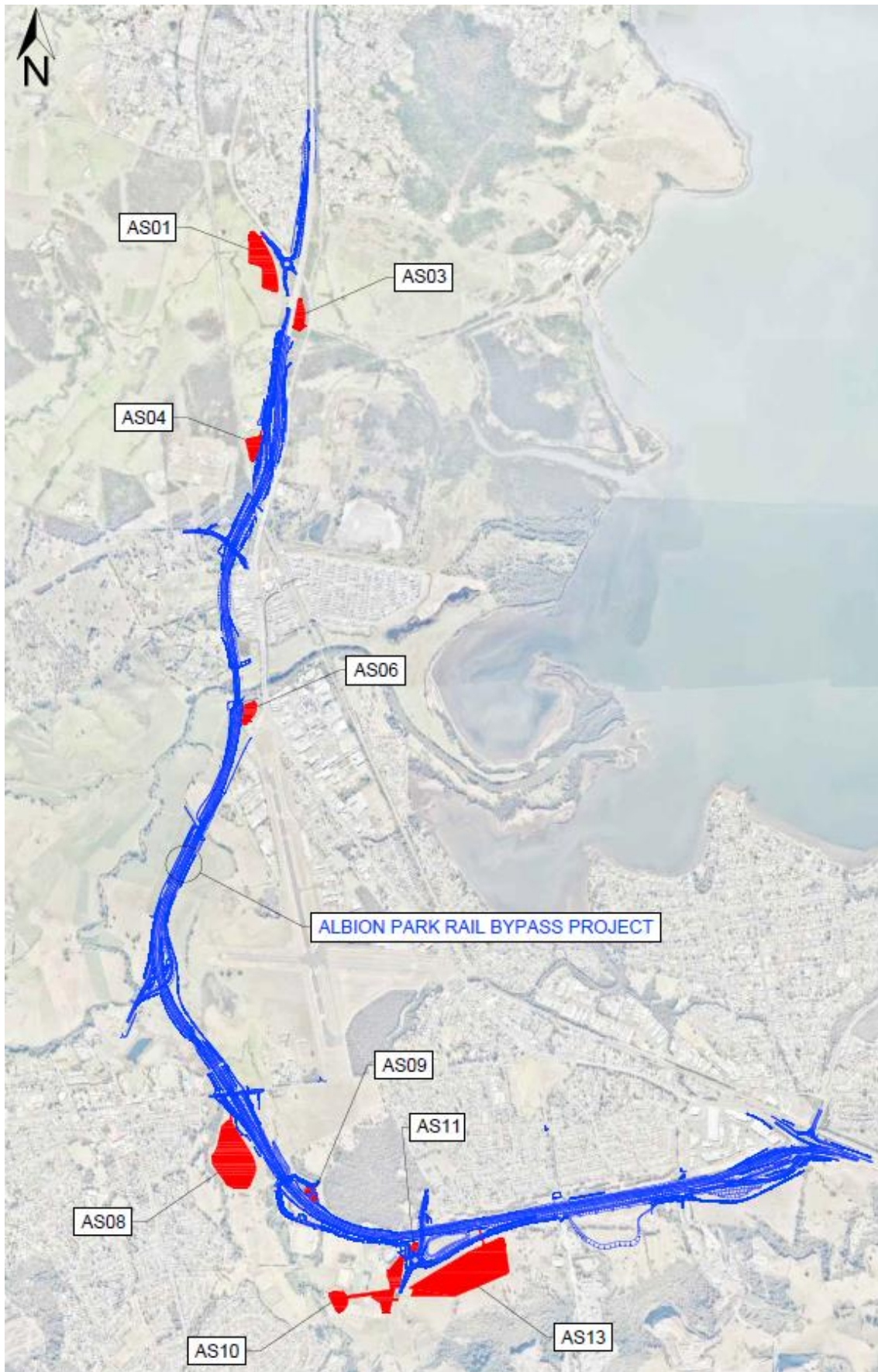


Figure 2-5 Ancillary facility sites previously identified and assessed in the EIS as amended by the SPIR

2.5.2 Ancillary facility site approval pathway

Ancillary facility sites will be established and managed in accordance with the Ancillary Facilities Management Plan required under CoA A17.

Should changes to the location of ancillary facility sites or additional ancillary facility sites be required during construction, the Ancillary Facilities Management Plan will be updated accordingly and resubmitted to the Secretary for approval.

2.5.3 Minor ancillary facility sites

A number of minor ancillary facilities, such as lunch sheds, office sheds, and portable toilet facilities etc., will also be required to support construction activities at different stages of the Project. These will be located within the active construction zone within the approved project boundary. Since the location and nature of minor ancillary facilities is subject to frequent change throughout construction they are not included in the Ancillary Facilities Management Plan.

Minor ancillary facilities that are not identified in the EIS as amended by the SPIR and which do not satisfy the criteria set out in CoA A16 must satisfy the criteria set out in CoA A18(a) and (b).

2.5.4 Location and management of stockpiles

Temporary stockpiles will be required during construction to store materials for construction or materials generated from within the construction site, including but not limited to:

- Excavated material to be used in fill embankments and other design features
- Excavated material unsuitable for project use
- Excess concrete, pavement, rock, steel and other material stored for either future use in the project or before removal off site
- Road base constituents
- Stripped topsoil
- Pre-cast concrete components
- Topsoil, mulch, excess timber for landscaping and revegetation works
- Rock crushing and screening machinery
- Crushed rock, and

Stockpiles will be located and managed in accordance with the criteria contained in the Stockpile Management Protocol (Appendix E of the SWMP). The Protocol states that the mitigation measures included in the relevant sub-plan e.g. Air Quality Management Sub-plan (AQMP), Waste and Energy Management Sub-plan (WEMP), Flora and Fauna Management Sub-plan (FFMP), Noise and Vibration Management Sub-plan (NVMP), Heritage Management Sub-plan (HMP), Soil and Water Management Sub-plan (SWMP) will be implemented to minimise or avoid impact of stockpiles on the environment.

3 Planning and Implementation

This CEMP is the overarching management plan for a suite of environmental management documents for the Project as shown in Figure 3-1. A register of environmental management documents will be maintained in the project's environmental document register. An example environmental document register is provided in Appendix A4.

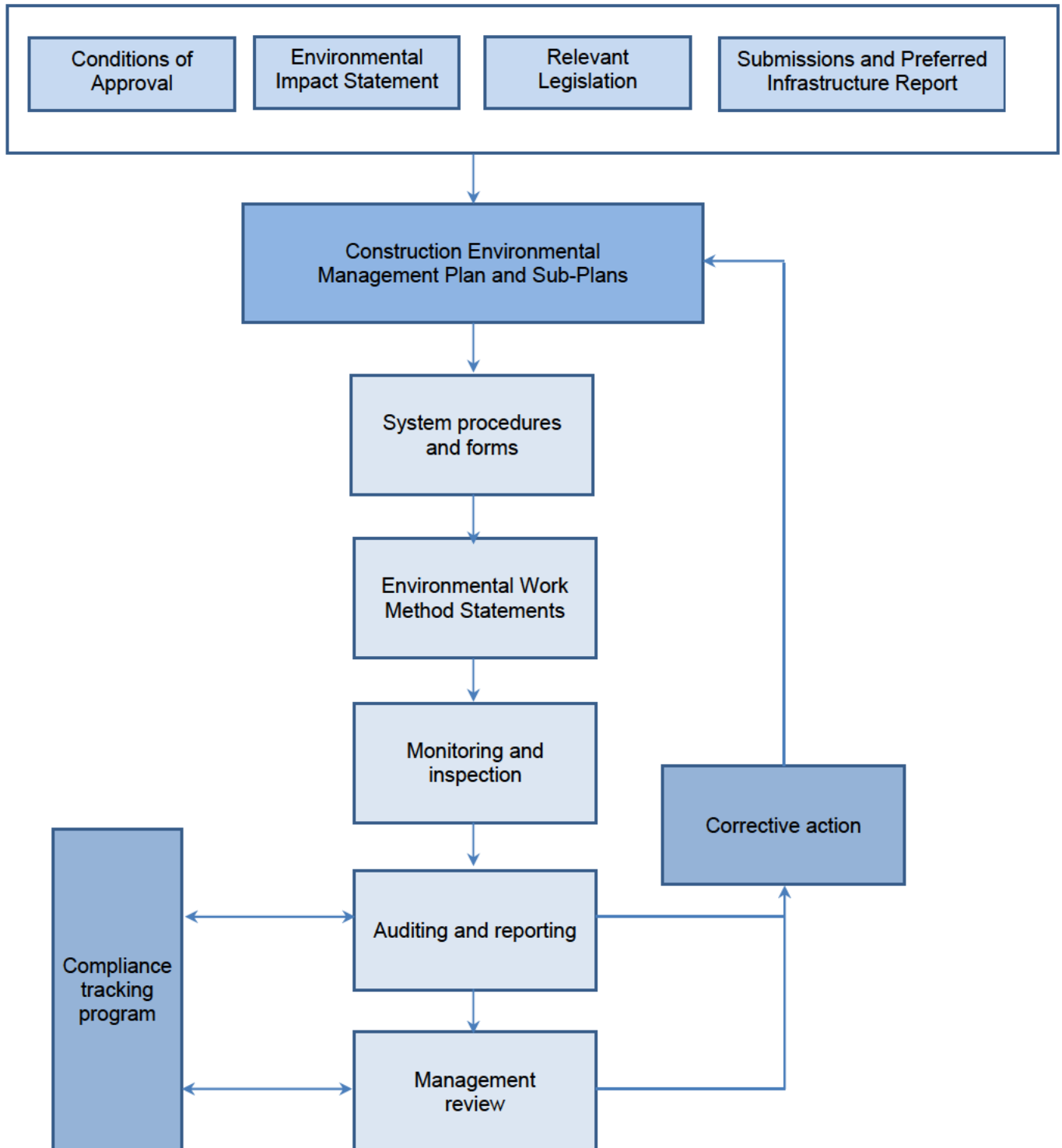


Figure 3-1 Environmental management system structure

3.1 Planning

3.1.1 Environmental risk assessment

An initial risk assessment has been undertaken prior to commencement of construction as part of the Environmental aspects and impacts register as outlined below. Ongoing analysis of the key environmental risks will occur for the duration of the project using a range of tools, including an environmental risk assessment workshop undertaken once before the commencement of construction (refer below); annual review of the CEMP (refer to Section 1.6); EWMS development (refer to Section 3.1.5); environmental inspections (refer to Section 3.7.1); environmental monitoring (refer to Section 3.7.2); auditing (refer to Section 3.7.3); and compliance tracking (refer to Section 3.1.2).

Environmental aspects and impacts register

A risk management approach is used to determine the severity and likelihood of an activity's impact on the environment and to prioritise its significance. This process considers potential regulatory and legal risks as well as the concerns of the community and other key stakeholders.

The objectives of the risk assessment are to:

- Identify activities, events or outcomes that have the potential to adversely affect the local environment and/or human health/property.
- Qualitatively evaluate and categorise each risk item.
- Assess whether risk issues can be managed by environmental protection measures.
- Qualitatively evaluate residual risk with implementation of measures.

A risk assessment has been carried out to inform the Environmental aspects and impacts register contained in Appendix A2. This risk assessment will be reviewed as part of the CEMP revision process outlined in Section 1.6 to ensure it remains relevant for the duration of the project. In addition, the risk assessment will be reviewed during the environmental risk assessment workshop as described below.

Environmental risk assessment workshop

An environmental risk assessment workshop will be carried out once before start of construction to identify the environmental risks associated with project activities, such as:

- Working platforms in or adjacent to waterways
- Decommission working platforms
- Temporary waterway crossings
- Site compound establishment including satellite compounds
- Access / haul roads
- Plant delivery, transport and maintenance
- Fencing
- Services relocation
- Embankment foundation treatment including compressible foundation treatments
- Culvert construction
- Bridge construction
- General earthworks
- Pre-casting yard
- Extraction area / Crusher
- Concrete paving
- Early installation of environmental protection measures
- Management of tannin leachate

- Clearing and grubbing
- Weed management
- Landscaping works
- Construction sediment basin installation and management
- Construction sediment basin decommissioning
- Source of construction water
- Dewatering
- Farm dam dewatering
- Stockpiling
- Acid sulfate soil and rock treatment
- Piling
- Blasting
- Waste management
- Structure demolition.

The risk assessment contained in Appendix A2 will be reviewed during the environmental risk assessment workshop and the CEMP updated as required.

3.1.2 Regulatory requirements and compliance

Legislation

A register of legal and other requirements for the Project is contained in Appendix A1. This register is maintained as a checklist. This register will be reviewed at regular intervals by the Environmental Manager, such as during management reviews, and updated with any applicable changes. Any changes made to the legal requirements register will be communicated to the wider project team, including subcontractors where necessary through toolbox talks, specific training and other methods detailed in Section 3.4 of this CEMP.

Approvals, permits and licences

A number of approvals, permits and licenses have and/or will be obtained for the Project. Appendix A1 contains a register of all relevant environmental approvals, permits and licenses. The register will be maintained by the Environmental Manager and will be reviewed before the start of construction and/or stages of construction, and at regular intervals during construction and at least annually as part of the management review.

The following approvals, permits and licences are required for the Project:

- Project Approval under the EP&A Act – SSI 6878 was granted by the Minister for Planning on 30 January 2018
- Environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997*
- EPBC Approval under the EPBC Act - 2017/7909 was granted by the Assistant Secretary on 29 May 2018.

All necessary licences, permits and approvals required for the development of the Project will be obtained and maintained as required throughout the life of the Project. No condition of the Project Approval removes the obligation for TfNSW or Fulton Hogan to obtain, renew or comply with such necessary licences, permits or approvals except as provided under Section 115ZG of the EP&A Act.

Compliance tracking

The CoA and REMMs are contained in the Compliance Tracking Program and provide a reference to where each requirement is addressed by this CEMP or other Project documentation.

A checklist of compliance with TfNSW specification G36 is also included in Appendix A1 and further information on compliance tracking is in section 3.7.4 of this CEMP.

TfNSW Specifications

Compliance with TfNSW specifications will be undertaken through regular monitoring, inspections and auditing as described in Section 3.7.

3.1.3 Environmental policy

The Environmental Policy (refer to Appendix A3) describes Fulton Hogan's commitment to continual improvement in environmental performance and compliance with applicable legal requirements.

The environmental policy is displayed on the TfNSW Project website (via this CEMP) and at the site office, and communicated to staff and other interested parties via inductions and ongoing awareness programs.

3.1.4 Environmental objectives and targets

As a means of assessing environmental performance during construction of the Project, environmental objectives and targets have been established. These objectives and targets have been developed with consideration of key issues identified through the environmental assessment and risk assessment process. The objectives and targets are consistent with Fulton Hogan's environmental policy and will help in monitoring whether the commitments of the policy are being met.

The performance of the Project against the objectives and targets will be documented in the Project construction compliance reports and at least on an annual basis as part of the management review (refer to Section 3.10).

Detailed environmental objectives and targets for the Project are incorporated into relevant environmental management sub-plans and a summary of key objectives and targets is provided in Table 3-1 below.

Table 3-1 Environmental objectives and targets

Objective	Target	Measurement tool
Construction of the Project in accordance with environmental approvals.	<ul style="list-style-type: none">Full compliance with statutory approvals.	Audits, construction compliance reporting, management view.
Compliance with all legal requirements.	<ul style="list-style-type: none">No regulatory infringements (PINs or prosecutions).	No formal regulatory warning-audits, construction compliance reporting, management view.
Implement a rigorous and comprehensive EMS that meets the requirements of AS/NZS ISO 14001.	<ul style="list-style-type: none">Address non-conformances and corrective actions within specific timeframes.	Audits, management reviews.

Objective	Target	Measurement tool
Engage with the effected and broader community, minimise complaints and respond to any complaints within a suitable timeframe.	<ul style="list-style-type: none"> Disseminate regular Project updates and other information through the Project website and other tools identified in the Community Communication Strategy. Record and response to complaints within the timeframe specified in the Community Communication Strategy. 	Review complaints register, construction compliance report, audits.
Continuously improve environmental performance.	<ul style="list-style-type: none"> Develop and maintain a program of ongoing environmental training. Capture lessons learnt from environmental incidents to minimise repeat issues. Encourage and reward innovation and effort throughout the works force. 	Construction compliance report, management review.

3.1.5 Environmental Work Method Statements

Environmental work method statements (EWMS) are prepared to manage and control all high risk activities and others that have the potential to negatively impact on the environment. EWMS will be prepared before the start relevant construction activities and will incorporate relevant mitigation measures and controls, including those from relevant management sub-plans. They also identify key procedures to be used concurrently with the EWMS. EWMS are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

EWMS will be prepared by engineering staff progressively in the lead up to and throughout construction in consultation with relevant members from the Project team. The Environmental Manager will conduct the final review and concurrence will be provided by the TfNSW Environmental Officer.

EWMS for activities identified as having high environmental risk will undergo a period of consultation with stakeholders and authorities before approval. A list of upcoming/future EWMS will be provided to Environmental Review Group (ERG) participants during regular meetings for information. Targeted consultation will be undertaken with the relevant agencies as required by the works.

Environmental Work Method Statements (EWMS) will be prepared for high risk activities including those outlined in the EIS and those identified through the Environmental Risk Assessment Workshop (refer to section 3.1.1. above). As a minimum, EWMS will be prepared for the following activities where relevant for the project works:

- Working platforms in or adjacent to waterways
- Decommission working platforms
- Temporary waterway crossings
- Site compound establishment including satellite compounds
- Access / haul roads
- Plant delivery, transport and maintenance
- Batch plant establishment and operation
- Fencing

- Services relocation
- Embankment foundation treatment including compressible foundation treatments
- Culvert construction
- Bridge construction
- General earthworks
- Pre-casting yard
- Extraction area / Crusher
- Concrete paving
- Early installation of environmental protection measures
- Management of tannin leachate
- Clearing and grubbing
- Weed management
- Landscaping works
- Construction sediment basin installation and management
- Construction sediment basin decommissioning
- Source of construction water
- Dewatering
- Farm dam dewatering
- Stockpiling
- Acid sulfate soil and rock treatment
- Piling
- Blasting (if required)
- Waste management
- Structure demolition

The EWMS include at least the following elements:

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

All construction personnel and sub-contractors carry out a task governed by an EWMS must participate in training on the EWMS, and acknowledge that they have read and understood their obligations by signing an attendance record before commencing work.

Regular monitoring, inspections and auditing of compliance with the EWMS will be carried out by Project management and environmental personnel to ensure that all controls are being followed and that any non-conformances are recorded and corrective actions implemented.

3.1.6 Progressive erosion and sediment control plans

Progressive Erosion and Sediment Control Plans (PESCPs) are used to identify the approximate location of erosion and sediment control structures on site. They cover all construction stages from initial vegetation clearing through to rehabilitation when erosion and sediment controls are no longer required and are removed. PESCP will be developed and implemented across the Project where there is a risk of erosion and sediment loss.

PESCPs may be produced in conjunction with EWMS to provide more detailed site-specific environmental mitigation measures.

PESCP will be developed by the Project Engineers in consultation with the superintendent, site engineers, foreman and other relevant site personnel (as required) and reviewed and approved by the Environmental Manager. They will be modified over time to reflect changing site conditions.

3.1.7 Sensitive Area Plans

The Project traverses a diversity of environmental and socially sensitive areas/sites. To help pre-construction planning and on-site construction management, these site constraints are consolidated on series of map-based sheets that extend the length of the Project. Sensitive area plans include information pertaining, but not limited to:

- Noise sensitive receivers' e.g. residential dwellings, educational institutions
- Flora features, including threatened species and threatened ecological communities
- Aboriginal and non-Aboriginal heritage sites, including items, places, objects and sites
- Local waterways
- Conservation areas / nature reserves.

The sensitive area plans are presented in Appendix A6. They are a working element of the CEMP and will be revised throughout construction to reflect true ground conditions and the most up-to-date information available on sensitive sites. Sensitive area plans will be used in conjunction with EWMS to help identify key risk areas and to promote ongoing communication to construction personnel during the Project.

3.2 Resources, responsibilities and authority

The key environmental management roles and responsibilities for the construction phase of the Project are described below. The structure of these roles is shown in Figure 3-2.

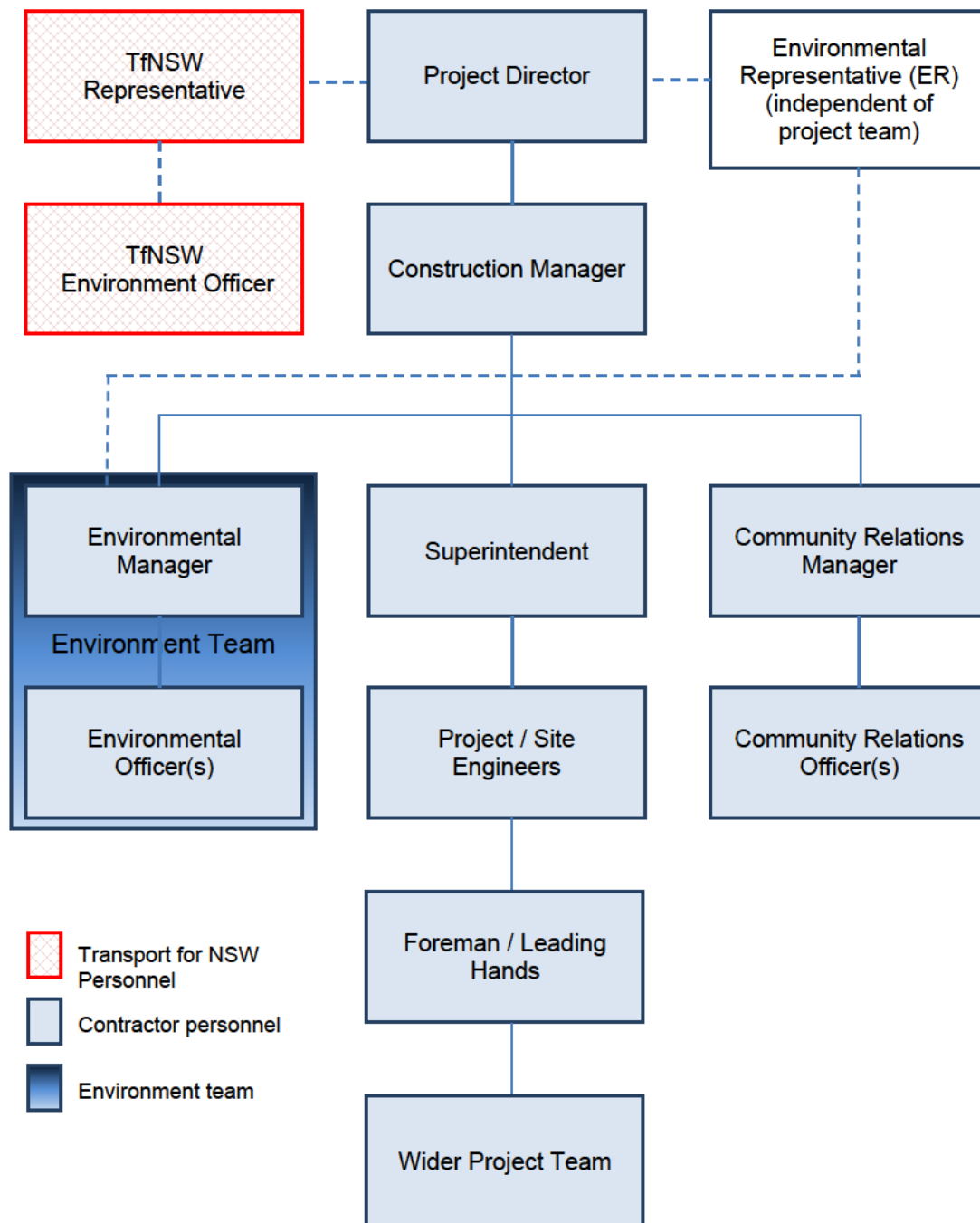


Figure 3-2 Project management structure

3.2.1 Environmental Representative

The environmental responsibilities of the Environmental Representative are detailed in CoA A24 and include:

- (a) receive and respond to communications from the Secretary in relation to the environmental performance of the SSI;
- (b) consider and inform the Secretary on matters specified in the terms of this approval;
- (c) consider and recommend any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community;

- (d) review all work and construction related documents required to be prepared under the terms of this approval, ensure they address any requirements in or under this approval and if so, endorse them before submission to the Secretary (if required to be submitted to the Secretary) or before implementation (if not required to be submitted to the Secretary);
- (e) regularly monitor the implementation of all work and construction related documents required by the terms of this approval for implementation in accordance with what is stated in the document and the terms of this approval;
- (f) as may be requested by the Secretary, help plan, attend or carry out Department audits of the SSI, briefings, and site visits;
- (g) if conflict arises between the Proponent and the community in relation to the environmental performance of the SSI, follow the procedure in the Community Communication Strategy approved under Condition B2 of this approval to attempt to resolve the conflict, and if it cannot be resolved, notify the Secretary;
- (h) review any draft consistency assessment that may be carried out by the Proponent, and provide advice on any additional mitigation measures required to minimise the impact of the work;
- (i) consider any minor amendments to be made to the CEMP, CEMP sub-plans and monitoring programs that comprise updating or are of an administrative nature, and are consistent with the terms of this approval and the CEMP, CEMP sub-plans and monitoring programs approved by the Secretary and, if satisfied such amendment is necessary, approve the amendment. This does not include any modifications to the terms of this approval;
- (j) assess the impact of minor ancillary facilities as required by Condition A18 of this approval; and
- (k) prepare and submit to the Secretary and other relevant regulatory agencies, for information, a monthly Environmental Representative Report detailing the ER's actions and decisions on matters for which the ER was responsible in the preceding month (or other timeframe agreed with the Secretary). The Environmental Representative Report must be submitted within seven (7) days after the end of each month for the duration of the delivery of the SSI, or as otherwise agreed with the Secretary.

Transport for NSW Roles

3.2.2 TfNSW Environment Officer

The environmental responsibilities of the TfNSW Environment Officer include, but are not limited to, the following:

- Review any environmental management plans and related documents prepared for the Project
- Review minor Project refinements that are consistent with the Project environmental assessment and approval documentation and recommend they be approved to the relevant TfNSW Director.
- Monitor the environmental performance of the Project in relation to TfNSW requirements

3.2.3 TfNSW Representative

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

- Evaluate and advise on compliance with TfNSW environmental requirements
- Review and approve any environmental management plans for the Project or related activities that are not required to be approved by the Secretary of DPIE.

3.2.4 TfNSW Assistant Representative

The environmental responsibilities of the TfNSW Assistant Representative include (but are not limited to) the following:

- Administers day-to-day interaction with Fulton Hogan activities on site as delegated by the TfNSW Representative

- Hold point release by delegation to TfNSW project engineering staff.

Fulton Hogan Roles

3.2.5 Project Director

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

- Ensure all works comply with relevant regulatory and Project requirements
- Ensure the requirements of this CEMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements
- Endorse and support the Project environmental policy attached at Appendix A3
- Liaise with TfNSW, Environmental Representative and other Government authorities as required
- Participate and provide guidance in the regular review of this CEMP and supporting documentation
- Provide adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of this CEMP
- Ensure that all personnel receive appropriate induction training, including details of the environmental and community requirements
- Ensure that complaints are investigated to ensure effective resolution
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

3.2.6 Construction Manager

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

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

3.2.7 Superintendent

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

- Communicate with all personnel and sub-contractors about compliance with the CEMP and site-specific environmental issues
- Ensure all site workers attend an environmental induction before the start of works
- Coordinate the implementation of the CEMP
- Coordinate the implementation and maintenance of pollution control measures
- Identify resources required for implementation of the CEMP
- Support the Environmental Manager in achieving the project environmental objectives, including on ground implementation of the EWMS and ESCP

- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Environmental Manager / Environmental Officers
- Coordinate action in emergency situations and allocate required resources
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Construction Manager and Environmental Manager.

3.2.8 Environmental Manager

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

- Overall responsibility for the implementation of environmental matters on the Project
- Development, implementation, monitoring and updating of the CEMP and sub-plans in accordance with ISO14001
- Report to Project Manager and other senior managers on the performance and implementation of the CEMP
- Ensure management reviews of the CEMP are carried out annually, documented and actions implemented
- Ensure environmental risks of the Project are identified and appropriate mitigation measures implemented
- Identify where environmental measures are not meeting the targets set and where improvement can be achieved
- Ensure environmental protocols are in place and managed
- Ensure environmental compliance
- Obtain and update all environmental licences, approvals and permits as required
- Lead liaison with Environmental Representative and approval authorities
- Manage environmental document control, reporting, inductions and training
- Manage environmental reporting within the Project team and to the TfNSW and regulatory authorities
- Preparing reports on a monthly basis outlining the Project Works carried out and the achievements that have been met, as well as identifying those areas where improvements were made
- Ensure construction monitoring programs are implemented
- Oversee site monitoring, inspections and audits
- Manage all subcontractors and consultants with regards to environmental matters, including assessing their environmental capabilities and overseeing the submission of their environmental documents
- Prepare and/or distribute environment awareness notes
- Review and approve PESCP
- Develop and facilitate induction, toolbox talks and other training programs about environmental requirements for all site personnel
- Notify TfNSW and relevant authorities in the event of an environmental incident and manage close-out of these
- Stop activities where there is an actual or immediate risk of harm to the environment, or to prevent environmental non-conformities, and advise the Project Director, Construction Manager and Superintendent

- Help the Community Relations Manager to resolve environment-related complaints.

3.2.9 Environmental Officer

The environmental responsibilities of the Environmental Officer include, but are not limited to, the following:

- Help in preparing the CEMP (including any future revisions) in accordance with all relevant requirements
- Develop PESCP in consultation with the superintendent, site engineers, foreman and other relevant site personnel, as required
- Carry out site inspections, carry out monitoring activities and complete site checklists
- Ensure monitoring records are appropriately maintained, reviewed and any non-compliance issues addressed
- Manage the day-to-day environmental elements of construction
- Record and provide written reports to the Environmental Manager of non-conformances or corrective actions with the CEMP. This may include the need to implement additional, or revise existing, mitigation measures
- Help in identifying environmental risks
- Advise the Environmental Manager and Construction Manager of the need to stop work immediately if an unacceptable impact on the environment is likely to occur or to require other reasonable steps to be taken by the Construction Manager or site construction staff to avoid or minimise impact
- Provide reports to the Environmental Manager on any major issues resulting from the Project
- Help all site staff with issues concerning Project environmental matters
- Help in developing training programs about environmental requirements and deliver where required, including delivery of the environmental component of toolbox talks
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Director, Construction Manager, Superintendent and Environmental Manager.

3.2.10 Community Relations Manager

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

- Ensure that all community consultation activities are carried out
- Communicate general Project progress, performance and issues to stakeholders including the community
- Maintain the 24 hour complaints hotline
- Report any environmental issues to the Environmental Manager raised by stakeholders or members of the community

3.2.11 Project/Site Engineers

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

- Provide input into the preparation of environmental planning documents as required
- Ensure that instructions are issued and adequate information provided to employees that relate to environmental risks on-site
- Ensure that the works are carried out in accordance with the requirements of the CEMP and supporting documentation, including the implementation of all environmental controls

- Identify any environmental risks
- Identify resource needs for implementation of CEMP requirements and related documents
- Ensure that complaints are investigated to ensure effective resolution
- Take action in the event of an emergency and allocate the required resources to minimise the environmental impact
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent and Environmental Manager.

3.2.12 Foreman

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

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

3.2.13 Wider project team (including sub-contractors)

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

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

3.3 Selection and management of subcontractors

Sub-contractor environmental requirements and responsibilities are to be specified in the contract documentation. As part of the selection process, consideration will also be given to their past environmental performance.

The Environmental Manager, or delegate, will participate in the tender assessment and selection process where it is deemed necessary due to associated environmental risks. All sub-contractors will be required to complete a sub-contractor questionnaire or similar.

All sub-contractors are required to work in accordance with the approved CEMP.

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

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

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

3.4 Competence, training and awareness

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

3.4.1 Environmental induction

All personnel (including sub-contractors) are required to attend a compulsory site induction that includes an environmental component before start on-site. This is done to ensure all personnel involved in the Project are aware of the requirements of the CEMP and to ensure the implementation of REMMs.

Short-term visitors to site carrying out inspections / entering the site (such as regulators) will be required to carry out a visitors induction and be accompanied by inducted personnel at all times.

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

The Environmental Manager (or delegate) will conduct the environmental component of the site inductions.

The environmental component must cover all elements of the CEMP and would include as a minimum:

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

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

The Environmental Representative will review and approve the induction program (where required) and monitor implementation.

3.4.2 Toolbox talks, training and awareness

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

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

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

- Erosion and sedimentation control
- Site preparation before heavy rainfall and flooding events
- Dewatering
- Hours of work
- Emergency and spill response
- Aboriginal and non-Aboriginal heritage
- Threatened species, endangered ecological communities, clearing controls and vegetation protection
- Weed management
- Dust control
- Construction noise
- Snake awareness

Toolbox talk attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained.

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

Another way to inform construction personnel will be through the development and distribution of awareness notes. These will typically take the form of a poster, booklet, or similar and will be distributed to engineers, leading hands, foreman and others with a responsibility for managing specific work locations or activities. This documentation will be used to inform the broader workforce through either daily pre-starts meeting (see section 3.4.3) or provision in worker crib sheds / break facilities.

The Environmental Representative will review and endorse the training program (where required) and monitor implementation.

3.4.3 Daily Pre-Start Meetings

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

The Foreman, or other appropriate site staff member, will conduct a daily pre-start meeting with the site workforce before the start of work each day (or shift) or where changes occur during a shift. Daily pre-start meetings are generally succinct in nature and take around 10-15 minutes.

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

Pre-start topics, dates delivered and a register of attendees will be recorded and the records maintained.

3.5 Communication

3.5.1 Internal Communication

The environmental team will meet regularly to discuss any issues with environmental management on-site, any amendments to plans that might be required or any new / changes to construction activities.

Regular meetings may also be scheduled with the ER and relevant TfNSW environmental staff. The purpose of these meetings would be to communicate ongoing environmental performance and to identify any issues to be addressed.

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

Further internal communications about environmental issues and aspects will be through toolbox talks and daily pre-start meetings as described in Section 3.4.2 and 3.4.3 above.

3.5.2 Liaison with EPA and Government authority consultation

The Environmental Manager will be the main point of contact for external and Government authorities. The Environmental Manager has the responsibility to report on the ongoing environmental performance of the Project to TfNSW, the ER and external Government agencies (e.g. EPA/OEH). The Environmental Manager will report regularly to TfNSW on progress and any key environmental matters through monthly reports.

The following two project team members are nominated as 24 hour contacts for environmental regulatory authorities, with the authority to take immediate action to shut down any activity, or to affect any pollution control measure:

- [REDACTED]
- [REDACTED]

Refer to Section 3.6 for how Fulton Hogan communicates with agencies and authorities about pollution incidents that cause or threaten material harm to the environment.

In the event of any visit to site by the EPA, the TfNSW is to be immediately notified and a report prepared which notifies of the purpose and outcome of the EPA visit, and all actions taken by Fulton Hogan in response to the EPA visit. The report is to be submitted to TfNSW within one (1) working day of the EPA site visit. Refer to Section 3.7.5 for reporting requirements.

3.5.3 Community communication strategy

A Community Communication Strategy (CCS) has been developed to provide an approach to stakeholder and community communications in accordance with the requirements of CoA B3. The strategy identifies opportunities for providing information and consulting with the community and stakeholders during the construction phase of the Project.

The Community Communication Strategy will be submitted to DPIE for approval before the start of any work.

3.5.4 Complaints management

A Construction Complaints Management System, consistent with AS-ISO 10002-2006 Complaints Handling (which has superseded AS 4269 Complaints Handling) has been developed for the Project, in accordance with the requirements of CoA B6.

All community inquiries and complaints related to the construction activities will be referred to the 24-hour community information line (1800 708 727). A postal address (Albion Park Rail bypass, PO Box 1014, Albion Park Rail NSW 2527) and email address (APRbypass@fultonhogan.com.au) has been provided for receipt of complaints and enquiries. The telephone number, the postal address and the email address was published in newspapers circulating in the local area before the start of construction and is provided on the Project website.

Information on all complaints received, including the means by which they were addressed and whether resolution was reached and whether mediation was required or used, will be included in a complaints register. The information contained within the register will be made available to the Secretary on request.

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

3.6 Emergency and Incident Planning

All incidents and emergencies will be managed in accordance with the Incident and Emergency Response Plan (IERP). The Case and Action Management System software (CAMs) will be used to record all environment incidents.

Reporting of environmental incidents will be undertaken in accordance with the TfNSW *Environmental Incident Classification and Reporting Procedure*. This procedure is provided in Appendix A7.

Upon consultation with the NSW Environmental Manager and the NSW Operations Manager, the Environmental Manager will notify TfNSW, the ER, the Project Verifier and DPIE verbally immediately and in writing within 24 hours of the occurrence of any environmental incident (refer to CoA A38 and G36 Clause 4.14). In accordance with CoA A39, notification of an incident will include the time and date of the incident, details of the incident and will identify any non-compliances with the project approval. Any requirements of the Secretary or relevant government authority (as determined by the Secretary) to address the cause or impact of an incident reported in accordance with CoA A38 will be met within the timeframe determined by the Secretary or relevant government authority (refer to CoA A40).

Incident reports will include lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident. All efforts will be carried out immediately to avoid and reduce impact of incidents and suitable controls put in place. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident.

In accordance with Part 5.7 of the *Protection of the Environment Operations Act 1997* (NSW) (POEO Act) immediate notification will be carried out of any incident if (a) actual or potential harm to the health or safety of human beings or ecosystems is not trivial, or (b) actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds \$10,000, to the following organisations:

- EPA (via the EPA pollution line 131 555)
- Ministry of Health (via the Public Health Unit)
- SafeWork NSW
- Wollongong City Council
- Shellharbour City Council
- Fire and Rescue NSW.

Where an incident involves an Aboriginal site, relevant Registered Aboriginal Parties will be notified and their input sought in closing out the incident.

3.7 Monitoring, inspections and auditing

3.7.1 Environmental inspections

Weekly and post rainfall site inspections

The Environmental Manager (or delegate) will ensure all erosion and sediment control measures on the project are inspected and works undertaken to repair and/or maintain these controls:

- weekly during standard construction hours outlined in CoA E36 and the EPL
- daily during periods of rainfall, and
- within 24 hours of cessation of a rainfall event causing runoff to occur on or from the project.

The Environmental Manager (or delegate) will record inspection findings on a standard inspection checklist form, or using a mobile software application, such as 'iAuditor'.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on the standard checklist form or using the mobile software application checklist form. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority.

Environmental Representative, TfNSW and ERG inspections

The Environmental Representative, TfNSW staff and members of the ERG will carry out regular inspections of works sites, and in particular critical activities throughout construction of the Project. Inspections by the Environmental Representative and TfNSW Project staff would typically occur on a weekly or fortnightly basis depending on the complexity and anticipated risks associated with the stage of construction. ERG inspections will typically be less frequent, more likely on a quarterly basis depending on the construction staging of Project.

A member of the Project environment team will participate in all Environmental Representative, client and ERG inspections, and records maintained. Deficiencies and required actions will be analysed and prioritised at the completion of the inspection and timeframes for implementation of corrective actions agreed.

3.7.2 Environmental monitoring

Monitoring will be carried out to validate the impact predicted (where relevant) for the Project, to measure the effectiveness of environmental controls and implementation of this CEMP, and to address approval requirements. The monitoring requirements for required aspects are included in the relevant environmental management sub-plans and summarised in Table 3-2 below.

Table 3-2 Summary of environmental monitoring required by the Project approval.

CoA	Description	Relevant Sub-plan
C9(a)	Air Quality Construction Monitoring Program	Air Quality Management Sub-plan (Appendix B6)
C9(b)	Groundwater Construction Monitoring Program	Soil and Water Management Sub-plan (Appendix B4)
C9(c)	Surface Water Construction Monitoring Program	Soil and Water Management Sub-plan (Appendix B4)
C9(d)	Noise Construction Monitoring Program	Noise and Vibration Management Sub-plan (Appendix B3)

The Environmental Representative and TfNSW Representative will be advised of any non-conformances from monitoring and details reported in the monthly report.

Where a non-conformance is detected or monitoring results are outside of the expected range and are directly attributable to the Project (i.e. are influenced by factors under the direct control of the Project e.g. noise from construction equipment), the process described in Section 3.8 will be implemented. Steps in the process will include:

- An analysis of the results by the Environmental Manager in more detail with a view of determining possible causes for the non-conformance
- A site inspection by the Environmental Manager or delegate
- Advising relevant personnel of the problem

- Identifying and agreeing on actions to resolve or mitigate the non-conformance
- Implementing actions to rectify or mitigate the non-conformance

A non-conformance Environmental Incident Report and/or Environmental Improvement Notice may be issued by the Environmental Manager in response to the non-conformance problem if it is found to be construction related.

The timing for any improvement will be agreed between the relevant Engineer/Superintendent and Environmental Manager based on the level of risk (eg a significant risk will require immediate action).

All environmental monitoring equipment shall be maintained and calibrated according to manufacturer's specifications and appropriate records kept.

3.7.3 Auditing

Both internal and external auditing will be carried out on the Project.

Contractor internal audits

Internal auditing will be carried out during construction on a six monthly basis throughout the Project. Refer to Table 3-3 below. The purpose of auditing is to verify compliance with:

- This CEMP and Sub-plans
- Approval requirements (CoAs, REMMs)
- Any relevant legal and other requirements (eg licenses, permits, regulations, TfNSW contract documentation/ specifications)
- An audit checklist will be developed and amended as necessary to reflect changes to this CEMP, subsequent approvals and changes to Acts, regulations or guidelines.

Table 3-3 Internal audit requirements

No.	Audit	Requirement	Timing	Responsibility	Recipient
1	Internal audit	Verify compliance with approval and legal requirements, TfNSW specifications and construction documentation	The first audit within three months of the start of construction and then at six monthly intervals thereafter. The final submitted within five working days of contract completion date.	Environmental Manager	TfNSW Representative

Independent external audits

Independent external auditing will be carried out in accordance with the Environmental Audit Program required under CoA A33, submitted to the Secretary for information no later than one month before the commencement of works.

The first construction-based audit will be completed within 12 months of works commencing then annually thereafter for the duration of the works.

3.7.4 Compliance tracking

A Compliance Tracking Program has been developed for the Project, as prescribed in CoA A25. The compliance reporting required under the Compliance Tracking Program will record how the CoA and REMMs have been addressed. A summary of the required compliance reporting, as required by CoA A25, is provided in Table 3-4.

Table 3-4 Compliance Reporting

No	Report	Requirement	Timing	Responsibility	Recipient
1	Compliance Tracking Program	To monitor compliance with the terms of the project approval	Before the start of works or within another timeframe agreed with the Secretary	Environment Manager	DPIE

3.7.5 Other reporting

Before, during and after construction, various reports will be prepared to fulfil TfNSW and other reporting needs, and requirements under the Project approval. Table 3-5 sets out the reporting requirements applicable to the Project, timing of the reporting, who is responsible for managing preparation of the reports and the intended recipient(s).

Additional reporting may be necessary as the works progress. In such a circumstance, Table 3-5 will be amended to reflect these changes.

Table 3-5 Reporting requirements

No	Report	Requirement	Timing	Responsibility	Recipient
1	Monthly environmental report	For incorporation in Project Monthly Reports including environmental statistics (i.e. incidents, regulatory action, complaints on environmental issues), regulatory and authority considerations, monitoring program performance and key environmental issues	Monthly	Environmental Manager	TfNSW
2	EPL Pollution Monitoring Report	Details of all non-compliances with conditions of EPL, measures taken to prevent recurrence, and details of discharges from sediment basins where water quality results exceed EPL conditions. Detail of any complaints received will also be reported.	Within 10 working days of the end of each calendar month.	Environmental Manager	EPA
3	EPL annual returns	Report on compliance with	Within 60 days of the	Environmental Manager	EPA

No	Report	Requirement	Timing	Responsibility	Recipient
		EPL and complaints	anniversary of the EPL.		
4	ER monthly report	Report of site environmental performance after routine inspections.	Monthly	Environmental Representative	DPIE TfNSW Fulton Hogan
5	Environmental risk assessment	Conducted for each construction stage, Project changes and significant issues.	Before construction during development of CEMP and as required thereafter.	Environmental Manager, Construction Manager	TfNSW
6	Monitoring results	Report on monitoring recorded data and potential exceedances against criteria.	As required	Environmental Manager, Construction Environmental Officer (s)	TfNSW
7	TfNSW and/or EPA environmental inspection reports	Response to matter raised in TfNSW and/or EPA site inspections.	As required. Typically every two weeks for TfNSW inspection reports and monthly for EPA inspection reports.	Environmental Manager, Construction Environmental Officer (s)	TfNSW/EPA
8	EPA or any other Authority, inspection report, other than for arranged inspections.	Report on the purpose, outcome and actions pertaining to the visit and will be submitted to the TfNSW Representative	Within one working day of the EPA or any other Authority visit, other than for arranged inspections.	Environmental Manager	TfNSW
9	Construction Monitoring Report	Report on monitoring results for each Construction Monitoring Program contained in the AQMP, SWMP and NVMP. Raw data to be provided, and exceedances highlighted.	6 monthly	Environmental Manager	DPIE TfNSW EPA DPI Water DPI Fisheries Shellharbour City Council

No	Report	Requirement	Timing	Responsibility	Recipient
10	Construction Compliance Report	Report on results and analysis of environmental monitoring; complaints; review of and minor amendments to the CEMP; consistency assessments; audits; incidents; and any other compliance matters. Refer to CoA A30 for additional details.	6 monthly from the date of the commencement of works or within another timeframe agreed with the Secretary for the duration of works	Environmental Manager	TfNSW DPIE

3.8 Environmental non-conformance/ non-compliance

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

The ER, TfNSW Representative or public authority may also raise a non-conformance/ non-compliance or improvement opportunity using the same process.

A non-conformance/ non-compliance is the failure or refusal to comply with the requirements of this CEMP and supporting documentation, EIS as amended by the SPIR, CoA and EPL requirements. If the non-conformance/ non-compliance constitutes an environmental incident the management and notification outlined in section 3.6 of this plan is to be implemented, this determination will be made by the Environmental Manager in consultation with RMS and the ER as required.

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

Corrective/preventative actions and improvement opportunities will be entered into the Fulton Hogan quality system database and include detail of the issue, action required and timing and responsibilities. The record will be updated with date of close out and any necessary notes. The database will be reviewed at least on a monthly basis to ensure actions are closed out as required. Prioritisation of corrective/ preventative actions will be commensurate with the risk of harm associated with the non-compliance.

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

Procedures utilised for rectifying any non-conformance/ non-compliance identified during environmental auditing, review of compliance or incident management are also documented in the Compliance Tracking Program (CoA A25).

3.9 Records of environmental activities

3.9.1 Environmental records

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

- All monitoring, inspection and compliance reports/records
- Correspondence with public authorities
- Induction and training records
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action
- Community engagement information
- Minutes of CEMP and construction environmental management system review meetings and evidence of any action taken
- CEMP and sub-plans
- EWMS

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

Only the Environmental Manager, or delegate, has the authority to change any of the environmental management documentation.

Environmental records will be made available to the Secretary and the Australian Government Department administering the EPBC Act upon written request.

3.9.2 Document control

Fulton Hogan or TfNSW where relevant, will coordinate the preparation, review and distribution, as appropriate, of the environmental documents and records listed above. During the Project, the environmental documents and records will be stored at the main site compound.

The Contractor will implement a document control procedure to control the flow of documents within and between TfNSW, stakeholders and subcontractors.

The procedure will also ensure that documentation is:

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

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

3.10 Management review

Management reviews are carried out as part of the continual improvement process. The management review can consist of group reviews, or executive reviews.

A group review is initiated by the Environmental Manager and includes relevant Project team members and stakeholders. The environment team meet quarterly, or at other pre-determined periods, to review environmental management issues for the Project. The environment team meeting can be run in conjunction with a wider group meeting if the Environmental Manager deems it appropriate.

The environment group meetings include:

- A review of the aspects and impact register, legal register and environmental induction.
- Consideration of monitoring, inspection and audit results.
- Consideration of incidents and any lessons learnt.
- Consideration of any new regulatory issues.
- A review of the effectiveness of erosion and sediment controls.
- Consideration of changes in operational needs such as resourcing.
- Feedback from management reviews.

An executive review will involve the management team. This review will be held every 12 months and will include a review of:

- Effectiveness of environmental management documentation implementation.
- Management effectiveness.
- Potential improvements to the environmental management documentation.
- Adequacy of resources.
- Findings of audits.
- Environmental objectives and targets.
- Environmental performance.
- Compliance with legal and other requirements.
- Critical non-conformance or repeated non-conformances.
- Organisation changes.
- Effectiveness of training and inductions.

The outcomes of the group and executive reviews could include amendments to this CEMP and related documentation, revision to the Project's environmental management system, risk assessment review, re-evaluation of the Project objectives and targets as well as input into other Project documents. For further details on the CEMP revision process, refer to Section 1.6.

4 Operational control

A number of environmental management sub-plans support the CEMP. These documents are prepared to identify requirements and processes applicable to specific impact or aspects of the activities described in Chapter 2. They address requirements of the CoA, REMMs and other measures identified in the environment assessment documentation.

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

A list of construction sub-plans for the Project, and their approval requirements, are provided in Table 4-1. For clarity, the Project forms Stage 2 of the overall approved SSI (SSI 6878) and the list of Sub-plans provided in Table 4-1 relates to Stage 2 only.

The Project Staging Report (CoA A12) documents the required Project-wide environmental documentation to be prepared for the Project and the timing required for submission where required.

Table 4-1 Environmental management sub-plans

CoA	Document name	Approval pathway
C4(a)	Traffic and Transport Management Sub-plan (Appendix B1)	DPIE approval
C4(c)	Flora and Fauna Management Sub-plan (Appendix B2)	DPIE approval
C4(b)	Noise and Vibration Management Sub-plan (Appendix B3)	DPIE approval
C4(d)	Soil and Water Management Sub-plan (Appendix B4)	DPIE approval
C4(e)	Heritage Management Sub-plan (Appendix B5)	DPIE approval
-	Air Quality Management Sub-plan (Appendix B6)	DPIE approval of the construction air quality monitoring program only
-	Waste and Energy Management Sub-plan (Appendix B7)	TfNSW approval
C4(f)	Flooding and Hydrology Management Sub-plan (Appendix B8)	DPIE approval
-	Contaminated Land Management Sub-plan (Appendix B9)	TfNSW approval

5 Principal Surveillance and Audits

The Project Director is responsible for ensuring adequate resources (personnel, financial and technological) are available to ensure effective development, implementation and maintenance of this CEMP. This includes resources for responding to audits and inspections carried out by TfNSW.

For further information about resources refer to Section 3.2 of this CEMP.

Appendix A1

Register of legal and other requirements

Table 1 Legal register

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability
General				
<i>Environmental Planning and Assessment Act 1979</i>	All	Comply with the Minister for Planning's approval for the project. Obtain the Minister's approval for any project modifications that are not consistent with the planning approval.	S5.25	Yes
Water				
<i>Water Management Act 2000</i>	Water access and use.	Do not take water from a water source (a lake, river or estuary or place where water occurs naturally on or below the surface of the ground, and includes coastal waters) without an access licence.	S56 S60A S89 S91A	No
With the exception of controlled activity approvals, the <i>Water Management Act 2000</i> (WM Act) only applies in relation to those water sources covered by operational water sharing plans – these areas cover most of the State's major regulated river systems.				
<i>Water Management Act 2000</i>	Water management works	Do not construct/use a water supply work, drainage work or flood work without the appropriate approval.	S90 S91B S91C S91D	No
<i>Water Management Act 2000</i>	Waterfront land.	Do not deposit material, excavate, or remove material within a watercourse bank, shore or bed, or on land 40 metres inland, or interfere with the likely flow of water to such a body, without a controlled activity approval.	S91	No Public authorities are exempt from the need to

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability
				obtain a controlled activity approval. Water Management (General) Regulation 2004 (cl.39A)
<i>Protection of the Environment Operations Act 1997</i>	Water pollution	Do not cause water pollution (other than to a sewer), except in accordance with the conditions of any EPA licence.	S120 S122	Yes
Noise				
<i>Protection of the Environment Operations Act 1997</i>	Plant maintenance and operation	Do not operate plant if it emits noise caused by poor maintenance or operation.	S139	Yes
<i>Protection of the Environment Operations Act 1997</i>	Materials management	Do not cause noise by failing to properly and efficiently deal with materials.	S140	Yes
Protection of the Environment Operations (Noise Control) Regulation 2017	Marine vessels – offensive noise and noise control equipment	As owner or captain, do not allow a vessel to be used on navigable waters so as to emit offensive noise. Do not use a vessel on navigable waters if its noise control equipment is defective.	cl. 30-31 cl. 32	NA
Contaminated material				
<i>Protection of the Environment Operations Act 1997</i>	Land pollution	Do not cause or permit land pollution other than under authority of a licence or regulation. (However it is not a land pollution offence to place virgin excavated natural material or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the EPA as an unlicensed landfill and which is operated in accordance with the regulations.)	S142A – S142E	Yes

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability
<i>Contaminated Land Management Act 1997</i>	Reporting contamination	Notify the EPA if Contaminants exceed thresholds contained in guidelines or the regulations where contamination has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water. Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land. Contamination meets other criteria that may be prescribed by the regulations.	S60	Yes
Biodiversity				
<i>Fisheries Management Act 1994</i>	Dredging or reclamation	Provide the Minister for Primary Industries 28 days notice of planned dredging or reclamation work.	S199	Yes
<i>Fisheries Management Act 1994</i>	Mangroves, seagrasses and marine vegetation	Do not harm any mangroves, seagrasses or other marine vegetation on public water land protected by the regulations without a permit.	S205	No
<i>Fisheries Management Act 1994</i>	Fish passage	Do not block fish passage without a permit	S219	No
<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>	Flora and fauna conservation	Do not kill, injure or take a member of a listed threatened species without a permit.	Part 13	Yes
		Comply with the terms of any EPBC Act approval for the project.		Yes
Waste				
<i>Protection of the Environment Operations Act 1997</i>	Littering	Do not litter in a public place or an open private place. Do not litter from a vehicle.	Part 5.6A	Yes

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability
		<p>Only deposit advertising material in receptacles provided for mail or newspapers or under the door of the premises.</p> <p>Do not deposit advertising material on or in vehicles.</p>		
<i>Protection of the Environment Operations Act 1997</i>	Waste and transportation	<p>Do not undertake a scheduled waste activity unless in accordance with an environment protection licence.</p> <p>A licence must be obtained when construction and demolition wastes are applied to land under certain circumstances. This includes the reincorporation of crushed road base material back into roads and the placing of excess fill material onto properties. A licence is not required if the material:</p> <ul style="list-style-type: none"> ■ Is VENM. ■ Does not exceed 200 tonnes in the Sydney, Newcastle and Wollongong areas, or 20,000 tonnes outside these areas. ■ Is covered by a “general exemption”. Current exempted materials are ENM, recycled aggregates and raw mulch. These exemptions are conditional and require some chemical testing of materials before they are placed onto land. <p>A licence must be obtained if more than 2,500 tonnes (or cubic metres) is stored on a stockpile site at any one time, or more than 30,000 tonnes of waste is received per year from off site.</p>	<p>Part 3.2</p> <p>Schedule 1</p>	Yes
		Only transport waste to a facility that can lawfully accept the waste.	S143	Yes
		Do not dispose of waste in a manner that harms or is likely to harm the environment.	S115	Yes

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability
Protection of the Environment Operations (Waste) Regulation 2005	Waste and transportation	Comply with general requirements for the transport of waste. For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.	Regulation cl.49	Yes
		Comply with record keeping requirements in relation to the transport of certain types of waste.	Regulation Part 3	Yes
Heritage				
Heritage Act 1977	Heritage	Do not undertake an activity that will affect a place, building, work, relic, moveable object or precinct which is subject to an Interim Heritage Order or is listed on the State Heritage Register without approval from the Heritage Council.	S56-57	No
		Do not disturb or excavate land with knowledge or reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed; or Do not disturb or excavate land on where a relic has been discovered or exposed.	S139	No
		Notify the heritage Council on discovery of a relic	S146	Yes
National Parks and Wildlife Act 1974	Aboriginal places and objects	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.	S86 S90	No
		Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	S89A	Yes
Aboriginal and Torres Strait Islander Heritage	Protection of areas and objects	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	S20	Yes

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability
<i>Protection Act 1984 (Commonwealth)</i>		Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.	S22	Yes
General				
<i>Protection of the Environment Operations Act 1997</i>	Harming the environment	Do not risk harming the environment by wilfully or negligently: disposing of waste unlawfully. causing any substance to leak, spill or otherwise escape (whether or not from a container); or emitting an ozone depleting substance	S115 S116 S117	Yes
<i>Protection of the Environment Operations Act 1997</i>	Control equipment	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices).	S167	Yes
<i>Protection of the Environment Operations Act 1997</i>	Notification of pollution incidents	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	S148	Yes
<i>Protection of the Environment Operations Act 1997</i>	Site licensing	Do not carry out or allow an activity listed in Schedule 1, or carry out work to enable such an activity, unless the premises are licensed by the EPA. This applies to: road construction: meaning the construction, widening or re-routing of roads if it results in the existence of 4 or more traffic lanes (other than bicycle lanes or lanes used for entry or exit) for 1 kilometres of their length in the metropolitan area, or 5 kilometres in length in any other area, where the road is classified, or proposed to be classified, as a freeway or tollway under the Roads Act 1993.	S47 S48	Yes

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability
<i>Environmentally Hazardous Chemicals Act, 1985</i>	Hazards and risks	Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.	S28	Yes
<i>Dangerous Goods (Road and Rail Transport) Act 2008</i>	Hazards and risks	Ensure that dangerous goods are transported in a safe manner.	S9	Yes
<i>Pesticides Act 1999</i>	Hazards and risks	<p>Use pesticides in an environmentally sensitive manner.</p> <p>Do not use an unregistered pesticide without a permit.</p> <p>Read the label or permit for the pesticide.</p> <p>Use registered pesticides in accordance with instructions on the label.</p> <p>Do not use any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act.</p> <p>Compliance with pesticide codes of practice is required.</p>	<p>S12</p> <p>S13</p> <p>S14</p> <p>S15</p> <p>S17</p>	Yes
<i>National Greenhouse and Energy Reporting Act 2007 and Regulations 2008</i>	Greenhouse gas emissions	Accounting and reporting of greenhouse gases produced and energy consumed during construction. Applicability dependent on thresholds.	-	Yes

Table 2 ~~Roads and Maritime Transport for NSW~~ G36 requirements¹

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
3.1	Contractor's Environmental Management Plan (CEMP) for Work Under the Contract, including Environmental Policy and Sub-Plans	This CEMP Section 3.1.3 Appendix B1 – B9
3.2.2	Compliance tracking program	Section 3.7.4
3.2.3	Environmental objectives and targets	Section 3.1.4
3.2.4	Environmental Work Method Statements	Section 3.1.5
3.3	Names, responsibilities and authority of site management personnel, including ESR, with responsibility for implementing CEMP. Where applicable, the relationship between Environmental Management Representative and ESR.	Section 3.2
3.4	Procedures to ensure subcontractor compliance	Section 3.3
3.5	Environmental induction and training plan	Section 3.4
3.6	Procedure for notifying the Roads and Maritime TfNSW Representative and all relevant Authorities in advance of any proposed extension to working hours	Appendix B3 - NVMP
3.7	Details of processes for external and internal communication in relation to environmental aspects of work	Section 3.5
3.8	Emergency planning and response procedures	Section 3.6
3.9	Procedure(s) to monitor and measure environmental management performance and to evaluate compliance	Section 3.7
3.9	Environmental monitoring and auditing program	Section 3.7
4.1	Soil and water management sub-plans (refer D&C G38)	Appendix B4 - SWMP
4.2	Contaminated Land Management Sub-Plan and Remediation Action Plan	Appendix B9 - CLMP

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
4.3	Procedure(s) for spill prevention and response	Section 3.6 Appendix B4 - SWMP
4.3	Procedures for controlling and removing chemical, fuel and lubricant spillage on the Site and adjoining areas	Section 3.6 Appendix B4 - SWMP
4.4	Air Quality Management Sub-Plan and procedures for effective dust control, including dust monitoring and reporting procedures	Appendix B6 - AQMP
4.6	Noise Management Sub-Plan	Appendix B3 - NVMP
4.7	Vibration and Air Blast Management Sub-Plan	Appendix B3 - NVMP
4.8	Flora and Fauna Management Sub-Plan and EWMS for clearing and grubbing	Appendix B2 - FFMP
4.9	Aboriginal Heritage Management Sub-Plan and procedure for the management of unexpected potential archaeological relics	Appendix B5 – HMP
4.10	Non-Aboriginal Heritage Management Sub-Plan and procedure for the management of unexpected potential archaeological relics	Appendix B5 – HMP
4.11	Waste Management Sub-Plan and Waste Management Register	Appendix B7 – WEMP
4.13	Sensitive Areas Maps and EWMS for working in or near environmentally sensitive areas	Section 3.1.7 Section 3.1.5
4.14	Environmental incident reporting and investigation procedure	Section 3.6

¹ In accordance with Annexure G36/D – Planning Documents.

Appendix A2

Environmental aspects and impacts register

This Environmental Aspects and Impacts Register has been prepared by Fulton Hogan to supplement the Environmental Risk Analysis conducted as part of the EIS.

The identification of significant construction activities and associated impacts that could eventuate during construction of the Project is central to the selection of appropriate environmental mitigation measures.

The risk management process involved an assessment of all specific project activities/aspects in or near environmentally sensitive areas and resulted in the development of a list of environmental risks (effects and impacts) and a corresponding risk mitigation strategy and risk ranking. Each environmental risk was categorised, based on the following:

- The environmental aspect.
- Relative scale of the potential impact.
- Type of potential impact.
- Likelihood of occurrence.

The identification of risks included a review of the proposed works, the CoA, REMMs, and review of the environmental risks identified by the EIS and subsequent Submissions Report.

The Fulton Hogan HSQE Operational Risk Matrix used to evaluate the risk level for each potential environmental impact is provided below and overleaf, followed by the Environmental Aspects and Impacts Register.

HSQE Operational Risk Matrix

To be used during any required risk assessments for all Fulton Hogan activities including: SWMS, CAMs Cases, Aspects & Impacts Assessments, Workplace Risk Assessments, etc.

Step 1 - Assess the potential consequence of the unwanted event (or what could have occurred for an incident):

		Potential Consequence				
		Insignificant	Minor	Significant	Major	Catastrophic
Risk Type	Health and Safety	No treatment required	First Aid Treatment Injury	Medical Treatment Injury (MTI) OR Restricted Work Injury OR Lost Time Injury (LTI) 3 days or less	Lost Time Injury (LTI) 4 days or more OR Hospitalisation	Fatality OR Permanent disability
	Environment	No impact on or off site	On-site impact requiring routine internal remediation	Off-site impact requiring internal remediation OR on-site impact requiring substantial internal remediation	Impact on- or off-site requiring specialist external remediation	Impact on- or off-site with long term effect OR requiring immediate external response
	Quality	Accept as is OR Audit Recommendation	Minor Audit Finding (NCR)	Major Audit Finding (NCR)	Critical Audit Finding (NCR) OR Accreditation warning	Loss of accreditation
	Cost (Remedials, Plant or Property)	Less than \$1000	\$1,000 to \$10,000	\$10,000 to \$25,000	\$25,000 to \$100,000	Greater than \$100,000
	Community & Reputation	No community complaints	Isolated community complaint	Repeat community complaints OR negative local media	Frequent community complaints OR negative regional media OR Negative Social Media	Organized community opposition OR negative national media OR Viral Negative Social Media
	Regulatory	Notified / no response or Verbal directive	Verbal Warning / No Response Required	Written Warning / Cost Recovery / Response Required / Improvement Notice	Abatement Notice / Infringement Notice / Prohibition Notice	Prosecution / Enforcement Order
	Business Interruption	No interruption to work	Work interrupted	Temporary site closure (less than a day)	Temporary site closure (more than a day)	Permanent site closure or eviction

Step 2- Using the Potential Consequence, decide on the likelihood of occurrence to categorise the incident or hazard risk rating.

		Potential Consequence Level				
		Insignificant	Minor	Significant	Major	Catastrophic
Potential Likelihood Level	Almost Certain <i>The potential consequence is expected to occur in most circumstances</i>	Med 11	High 16	High 20	Ext 23	Ext 25
	Likely <i>The potential consequence will probably occur in most circumstances</i>	Med 7	Med 12	High 17	High 21	Ext 24
	Possible <i>The potential consequence is expected to occur at some time</i>	Low 4	Med 8	Med 13	High 18	High 22
	Unlikely <i>The potential consequence could occur at some time</i>	Low 2	Low 5	Med 9	Med 14	High 19
	Rare <i>The potential consequence may occur in exceptional circumstances</i>	Low 1	Low 3	Low 6	Med 10	Med 15

RISK LEVELS	SCORES	PARAMETERS
EXTREME	23 – 25	If the post-control risk is EXTREME the activity MUST NOT proceed. Elimination, substitution, isolation and/or engineering controls must be put in place to reduce the risk rating to LOW or MEDIUM
HIGH	16 – 22	If the post-control risk is High the activity MUST NOT proceed. Alternate controls must be put in place to reduce the risk rating to LOW or MEDIUM
MEDIUM	7 – 15	The activity can proceed so long as the highest level and most appropriate risk control measures have been identified and implemented
LOW	1 – 6	Activity may proceed with normal supervision after implementing control measures

Table 1 Environmental aspects and impacts register

ACTIVITY/ ASPECT	HAZARD/SOURCE OF IMPACT	IMPACT	PRE-CONTROL RISK			MITIGATION MEASURES (ID provided under 'Environmental mitigation measures' in the relevant Sub-plan)	POST-CONTROL RISK		
			CONSEQUENCE	LIKELIHOOD	RISK RATING		CONSEQUENCE	LIKELIHOOD	RISK RATING
Erosion, sedimentation and water quality									
Vegetation clearing and topsoil stripping	Sediment laden runoff from disturbed areas Diesel/fuel spills	Reduced water quality in local waterways due to increased turbidity and sediment loading	Significant	Possible	Med 13	SWMM1 - SWMM44, SWMM56 - SWMM65.	Insignificant	Possible	Low 4
		Contamination of surface water by petroleum hydrocarbons	Minor	Possible	Med 8	SWMM78 - SWMM81.	Minor	Unlikely	Low 5
Earthworks including materials processing	Sediment laden runoff from disturbed areas Diesel/fuel spills Mud tracking Groundwater seepage in excavations	Reduced water quality in local waterways due to increased turbidity and sediment loading	Major	Likely	High 21	SWMM1 - SWMM44, SWMM56 - SWMM65.	Significant	Possible	Med 13
		Contamination of surface and groundwater by petroleum hydrocarbons or unexpected contaminated land	Minor	Possible	Med 8	SWMM78 – SWMM81, SWMM85.	Minor	Unlikely	Low 5
		Mud tracking on public roads resulting in road safety issues and community complaints	Significant	Likely	High 17	SWMM32.	Insignificant	Possible	Low 4
		Uncontrolled discharges of groundwater	Significant	Possible	Med 13	SWMM84	Minor	Possible	Med 8
Site access, including temporary waterway crossings (where required)	Disturbance of creek beds Overclearing in riparian areas Fines from rockfill Mud tracking Diesel/fuel spills	Reduced water quality in local waterways due to increased turbidity and sediment loading	Major	Likely	High 21	SWMM1 - SWMM44, SWMM56 - SWMM65.	Significant	Possible	Med 13
		Adverse impact on aquatic ecosystems	Significant	Likely	High 17	SWMM40 - SWMM44.	Minor	Possible	Med 8
		Contamination of surface water by petroleum hydrocarbons	Significant	Possible	Med 13	SWMM78 - SWMM81.	Minor	Unlikely	Low 5
Culvert and drainage works	Sediment laden runoff Diesel/fuel spills Concrete slurry spills Groundwater seepage in excavations Flooding	Reduced water quality in local waterways due to increased turbidity and sediment loading	Major	Likely	High 21	SWMM1 - SWMM44, SWMM56 - SWMM65.	Significant	Possible	Med 13
		Contamination of surface and groundwater by petroleum hydrocarbons or unexpected contaminated land	Minor	Possible	Med 8	SWMM78 – SWMM81, SWMM85.	Minor	Unlikely	Low 5
		Contamination of surface water by concrete slurry	Minor	Possible	Med 8	SWMM69 – SWMM73.	Insignificant	Possible	Low 4
		Uncontrolled discharges of groundwater	Significant	Possible	Med 13	SWMM84	Minor	Possible	Med 8
Services/utilities relocation	Sediment laden runoff Diesel/fuel spills Groundwater seepage in excavations	Reduced water quality in local waterways due to increased turbidity and sediment loading	Major	Likely	High 21	SWMM1 - SWMM44, SWMM56 - SWMM65.	Significant	Possible	Med 13
		Contamination of surface and groundwater by petroleum hydrocarbons or unexpected contaminated land	Minor	Possible	Med 8	SWMM78 – SWMM81, SWMM85.	Minor	Unlikely	Low 5
		Uncontrolled discharges of groundwater	Significant	Possible	Med 13	SWMM84	Minor	Possible	Med 8
Bridge construction	Sediment laden runoff Diesel/fuel spills Concrete slurry spills Curing compound spills	Reduced water quality in local waterways due to increased turbidity and sediment loading	Major	Likely	High 21	SWMM1 - SWMM44, SWMM56 - SWMM65.	Significant	Possible	Med 13
		Contamination of surface and groundwater by petroleum hydrocarbons or unexpected contaminated land	Minor	Possible	Med 8	SWMM78 – SWMM81, SWMM85.	Minor	Unlikely	Low 5
		Contamination of surface water by concrete slurry and/or concrete curing compound	Minor	Possible	Med 8	SWMM69 – SWMM73.	Insignificant	Possible	Low 4
		Contamination of surface water by tannins	Minor	Likely	Med 12	SWMM67	Minor	Unlikely	Low 5

ACTIVITY/ ASPECT	HAZARD/SOURCE OF IMPACT	IMPACT	PRE-CONTROL RISK			MITIGATION MEASURES (ID provided under 'Environmental mitigation measures' in the relevant Sub-plan)	POST-CONTROL RISK		
			CONSEQUENCE	LIKELIHOOD	RISK RATING		CONSEQUENCE	LIKELIHOOD	RISK RATING
Materials stockpiling e.g. mulch, topsoil, acid sulfate materials	Tannin leachate runoff Sediment laden runoff Acidic surface or groundwater Strong winds	Negative impact on aquatic ecosystems, i.e. habitat degradation, fish kills and weed invasion	Significant	Likely	High 17	SWMM23, SWMM67, SWMM87	Minor	Possible	Med 8
		Reduced water quality in local waterways due to increased turbidity and sediment loading from unstabilised stockpiles	Major	Likely	High 21	SWMM1 – SWMM3, SWMM23, SWMM25, SWMM28, SWMM59.	Significant	Possible	Med 13
Paving activities	Hydrocarbon spills	Contamination of surface water by petroleum hydrocarbons	Significant	Likely	High 17	SWMM74 – SWMM77.	Significant	Unlikely	Med 9
Operation of ancillary facilities, including e.g. chemical storage, refuelling.	Diesel/fuel spills, including those resulting from maintenance activities Chemical spills	Contamination of surface water by petroleum hydrocarbons	Minor	Possible	Med 8	SWMM78 - SWMM81.	Insignificant	Possible	Low 4
Flora and fauna									
Earthworks, including vegetation clearing	Sediment laden runoff from disturbed areas Vehicular movements Vegetation clearing occurs outside the clearing limits	Loss of unexpected threatened TEC/species	Major	Likely	High 21	FFMM1 - FFMM8, FFMM13	Major	Unlikely	Med 14
		Inadvertent loss of native vegetation/ fauna habitat identified to be protected	Significant	Likely	High 17	FFMM1 – FFMM13.	Significant	Unlikely	Med 9
		Terrestrial fauna mortality / injury	Significant	Likely	High 17	FFMM14 - FFMM16.	Significant	Unlikely	Med 9
		Invasion of weeds	Significant	Possible	Med 13	FFMM2, FFMM33 – FFMM35.	Significant	Unlikely	Med 9
		Reduced water quality in local waterways and loss of fish and aquatic habitat	Major	Likely	High 21	FFMM2, FFMM17 - FFMM32.	Major	Unlikely	Med 14
Stockpiling	Sediment laden runoff from disturbed areas Vehicular movements Stockpiling occurs outside allowable areas Strong winds	Loss of unexpected threatened TEC/species	Major	Likely	High 21	FFMM1 - FFMM8, FFMM13.	Major	Unlikely	Med 14
		Inadvertent loss of native vegetation/ fauna habitat identified to be protected	Significant	Likely	High 17	FFMM1 – FFMM13.	Significant	Unlikely	Med 9
		Invasion of weeds	Significant	Possible	Med 13	FFMM2, FFMM33 – FFMM35.	Significant	Unlikely	Med 9
		Reduced water quality in local waterways and loss of fish and aquatic habitat	Major	Likely	High 21	FFMM2, FFMM17 - FFMM32.	Major	Unlikely	Med 14
Works around and within watercourses and aquatic environments	Vehicular movements Vegetation clearing occurs outside the clearing limits Sediment laden runoff from disturbed areas	Loss of unexpected threatened TEC/species	Major	Likely	High 21	FFMM1 - FFMM8, FFMM13.	Major	Unlikely	Med 14
		Inadvertent loss of native vegetation/ fauna habitat identified to be protected	Significant	Likely	High 17	FFMM1 – FFMM13.	Significant	Unlikely	Med 9
		Terrestrial fauna mortality / injury	Significant	Likely	High 17	FFMM14 - FFMM16.	Significant	Unlikely	Med 9
		Invasion of weeds	Significant	Possible	Med 13	FFMM2, FFMM33 – FFMM35.	Significant	Unlikely	Med 9
		Reduced water quality in local waterways and loss of fish and aquatic habitat	Major	Likely	High 21	FFMM2, FFMM17 - FFMM32.	Major	Unlikely	Med 14
Air quality									
Earthworks, including vegetation clearing, materials processing	Mud tracking Wind erosion Poorly maintained equipment	Loss of reusable material, such as top soil and backfill material	Significant	Likely	High 17	AQMM1, AQMM2, AQMM3, AQMM8, AQMM12, AQMM14.	Minor	Possible	Med 8
		Mud tracking on public roads resulting in road safety issues and community complaints	Significant	Likely	High 17	AQMM1, AQMM2, AQMM3, AQMM6, AQMM7, AQMM8, AQMM12, AQMM13.	Minor	Possible	Med 8
		Amenity impacts to sensitive receivers when dust is deposited on surfaces resulting in community complaints.	Significant	Likely	High 17	AQMM1- AQMM8, AQMM12 – AQMM14.	Minor	Possible	Med 8
		Reduced water quality in local waterways when dust is deposited in waterways.	Significant	Possible	Med 13	AQMM1 - AQMM4, AQMM8, AQMM12, AQMM14.	Minor	Unlikely	Low 5

ACTIVITY/ ASPECT	HAZARD/SOURCE OF IMPACT	IMPACT	PRE-CONTROL RISK			MITIGATION MEASURES (ID provided under 'Environmental mitigation measures' in the relevant Sub-plan)	POST-CONTROL RISK		
			CONSEQUENCE	LIKELIHOOD	RISK RATING		CONSEQUENCE	LIKELIHOOD	RISK RATING
		Health and environmental impacts due to poorly maintained equipment	Minor	Possible	Med 8	AQMM9 – AQMM11, AQMM16 – AQMM22.	Minor	Unlikely	Low 5
Stockpiling, material loading and material haulage	Mud tracking Wind erosion, including from strong winds Poorly maintained equipment	Mud tracking on public roads resulting in road safety issues and community complaints	Significant	Likely	High 17	AQMM1, AQMM2, AQMM3, AQMM6, AQMM7, AQMM8, AQMM12, AQMM13.	Minor	Possible	Med 8
		Amenity impacts to sensitive receivers when dust is deposited on surfaces resulting in community complaints.	Significant	Likely	High 17	AQMM1- AQMM8, AQMM12 – AQMM14.	Minor	Possible	Med 8
		Reduced water quality in local waterways when dust is deposited in waterways.	Significant	Possible	Med 13	AQMM1 - AQMM4, AQMM8, AQMM12, AQMM14.	Minor	Unlikely	Low 5
		Health and environmental impacts due to poorly maintained equipment	Minor	Possible	Med 8	AQMM9 – AQMM11, AQMM16 – AQMM22.	Minor	Unlikely	Low 5
Waste and energy									
Demolition	Demolition waste including pipe work and pavements.	Inappropriate disposal of waste	Significant	Possible	Med 13	WEMM1, WEMM6, WEMM7, WEMM8, WEMM9, WEMM10, WEMM15, WEMM19.	Significant	Unlikely	Med 9
		Greenhouse gas emissions due to consumption of energy from non-renewable resources, such as diesel.	Insignificant	Almost certain	Med 11	WEMM21 - WEMM25.	Insignificant	Likely	Med 7
		Cross-contamination of waste	Minor	Likely	Med 12	WEMM11, WEMM19.	Minor	Possible	Med 8
Clearing and grubbing	Green waste	Inappropriate disposal of waste	Significant	Possible	Med 13	WEMM1, WEMM6, WEMM7, WEMM8, WEMM9, WEMM10, WEMM15, WEMM19.	Significant	Unlikely	Med 9
		Waste received on site unlawfully	Significant	Likely	High 17	WEMM3	Significant	Unlikely	Med 9
		Greenhouse gas emissions due to consumption of energy from non-renewable resources, such as diesel.	Insignificant	Almost certain	Med 11	WEMM21 - WEMM25.	Insignificant	Likely	Med 7
Site establishment and general construction works, including at ancillary facility sites	Surplus material. Packaging materials from items delivered to the site, such as pallets, crates. General office wastes generated by onsite personnel, such as paper, cardboard, beverage containers and food wastes. Effluent generated at site amenities during construction. Operation of site compounds and lighting.	Inappropriate disposal of waste	Significant	Possible	Med 13	WEMM1, WEMM6, WEMM7, WEMM8, WEMM9, WEMM10, WEMM15, WEMM19, WEMM20.	Significant	Unlikely	Med 9
		Litter	Minor	Likely	Med 12	WEMM2 WEMM11.	Minor	Possible	Med 8
		Excessive packaging on products delivered to site.	Minor	Likely	Med 12	WEMM1, WEMM5.	Minor	Possible	Med 8
		Excessive paper use.	Minor	Likely	Med 12	WEMM1, WEMM 18.	Minor	Unlikely	Low 5
		Paper from office cross-contaminated with food waste.	Minor	Likely	Med 12	WEMM1, WEMM 18.	Minor	Unlikely	Low 5
		Over-ordering of materials resulting in waste.	Minor	Likely	Med 12	WEMM1, WEMM 18.	Minor	Unlikely	Low 5
		Greenhouse gas emissions due to consumption of energy from non-renewable resources, such as diesel.	Insignificant	Almost certain	Med 11	WEMM21 - WEMM25.	Insignificant	Likely	Med 7
		Waste received on site unlawfully	Significant	Likely	High 17	WEMM3	Significant	Unlikely	Med 9
		Cross-contamination of waste	Minor	Likely	Med 12	WEMM11, WEMM16, WEMM19.	Minor	Possible	Med 8
Earthworks	Soil and rock, unable to be reused within the Project. Exposure of contaminated soils.	Inappropriate disposal of waste	Significant	Possible	Med 13	WEMM1, WEMM6, WEMM7, WEMM8, WEMM9, WEMM10, WEMM15, WEMM19.	Significant	Unlikely	Med 9
		Inefficient use of available resources.	Minor	Likely	Med 12	WEMM13, WEMM14.	Minor	Unlikely	Low 5
		Greenhouse gas emissions due to consumption of energy from non-renewable resources, such as diesel.	Insignificant	Almost certain	Med 11	WEMM21 - WEMM25.	Insignificant	Likely	Med 7

ACTIVITY/ ASPECT	HAZARD/SOURCE OF IMPACT	IMPACT	PRE-CONTROL RISK			MITIGATION MEASURES (ID provided under 'Environmental mitigation measures' in the relevant Sub-plan)	POST-CONTROL RISK		
			CONSEQUENCE	LIKELIHOOD	RISK RATING		CONSEQUENCE	LIKELIHOOD	RISK RATING
		Waste received on site unlawfully	Significant	Likely	High 17	WEMM3	Significant	Unlikely	Med 9
		Increased greenhouse gas emissions due to the purchase of non-local products/services.	Insignificant	Likely	Med 7	WEMM23.	Insignificant	Possible	Low 4
		Spread of contaminated waste	Significant	Possible	Med 13	WEMM6, WEMM7, WEMM8, WEMM9, WEMM10.	Significant	Unlikely	Med 9
Plant and vehicle maintenance	Waste fuel, oil and chemical containers.	Inappropriate disposal of waste	Significant	Possible	Med 13	WEMM1, WEMM6, WEMM7, WEMM8, WEMM9, WEMM10, WEMM15, WEMM19.	Significant	Unlikely	Med 9
		Cross-contamination of waste	Minor	Likely	Med 12	WEMM11, WEMM12.	Minor	Possible	Med 8
Aboriginal and non-Aboriginal heritage									
Earthworks (topsoil, new and existing concrete, fill), including vegetation clearing	Ground disturbance, clearing, vibration from plant and equipment, non-adherence to exclusion zones, vehicle movement	Damage/impacts to known heritage item/site	Significant	Likely	High 17	HMM1, HMM3 – HMM45.	Significant	Unlikely	Med 9
		Damage to unknown heritage item	Significant	Possible	Med 13	HMM2.	Significant	Unlikely	Med 9
Stockpiling, site compound use, loading and haulage	Ground disturbance, over-clearing, vibration from plant and equipment, non-adherence to exclusion zones, vehicle movement	Damage/impacts to known heritage item/site	Significant	Likely	High 17	HMM1, HMM3 – HMM45.	Significant	Unlikely	Med 9
		Damage to unknown heritage item	Significant	Possible	Med 13	HMM2.	Significant	Unlikely	Med 9
Public utility adjustment (existing services, electricity, telecommunications, water and sewer, gas, traffic signals)	Ground disturbance, vibration, non-adherence to exclusion zones, vehicle movements	Damage/impacts to known heritage item/site	Significant	Likely	High 17	HMM1, HMM3 – HMM45.	Significant	Unlikely	Med 9
		Damage to unknown heritage item	Significant	Possible	Med 13	HMM2.	Significant	Unlikely	Med 9
Piers/Piling	Ground disturbance, vibration, non-adherence to exclusion zones, vehicle movements.	Damage/impacts to known heritage item/site	Significant	Likely	High 17	HMM1, HMM3 – HMM45.	Significant	Unlikely	Med 9
		Damage to unknown heritage item	Significant	Possible	Med 13	HMM2.	Significant	Unlikely	Med 9
Noise and vibration									
Mobilisation and site establishment	Noise and vibration generated during mobilisation and site establishment, including utility diversions.	Noise from mobilisation and site establishment activities causes disturbance and leads to community complaints	Major	Likely	High 21	NVMM1-NVMM36.	Major	Unlikely	Med 14
		Vibration from mobilisation and site establishment works causes disturbance or damage to structures and leads to community complaints	Major	Possible	High 18	NVMM37-NVMM50.	Major	Unlikely	Med 14
Earthworks including materials processing	Noise and vibration generated during earthworks	Noise from earthworks causes disturbance and leads to community complaints	Major	Likely	High 21	NVMM1-NVMM36.	Significant	Possible	Med 13
		Vibration from excavation or compaction works causes disturbance or damage to structures and leads to community complaints	Major	Possible	High 18	NVMM37-NVMM50.	Major	Unlikely	Med 14
Drainage works	Noise and vibration generated during drainage works	Noise from drainage works causes disturbance and leads to community complaints	Major	Likely	High 21	NVMM1-NVMM36.	Significant	Possible	Med 13

ACTIVITY/ ASPECT	HAZARD/SOURCE OF IMPACT	IMPACT	PRE-CONTROL RISK			MITIGATION MEASURES (ID provided under 'Environmental mitigation measures' in the relevant Sub-plan)	POST-CONTROL RISK		
			CONSEQUENCE	LIKELIHOOD	RISK RATING		CONSEQUENCE	LIKELIHOOD	RISK RATING
		Vibration from drainage works causes disturbance or damage to structures and leads to community complaints	Major	Possible	High 18	NVMM37-NVMM50.	Major	Unlikely	Med 14
Bridgeworks	Noise and vibration from bridgeworks	Noise from works causes disturbance and leads to community complaints	Major	Likely	High 21	NVMM1-NVMM33.	Significant	Possible	Med 13
		Vibration from works causes disturbance or damage to structures and leads to community complaints	Major	Possible	High 18	NVMM37-NVMM50.	Major	Unlikely	Med 14
Paving / roadworks	Noise and vibration from pavement construction	Noise from paving works causes disturbance and leads to community complaints	Major	Likely	High 21	NVMM1-NVMM36.	Major	Unlikely	Med 14
		Vibration from paving works causes disturbance or damage to structures and leads to community complaints	Major	Possible	High 18	NVMM37-NVMM50.	Major	Unlikely	Med 14
Rehabilitation / landscaping (finishing works)	Noise and vibration from rehabilitation / landscaping works	Noise from works causes disturbance and leads to community complaints	Major	Possible	High 18	NVMM1-NVMM36.	Significant	Possible	Med 13
		Vibration from works causes disturbance or damage to structures and leads to community complaints	Major	Possible	High 18	NVMM37-NVMM50.	Major	Unlikely	Med 14
Extended working hours	Noise from works outside of standard hours but in extended hours	Noise from works carried out during extended hours results in community complaints	Major	Likely	High 21	NVMM1-NVMM36.	Major	Unlikely	Med 14
		Vibration from works carried out during extended hours results in community complaints	Major	Possible	High 18	NVMM37-NVMM50.	Major	Unlikely	Med 14
Out of Hours works	Noise outside of standard construction hours and extended hours	Noise from works carried out outside of the standard construction hours, including critical OOHV, results in community complaints	Major	Likely	High 21	OOHMM1-OOHMM32	Major	Unlikely	Med 14
		Vibration from OOHV results in community complaints	Major	Possible	High 18	OOHMM33-OOHMM49	Major	Unlikely	Med 14
Stockpiling and other activities associated with the operation of ancillary facilities.	Noise and vibration from plant operations.	Extended operations of noise intensive activities at ancillary activities results in complaints	Major	Likely	High 21	NVMM1-NVMM36.	Significant	Possible	Med 13
		Vibration generated by compaction works or other vibration intensive works results in complaints	Major	Possible	High 18	NVMM37-NVMM50.	Major	Unlikely	Med 14
Blasting	Overpressure and vibration from blasting	Disturbance to sensitive receivers results in complaints	Major	Likely	High 21	BMM2, BMM5, BMM8, BMM14.	Major	Unlikely	Med 14
	Flyrock	Damage to structures from vibration and airblast overpressure	Major	Possible	High 18	BMM1, BMM3, BMM4, BMM6, BMM7, BMM9, BMM10, BMM11, BMM12, BMM13, BMM16.	Major	Unlikely	Med 14
	Cloudy day with wind blowing in the direction of nearby residents	Traffic impacts	Major	Possible	High 18	BMM15	Major	Unlikely	Med 14
Flooding and Hydrology									
Stockpiling within floodplain	Obstruction of flow paths and reduced capacity of floodplain to store floodwaters	Potential flooding impacts to people and property	Significant	Likely	High 17	SWMM23, FHMM4.	Significant	Unlikely	Med 9
Ancillary sites within floodplain	Obstruction of flow paths and reduced capacity of floodplain to store floodwaters	Potential flooding impacts to people and property	Significant	Likely	High 17	Ancillary sites have been designed to reduce the likelihood of and to minimise potential impacts from the	Significant	Unlikely	Med 9

ACTIVITY/ ASPECT	HAZARD/SOURCE OF IMPACT	IMPACT	PRE-CONTROL RISK			MITIGATION MEASURES (ID provided under 'Environmental mitigation measures' in the relevant Sub-plan)	POST-CONTROL RISK		
			CONSEQUENCE	LIKELIHOOD	RISK RATING		CONSEQUENCE	LIKELIHOOD	RISK RATING
						sites flooding. Refer to the Ancillary Facilities management Plan (CoA A17).			
Temporary watercourse crossings	Partial obstruction of flow paths	Potential flooding impacts to people and property	Major	Likely	High 21	SWMM4, SWMM40, FHMM2.	Significant	Possible	Med 13
Flooding	Onset of flooding following rainfall in the catchment	Potential flooding impacts to people and property	Major	Likely	High 21	FHMM1, SWMM66, FHMM2, FHMM3.	Significant	Possible	Med 13
Traffic and transport									
All construction activities	Construction vehicles movements, deliveries of construction materials and motorways access restrictions for cyclists	Construction impacts on motorway traffic and local roads	Significant	Likely	High 17	Implementation of Traffic and Transport Management Sub-plan (TTMP)	Significant	Possible	Med 13
		Construction impacts on pedestrians and cyclists	Significant	Likely	High 17		Significant	Possible	Med 13

Appendix A3

Environmental policy

Environmental Policy



Working together to protect our environment

We will:

- Work towards minimising our environmental footprint through innovation, energy and resource efficient operations focused on reducing, reusing and recycling
- Meet or exceed all obligations and consent conditions applicable to our activities
- Recognise that environmental management encompasses diverse aspects including flora, fauna, water, community and cultural interests
- Identify impacts to the environment and implement effective controls
- Set objectives and targets to measure, manage and improve our performance
- Train our people to identify environmental risks and opportunities to improve our performance
- Work closely with our subcontractors and suppliers to ensure they meet our expectations
- Drive continual improvement through the proactive use of environmental management systems

Our people will be environmental leaders by:

- Minimising the long term environmental impact of our activities
- Planning for and addressing all environmental risks and opportunities
- Pursuing innovative ways to improve our environmental performance

C W Bruyn
Group Chief Executive Officer

December 2017



Fulton Hogan

Appendix A4

Example document register

Table 1 Example environmental document register

Environmental management document	Document title	Revision Number	Review date
<i>Environmental Policy</i>	<i>Environmental Policy</i>		
<i>Construction environmental management plan</i>	<i>Construction Environmental Management Plan</i>		
<i>Environmental management sub-plans</i>	<i>Traffic and Transport Management Sub-plan (TTMP)</i>		
	<i>Flora and Fauna Management Sub-plan (FFMP)</i>		
	<i>Noise and Vibration Management Sub-plan (NVMP)</i>		
	<i>Soil and Water Management Sub-plan (SWMP)</i>		
	<i>Heritage Management Sub-plan (HMP)</i>		
	<i>Air Quality Management Sub-plan (AQMP)</i>		
	<i>Waste and Energy Management Sub-plan (WEMP)</i>		
	<i>Flooding and Hydrology Management Sub-plan (FHMP)</i>		
	<i>Contaminated Land Management Sub-plan (CLMP)</i>		
<i>Environmental work method statements</i>	<i>[Detail to be added]</i>		

Appendix A5

Stakeholder and agency CEMP consultation

Appendix A6

Sensitive area plans

Appendix A7

Environmental incident classification and reporting procedure



Transport
Roads & Maritime
Services

Environmental Incident Classification and Reporting Procedure

September 2017

About this release

Title	Environmental Incident Classification and Reporting Procedure
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Approval		
Prepared by	Environment Manager Performance Improvement	Scott Machar
Reviewed by	Director Environment Operations	Sally Durham
Approved by	Director Environment	Michael Crowley

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Acronyms and definitions	
Acronym	Definition
DE	(Roads and Maritime Services) Director Environment
DEO	(Roads and Maritime Services) Director Environment Operations
DPE	Department of Planning and Environment
Environmental harm	Any act that degrades or pollutes the environment
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1997</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
REF	Review of Environmental Factors
Roads and Maritime	NSW Roads and Maritime Services
SEQC	(Roads and Maritime Services) Safety Environment and Quality Co-ordinator
SEQO	(Roads and Maritime Services) Safety Environment and Quality Officer

1. Introduction

1.1 Aim

The Environmental Incident Classification and Reporting Procedure (the Procedure) aims to ensure Roads and Maritime Services workers and contractors understand how to classify, respond to and report environmental incidents that occur as a result of Roads and Maritime managed activities.

1.2 Objectives

The objectives of the Procedure are to:

- Ensure all relevant Roads and Maritime workers, managers and contractors are made aware of environmental incidents promptly and can respond accordingly
- Ensure site workers understand the immediate environmental incident reporting requirements
- Ensure all workers understand reporting timeframes, including statutory requirements
- Ensure incidents are reported to enable monitoring, sharing of lessons learnt and response to emerging environmental incident trends
- Comply with statutory obligations to report certain environmental incidents to regulators and other relevant government agencies (see [section 5.1](#)).

1.3 Scope and coverage

This Procedure is applicable to all Roads and Maritime activities where environmental incidents may occur. This includes (but is not limited to):

- Temporary activities, such as preliminary investigations (e.g. geotechnical and environmental surveys) and the construction and maintenance of Roads and Maritime assets
- Activities at Roads and Maritime properties and facilities
- Vessels operated by Maritime division
- Activities undertaken by contractors on behalf of Roads and Maritime.

The requirements of this Procedure must be communicated to all Roads and Maritime workers and contractors (e.g. during inductions) who are undertaking activities where incidents may occur.

The Procedure is for internal reporting processes, except where incidents are identified that need to be notified to regulators, and other relevant authorities (see [section 5.1](#)).

The procedure does NOT cover environmental incidents caused by:

- Operational road and traffic activities of the general public (e.g. vehicle accidents, fires caused by discarded cigarette butts)
- Boating accidents (except those involving Roads and Maritime vessels)
- Dumping of materials by members of the public on Roads and Maritime roadsides or land (except where hazardous materials are unexpectedly found during road construction or maintenance activities). Illegal dumping should be reported to the [NSW Environment Protection Authority](#) (EPA)
- Marine oil and chemical spills covered by the [National Plan for Maritime Environmental Emergencies](#) (Australian Maritime Safety Authority, 2014).

2. Environmental incident classification

There are three categories of environmental incidents, as detailed in Table 2.

Table 2: Environmental incident classification

Category	Description	Examples	
Category 1	<p>Potential breaches of legislation or failures of process that result in actual off-site environmental harm, or residual on-site environmental harm</p> <p>or</p> <p>Works undertaken outside approved areas, without required approval or without environmental assessment</p> <p>or</p> <p>Any Material Harm pollution incident as defined by Part 5.7 of the Protection of the Environment Operations Act 1997 (POEO Act).</p>	Pollution Incidents	Discharge of waters from site not in accordance with any approval requirements (e.g. discharge criteria in an Review of Environmental Factors (REF) safeguard or Environment Protection Licence (EPL) condition)
			Pollution, or potential pollution, of waters
			Unmanaged vehicle tracking of materials or emissions of dust, offensive odours or noise beyond the site boundary that are not managed in accordance with approval requirements and/or might impact on nearby land users
			Pollution incidents that threaten harm to the health or safety of people (e.g. odours)
			Unauthorised or illegal disposal or transport of waste
			A spill or other incident that causes pollution to land
		Conservation Breaches	Unauthorised harm or damage to native flora and fauna (terrestrial or aquatic/marine)
			Unauthorised dredging or reclamation works within a watercourse
		Heritage Breaches	A fire caused by Roads and Maritime activities that travels beyond the boundary causing or potentially causing harm to the environment or community
			Unauthorised harm to Aboriginal objects and Aboriginal places
			Unauthorised damage to any State or locally significant relic or Heritage item, or item listed on the Roads and Maritime Section 170 register

Table 2: Environmental incident classification

Category	Description	Examples	
		Planning and compliance breaches	<p>Failure to comply with the requirements of:</p> <ul style="list-style-type: none"> The <i>Environmental Planning and Assessment Act 1997</i> (EP&A Act), including exempt activities, Part 5 determinations and Part 5.1 approvals An <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) approval An EPL A CEMP or environmental work method statement A permit from a regulator (e.g. under the <i>Fisheries Management Act 1994</i>)
Category 2	Failures of process or events that do not result in off-site environmental harm, or residual on-site environmental harm. These incidents may result in temporary on-site environmental harm that can be rectified to pre-existing conditions.	<p>A procedural, administrative or technical breach of environmental requirements, including:</p> <ul style="list-style-type: none"> Failure to prepare or submit required documents, reports or other correspondence Failure to comply with the requirements of: <ul style="list-style-type: none"> The <i>Environmental Planning and Assessment Act 1997</i> (EP&A Act), including exempt activities, Part 5 determinations and Part 5.1 approvals An <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) approval An EPL A CEMP or environmental work method statement A permit from a regulator (e.g. under the <i>Fisheries Management Act 1994</i>). 	
		Spills and discharges that do not leave a site boundary and are cleaned up without residual on-site environmental harm, and the area of temporary impact can be restored to pre-existing conditions	
		A fire that is contained on site and does not cause or potentially cause adverse impact to the environment or community	
Reportable Event	An event or unexpected find that occurs outside the scope of reasonable environmental controls and mitigation measures	<p>Sediment or site water travelling beyond a site boundary, and where it can be demonstrated that:</p> <ul style="list-style-type: none"> Erosion and sediment controls were installed and maintained in accordance with an erosion and sediment control plan, and The cause of the incident was reasonably unforeseen or the weather (rain, wind etc) event exceeded the design capacity of controls. <p>Note these events are considered to have occurred (and the response should commence in accordance with Section 3) when sediment or site water first travels beyond the site boundary (e.g. when an appropriately sized and maintained sediment basin commences overtopping)</p>	
		An unexpected archaeological find that is being managed in accordance with the "Roads and Maritime	

Table 2: Environmental incident classification

Category	Description	Examples
		Standard Management Procedure - Unexpected Archaeological Finds”
		An unexpected threatened species find that is being managed in accordance with the “Roads and Maritime Biodiversity Guidelines – unexpected threatened species finds procedure”
		An unexpected find of contaminated soils, asbestos or other potentially hazardous substances during construction or maintenance works. Note that once a particular contaminant is identified or found for the first time (either during project planning or construction phases) it is then reasonably expected to be found, so additional finds need not be reported in this category.
Regulatory Action	Formal regulatory action from an environmental regulator (that has not already been reported in conjunction with another incident)	<p>Formal regulatory action from an environmental regulator includes, but is not limited to:</p> <ul style="list-style-type: none"> • Penalty infringement notices (PINs) • Clean up notices • Prevention notices • Official cautions / warnings • EPA show cause notifications.

Note: For any incident where there is associated formal regulatory action from an environmental regulator, copies of this correspondence must be forwarded to envops@rms.nsw.gov.au in addition to the Environmental Incident Report (see [section 4](#)).

3. Environmental incident response

3.1 Considerations and steps for environmental incident response

The step-by-step response for Category 1 incidents, Category 2 incidents and Reportable Events is detailed in Table 3.1a (activities undertaken by contractors) and Table 3.1b (activities undertaken by Roads and Maritime Regional Maintenance). However, some key points apply throughout all stages of the response to any environmental incident:

- If in doubt, treat all incidents as Category 1 to ensure reporting timeframes can be met
- Strong consideration should be given to notifying:
 - Roads and Maritime Corporate Communications for any incidents that have potential for community or media attention (see [section 4.4](#))
 - Roads and Maritime Work Health and Safety Branch for any incidents that involve actual or potential risks to worker health and safety (see [section 4.4](#)).
- The person responsible for operational management of the site/activity shall assume responsibility for the response to the incident and direct actions as necessary and in accordance with this Procedure
- A Roads and Maritime Environment Manager can consult with the Director Environment Operations (DEO) to reclassify the category of an incident where appropriate.

Any Regulatory Action received (that has not already been reported in conjunction with another incident) should be immediately forwarded to the envops@rms.nsw.gov.au mailbox, and followed by an immediate phone call to the relevant Roads and Maritime Environment Manager, who will immediately advise the DEO. Consideration should then be given as to whether an environmental incident has occurred (see [section 2](#)) that should be reported in accordance with this section.

Table 3.1a: Environmental incident response activities undertaken by contractors

Step	Action	Responsibility for completing action	Timeframe	
			Category 1 Incidents	Category 2 Incidents / Reportable Events
1	Stop work in relevant area (if necessary) and take actions to prevent adverse impact to human health or the environment. Note human health and safety is the primary concern, and no action should be taken if it is not safe to do so.	Person who identifies incident	Immediate	Immediate
2	Advise the contractor site management team.	Person who identifies incident	Immediate	Immediate
3	Advise the Roads and Maritime project management team and the relevant Roads and Maritime Environment Manager.	Contractor	Immediate	Day of the incident
4	Consider if the incident is a pollution incident that constitutes Material Harm in accordance with Part 5.7 of the POEO Act. For Material Harm pollution incidents, notify relevant agencies (see section 5.2). Sites with an EPL should implement their Pollution Incident Response Management Plan.	Contractor	Immediate	Immediate
5	Advise DEO by phone. The DEO may request photographs and a brief summary of known information via email. The following Roads and Maritime managers should also be notified by phone as relevant: <ul style="list-style-type: none"> Director Environment (Major Projects) Director Environment (Motorways). 	Roads and Maritime Environment Manager	Immediately following advice of the incident	N/A
6	Where relevant, notify incident to appropriate regulatory agency (see section 5.1). Note this does not refer to the requirement to notify Material Harm pollutions incidents (see Step 4).	Contractor	As required by legislation	As required by legislation
7	Complete the incident report form (see section 4.2), including sign-off from Roads and Maritime Project Manager, and submit to Roads and Maritime Environment Manager* (see sections 4.3 and 4.4).	Contractor	Within 3 business days of the incident	Within 3 business days of the incident
8	Sign and submit incident report form to envops@rms.nsw.gov.au .	Roads and Maritime Environment Manager	On the day of receipt of the form	On the day of receipt of the form
9	For Material Harm pollution incidents, provide a written report to each relevant authority (see section 5.2).	Contractor	Within 7 days of the incident	N/A
10	Undertake incident investigation (level of investigation to be appropriate to the severity of the incident) to determine root cause and any necessary corrective actions. Summarise findings in 'Incident Lessons Learnt' template and submit to Environment Manager for review.	Contractor	Within 1 month of incident	N/A
11	Submit final Incident Lessons Learnt to envops@rms.nsw.gov.au .	Roads and Maritime Environment Manager	Within 1 week of receipt	N/A
12	Consider the need for any required corrective actions to be addressed through a management system (e.g. corrective action request).	Roads and Maritime Environment Manager and project team	As appropriate	As appropriate

*Alternate workflow / signatory arrangements may be required for projects where a third party is involved (e.g. a delivery authority). These arrangements can be confirmed with the relevant Roads and Maritime Environment Manager.

Table 3.1b: Environmental incident response activities undertaken by Regional Maintenance (including contractors or RMCC on behalf of Regional Maintenance)				
Step	Action	Responsibility for completing action	Timeframe	
			Category 1 Incidents	Category 2 Incidents / Reportable Events
1	Stop work in relevant area (if necessary) and take actions to prevent adverse impact to human health or the environment. Note human health and safety is the primary concern, and no action should be taken if it is not safe to do so.	Person who identifies incident	Immediate	Immediate
2	Advise the Roads and Maritime site management team and the relevant Roads and Maritime Environment Manager and Safety Environment Quality Officer (SEQO) / Safety Environment Quality Co-ordinator (SEQC).	Person who identifies incident	Immediate	Immediate
3	Advise DEO by phone. The DEO may request photographs and a brief summary of known information via email. The relevant Regional Maintenance Manager must also be notified.	Environment Manager	Immediate	N/A
4	Consider if the incident is a pollution incident that constitutes Material Harm in accordance with Part 5.7 of the POEO Act. For Material Harm pollution incidents, notify relevant agencies (see section 5.2). Sites with an EPL should implement their Pollution Incident Response Management Plan.	DEO	Immediately following advice of the incident	N/A
5	Where relevant, notify incident to appropriate regulatory agency (see section 5.1). Note this does not refer to the requirement to notify Material Harm pollutions incidents (see Step 4).	Environment Manager	As required by legislation	As required by legislation
6	Complete the incident report form (see section 4.2), including sign-off from Roads and Maritime Project Manager, and submit to SEQC (see section 4.3).	Relevant Roads and Maritime site representative	Within 3 business days of the incident	Within 3 business days of the incident
7	SEQC to sign and submit incident report form to relevant Environment Manager (see section 4.4).	SEQC	On the day of receipt of the form	On the day of receipt of the form
8	Sign and submit incident report form to envops@rms.nsw.gov.au .	Environment Manager	On the day of receipt of the form	On the day of receipt of the form
9	For Material Harm pollution incidents, provide a written report to each relevant authority (see section 5.2).	DEO	Within 7 days of the incident	N/A
10	Undertake incident investigation (level of investigation to be appropriate to the severity of the incident) to determine root cause and any necessary corrective actions. Summarise findings in 'Incident Lessons Learnt' template and submit both to Environment Manager for review. Consider the need for any required corrective actions to be addressed through a management system (e.g. corrective action request).	SEQC	Within 1 month of incident	N/A
11	Submit final Incident Lessons Learnt to envops@rms.nsw.gov.au .	Roads and Maritime Environment Manager	Within 1 week of receipt	N/A

Copies of formal regulatory action from an environmental regulator (that has not already been reported in conjunction with another incident) must be forwarded to the relevant Roads and Maritime Environment Manager (and SEQC/SEQO for Regional Maintenance projects) and envops@rms.nsw.gov.au immediately upon receipt.

3.2 Critical incidents

Some Category 1 incidents require escalation so relevant members of the Roads and Maritime Executive are aware of the incident and ready to respond as necessary. Category 1 incidents will be deemed 'Critical Incidents' for escalation to the Executive when they have the potential for:

- Regulatory action (e.g. EPA Penalty Infringement Notice) and/or
- Reputational damage (e.g. media coverage) and/or
- Significant environmental harm.

Guiding factors that will be considered when determining whether there has been 'significant' environmental harm include:

- When there has been actual or potential harm to the health or safety of people or to the environment that is not trivial
- Actions required to prevent, mitigate or make good the actual or potential environmental harm are likely to exceed \$10,000

When a potential 'Critical Incident' is reported, the DEO will immediately brief the Director Environment (DE) who will make a determination on whether it will be considered a 'Critical Incident'. The DE will then brief the Roads and Maritime Chief Executive and relevant Executive Director, as well as any other members of the Executive as appropriate. When the DE cannot be contacted, the DEO will make the determination and make the relevant Executive briefings.

4. Environmental incident reporting

4.1 Environmental incident report form

The Environmental Incident Report Form should be completed for Category 1 incidents, Category 2 incidents and Reportable Events, and is available on the [Roads and Maritime website](#).

4.2 Completing the incident report form

All parts of the Incident Report Form must be completed in accordance with this procedure and following the instructions within the form. The Form (and any subsequent reports) must only include factual information. Speculation about the causes and outcomes of incidents are not to be included.

The Form must be signed by the following:

Signatory	Reason
The person making the report	The person witnessed the incident or has the most knowledge of the incident, and can provide sufficient factual information.
The Roads and Maritime Project Manager	To ensure all relevant Roads and Maritime parties can be made aware of the incident, and appropriate resources can be allocated and/or approved to respond to the incident. This also ensures the project management team are aware of any environmental performance trends if multiple incidents occur.
Safety Environment and Quality Co-ordinator (Roads and Maritime Regional Maintenance only)	To ensure Regional Maintenance management system staff are aware of the incident, and any necessary management system changes can be made once corrective actions and lessons learnt are finalised.
The relevant Roads and Maritime Environment Manager	Concurrence that the incident is adequately described, and the immediate actions and corrective actions are appropriate.

As noted in [Table 3.1a](#), alternate signatory arrangements may be required for projects where a third party is involved (e.g. a delivery authority). These arrangements can be confirmed with the relevant Roads and Maritime Environment Manager.

4.3 Submitting the incident report form

All Incident Report Forms must be populated, signed and submitted electronically (never printed / signed / scanned etc.) to enable Roads and Maritime to electronically capture the information entered in the form.

Completed Incident Report Forms should be submitted by the Roads and Maritime Environment Manager to the Environment Operations mailbox:

- envops@rms.nsw.gov.au

It is essential that a clear and consistent subject line convention is used to allow tracking of correspondence about each incident. All emails about an incident between all parties should structure the subject line as follows:

- Category X - project name / incident location - date
- For example, Category 1 – Main Road Upgrade – dd/mm/yy.

Where information cannot be gathered within the timeframes set out in this Procedure, the incident form should be submitted to the mailbox as a 'draft', whether or not the information contained is fully completed.

- For example, Category 1 – Main Road Upgrade – dd/mm/yy (DRAFT).

The Environment Manager should then request further information from the person making the report, and the final report should be submitted within the next 24 hours.

4.4 Roads and Maritime contacts

The relevant Environment Manager for each region and Project Office is the first point of contact for enquiries relating to environmental incidents. Current contacts for all Roads and Maritime Environment Managers can be found on the [Roads and Maritime website](#).

Environment Managers can also provide contact details for other relevant contacts during an incident, such as Communications or Work, Health and Safety.

The DEO oversees the application of this Procedure, and can be contacted in the absence of the relevant Environment Manager for Category 1 incidents:

- Phone - (02) 8843 3048

5. Regulatory agency notification

5.1 Notification of Material Harm pollution incidents

5.1.1 Definition of Material Harm pollution incidents

Under Part 5.7 of the POEO Act, there is a duty to immediately notify (i.e. promptly and without delay) each relevant authority (see [section 5.1.3](#)) of a pollution incident where material harm to the environment is caused or threatened.

The POEO Act states that a pollution incident should be considered Material Harm if:

- “(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*
- (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000”*

Material Harm only relates to pollution incidents. Other environmental incidents, such as conservation, heritage and planning breaches, are not included in the definition of a pollution incident.

5.1.2 Determining if an incident should be considered Material Harm

As soon as a person becomes aware of a pollution incident that has the potential to cause Material Harm, the Category 1 incident response should be followed (see [Table 3.1a](#) and [Table 3.1b](#) above). The determination on whether a pollution incident should be considered Material Harm should be made in accordance with Table 5.1.2.

Table 5.1.2: Determination of Material Harm pollution incidents

Project delivery	Material Harm determination
Activities undertaken by Regional Maintenance	<p>The DEO should make the determination (and any associated notifications) on whether a pollution incident should be considered Material Harm.</p> <p>If the DEO is not available, the relevant Environment Manager should seek advice from other Roads and Maritime Environment Branch Directors, or make the material harm determination themselves.</p> <p>If no assistance can be obtained and it is suspected that a pollution incident should be considered Material Harm, the project should notify the relevant authorities in accordance with Table 5.1.3a or Table 5.1.3b (as relevant).</p>
Activities undertaken by contractors	<p>The contractor project team should make the determination (and any associated notifications) on whether a pollution incident should be considered Material Harm.</p> <p>The relevant Roads and Maritime Environment Manager or Environment Branch Director may contact the DEO to assist in making an assessment of the incident, to aid the contractor in determining if the pollution incident should be considered Material Harm.</p> <p>Where Roads and Maritime believes a pollution incident should be considered Material Harm but the contractor disagrees, Roads and Maritime is required by law to notify EPA and other relevant authorities. In this instance the DEO or DE would make a determination on whether the incident should be notified by Roads and Maritime as Material Harm. Roads and Maritime would provide details of any notifications made to the contractor.</p>

Even if only limited information is available for a pollution incident being considered Material Harm, each relevant authority must be immediately notified with the information available and updates provided as soon as further relevant information becomes available.

In circumstances where there is doubt about the need to notify a pollution incident as Material Harm, Roads and Maritime and its contractors should always err on the side of notification.

When in doubt, communicate!

Note: Roads and Maritime is not responsible for notifying a Material Harm pollution incident caused by a traffic or vehicle accident where notification has already occurred by someone at the scene. However, if it is believed notification has not been undertaken, Roads and Maritime should undertake notification in accordance with [section 5.1.3](#). Environment Branch can provide advice in this instance (see [section 4.4](#)).

5.1.3 Relevant authorities to notify

The relevant authorities that must be notified for a Material Harm pollution incident are listed in tables [5.1.3a](#) and [5.1.3b](#) below. It is important to note the order of notification and phone numbers to use can vary depending on the nature of the pollution incident, as detailed in the two tables.

All of the authorities listed (whether considered relevant or not) must be contacted for each Material Harm pollution incident to satisfy POEO Act requirements. Serious penalties apply to both individuals and corporations for failing to notify Material Harm pollution incidents:

- Maximum penalty for individuals - \$500,000
- Maximum penalty for corporations - \$2,000,000.

Table 5.1.3a: Authorities to notify for Material Harm pollution incidents that present an immediate threat to human health or property

Order	Authority	Contact Number
1	Fire and Rescue NSW	000
2	NSW EPA environment line	131 555
3	Ministry of Health (via the local Public Health Unit)*	Contact 1300 066 055 to be directed to the local Public Health Unit, or visit the NSW Health Website
4	SafeWork NSW	131 050
5	The Appropriate Regulatory Authority*, being either: <ul style="list-style-type: none"> • Local council • Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council). 	Local council - contact Office of Local Government on 4428 4100, or visit the Office of Local Government website Western Lands Commissioner – phone 6883 5400

Table 5.1.3b: Authorities to notify for Material Harm pollution incidents that do NOT present an immediate threat to human health or property

Order	Authority	Contact Number
1	NSW EPA environment line	131 555
2	The Appropriate Regulatory Authority*, being either: <ul style="list-style-type: none"> • Local council • Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council). 	Local council - contact Office of Local Government on 4428 4100, or visit the Office of Local Government website Western Lands Commissioner – phone 6883 5400
3	Ministry of Health (via the local Public Health Unit)*	Contact 1300 066 055 to be directed to the local Public Health Unit, or visit the NSW Health Website

4	SafeWork NSW	131 050
5	Fire and Rescue NSW	1300 729 579

* The appropriate contact for the Appropriate Regulatory Authority and Public Health Unit will vary according to the geographic location of the activity. These contact numbers should be found in advance and stored for immediate access (e.g. in a project's Construction Environmental Management Plan and/or on site notice boards) should a pollution incident need to be notified.

5.1.4 The relevant information to provide

It is important to avoid speculation on origin, causes or outcomes of a pollution incident in discussions with the authorities. Section 150 of the POEO Act provides the information that needs to be notified, being:

- The time, date, nature, duration and location of the incident
- 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, if known
- 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, if known
- Other information prescribed by the regulations.

Only known information should be provided when notifying of a Material Harm pollution incident. If further information becomes known after the initial notification, that information must immediately be notified to all authorities in accordance with Section 150 (see above). The immediate verbal notification is to be followed by written notification to each relevant authority within seven days of the date on which the incident occurred.

Complying with these notification requirements does not remove the need to comply with any other legislative requirements for incident notification (e.g. requirements under EPL conditions or the Work Health and Safety Act 2011).

5.2 Summary of other regulatory agency notification requirements

Specific statutory requirements relating to the notification of environmental incidents to relevant regulatory agencies are summarised in Table 5.2. Additional requirements adopted by Roads and Maritime are indicated in *italics*. Any notification to regulatory agencies should be indicated in the Environmental Incident Report Form to confirm that any required notifications have been initiated.

Table 5.2: Regulatory agency notification requirements

Legislation / issue	Regulating authority	Section / requirement
<i>Commonwealth Aboriginal and Torres Strait Islanders Heritage Protection Act 1984</i>	Department of the Environment and Energy	Section 20 – requirement to notify the Minister of the discovery of Aboriginal remains.
<i>Contaminated Land Management Act 1997</i>	EPA	Section 60 – requirement to notify if Roads and Maritime activities have contaminated land or if Roads and Maritime owns land that has been contaminated.
<i>Heritage Act 1977</i>	Office of Environment and Heritage	Section 146 – requirement to notify the Heritage Council of the location of the relic once a relic has been discovered or located.
<i>National Parks and Wildlife Act 1974</i>	Office of Environment and Heritage	Section 89A – requirement to notify the location of an Aboriginal object that is the property of the Crown.
<i>Protection of the Environment Operations Act 1997</i>	EPA and other relevant authorities	Section 148 – requirement to immediately notify pollution incidents that cause or threaten Material Harm to the environment (see Section 5.1)

	EPA	<i>Pro-active reporting to the local EPA officer of offsite pollution incidents that occur as a result of Roads and Maritime activities is encouraged as soon as practicable after the pollution incident occurs.</i>
<i>Rural Fires Act 1997</i>	NSW Rural Fire Service	Section 64 – requirement to notify an appropriate fire officer of the inability to extinguish any fire burning during a bush fire danger period applicable to the land.
Breach of Conditions of Approval (projects approved under Part 5.1 of the EP&A Act)	Department of Planning and Environment (DPE)	DPE should be notified by the project proponent when there has been a breach of a Condition of Approval (CoA). There may also be other notification requirements included in the CoA.
<i>Water supply catchment areas</i>	<i>Local water supply authority</i>	<i>If an environmental incident has the potential for unapproved impacts on a drinking water supply, the relevant water supply authority must be advised.</i>

5.3 Requests for written reports from regulatory authorities (activities delivered internally by Roads and Maritime)

Should Roads and Maritime directly receive a request from a regulatory authority for a written report regarding an environmental incident, Environment Branch and Legal Branch must be immediately contacted for advice. No further correspondence (including email) about the incident should be distributed either internally or externally until advice is received. Environment Branch will coordinate with Legal Branch to:

- Assist in the investigation of the incident
- Provide legal advice to the project
- Co-ordinate the preparation of the written response to the regulatory authority.