CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
Halfway Creek to Glenugie
Section 2 Pacific Highway Upgrade
MAY 2015
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Plan approved by:

Alistair Pagan
Martin Mulhearn
Steven Alford

CMC Project Manager
CMC Environment Manager
Roads and Maritime Representative

Revision history

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Halfway Creek to Glenugie Construction Environmental Management Plan
### Contacts

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<tr>
<th>Position</th>
<th>Name</th>
<th>Phone</th>
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<tr>
<td>&quot;24 hour community information line&quot;</td>
<td>NA</td>
<td>1800 778 900</td>
</tr>
<tr>
<td>Environmental Manager</td>
<td>Martin Mulhearn</td>
<td>W 07 32125000</td>
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<td>M 0438186746</td>
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<td>*Project Manager</td>
<td>Alistair Pagan</td>
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<td></td>
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<td>M 0417605476</td>
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<tr>
<td>*Superintendent</td>
<td>James Barry]</td>
<td>W 07 32125000</td>
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<td></td>
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<td>M 0448946181</td>
</tr>
<tr>
<td>Environmental Representative</td>
<td>Daniel Saunders</td>
<td>W 02 99255650</td>
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<tr>
<td></td>
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<td>M 0423066956</td>
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<tr>
<td>Roads and Maritime Representative</td>
<td>Steven Alford</td>
<td>W [insert detail]</td>
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<td>M 041129398</td>
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<tr>
<td>Roads and Maritime Environmental Services Manager, Pacific Highway</td>
<td>Scott Lawrence</td>
<td>W 02 6640 1375</td>
</tr>
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<td></td>
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<td>M 0419 248 583</td>
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<tr>
<td>EPA pollution hotline</td>
<td>NA</td>
<td>131 555</td>
</tr>
</tbody>
</table>

* to be contactable by EPA on a 24-hour basis
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Appendix B10 Construction Contaminated Land Management Plan (Developed if required)
Appendix B11 Construction Acid Sulfate Materials Management Plan
<table>
<thead>
<tr>
<th><strong>Glossary / Abbreviations</strong></th>
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<tr>
<td><strong>ASS</strong></td>
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<td><strong>CEMP</strong></td>
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<td><strong>DP&amp;E</strong></td>
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<td><strong>DPI</strong></td>
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<td><strong>Ecological sustainable development</strong></td>
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<td><strong>EIS</strong></td>
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<td><strong>Environmental target</strong></td>
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<td><strong>Environmental Representative</strong></td>
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to all questions and complaints concerning environmental performance.

**EP&A Act**  
*NSW Environmental Planning and Assessment Act 1979*

**EPA**  
NSW Environment Protection Authority

**EPBC Act**  
*Commonwealth Environment Protection and Biodiversity Conservation Act 1999*

**EPL**  
NSW Environment Protection Licence under the *Protection of the Environment Operations Act 1997*.

**ERG**  
Environmental Review Group – comprising representatives of Roads and Maritime, Environmental Representative, Project delivery team, regulatory authorities (EPA, DPI – Fisheries Conservation and Aquaculture, NOW) and local councils. The ERG will be maintained for the duration of the Project and will meet regularly and undertake environmental inspections. The role the ERG is to provide proactive advice on environmental management issues and review the environmental performance of the Project.

**EWMS**  
Environmental Work Method Statement

**Minister, the**  
NSW Minister for Planning

**Non-compliance**  
Failure to comply with the requirements of the Project approval or any applicable license, permit or legal requirements.

**Non-conformance**  
Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation.

**NOW**  
NSW Office of Water

**OEH**  
NSW Office of Environment and Heritage

**SPIR**  
Woolgoolga to Ballina Pacific Highway Upgrade Submissions Preferred Infrastructure Report (November, 2013)

**PoEO Act**  
*NSW Protection of the Environment Operations Act 1997*

**Project, the**  
Halfway Creek to Glenugie Section 2 of the Woolgoolga to Ballina Pacific Highway Upgrade Project.

**Roads and Maritime**  
NSW Roads and Maritime Services

**Secretary**  
Secretary of the Department of Planning and Environment

**SSI**  
State significant infrastructure

**TSC Act**  
NSW Threatened Species Conservation Act 1995
1 Introduction

1.1 Background

On behalf of the Australian and NSW governments, NSW Roads and Maritime Services (Roads and Maritime) is progressively upgrading the Pacific Highway to dual carriageway between the Hunter and NSW/Queensland border.

The Woolgoolga to Ballina Project was declared critical State significant infrastructure under section 115V of the Environmental Planning and Assessment Act 1979 (EP&A Act) and was assessed under Part 5.1 of the EP&A Act.

An Environmental Impact Statement (EIS) was prepared for the Woolgoolga to Ballina Project and placed on public exhibition for 60 days between December 2012 and February 2013. A Submissions/Preferred Infrastructure Report (SPIR) was prepared for the Woolgoolga to Ballina Project to address key revisions and updates from the EIS following public exhibition of the EIS. A total of 145 submissions were received in response to the exhibition of the EIS. The SPIR was published in November 2013. Approval was granted by the Minister for Planning on 26 June 2014. The Woolgoolga to Ballina Project has also been subject to approval under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The Woolgoolga to Ballina Project was declared by the Commonwealth Minister for the Environment to be a controlled action under this Act on 20 June 2012. Approval was granted on 14 August 2014. The Woolgoolga to Ballina approval was modified on 15 January 2015 (Modification 1) to add utility adjustments in section 4 as pre-construction and updating references to the OEH and EPA. The Conditions of Approval directly related to the CEMP are included within Table 1-1.

The Woolgoolga to Ballina Project comprises approximately 155 kilometres of four-lane dual carriageway motorway that bypasses the towns of Grafton, South Grafton, Ulmarra, Woodburn, Broadwater and Wardell. The project does not include the Pacific Highway upgrades at Glenugie and Devils Pulpit as these are separate projects and now complete, however the tie-ins to these projects are included within the DP&E approval. As described in the Woolgoolga to Ballina Pacific Highway Upgrade Environmental Impact Statement, Roads and Maritime is considering a range of different packaging and procurement options ranging from one single 155 kilometre project to up to 11 individual projects. Further detail of the proposed staging of the project would be provided in the Staging Report as required by Condition of Approval (CoA A7).

Civil Mining and Construction Pty Ltd (CMC) has been awarded the contract to construct the Project. The Project is about 12.3 kilometres long, extending from the northern end of the current dual-lane section at Halfway Creek at Lemon Tree Road, to the southern end of the Glenugie upgrade at Franklins Road (Figure 2-2). The project is entirely situated within the Clarence Valley Council area.

1.2 Purpose of this CEMP

This Construction Environmental Management Plan (CEMP) template and its associated sub-plans have been prepared to comply with the Minister for Planning’s Conditions of Approval for the Woolgoolga to Ballina Project. A detailed description of the project is provided in Chapter 2.

This CEMP has been developed to be specific to Section 2, between Halfway Creek and Glenugie. The CEMP has been prepared in accordance with Roads and Maritime QA Specification G36 and the Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004). It is also consistent with AS/NZS ISO 14001.
The project joins to the southern end of the constructed Glenugie upgrade project. The Ministers conditions of approval for this section have been included to ensure tie in works are consistent with the requirements. These conditions are included in Table 1.1.

The purpose of this CEMP is to provide a structured approach to the management of environmental issues during construction of the project. Implementing this CEMP effectively will ensure that the project team meets regulatory and policy requirements in a systematic manner and continually improves its performance. The CEMP is to ensure that the requirements of Roads and Maritime, the Project Environment Protection Licence, the CMC Environmental Management System and the Minister’s conditions of approval, Statement of Commitments in the EIS and S/PIR including DoE requirements are met (see Appendix A1 and Compliance Tracking Program).

In particular, this CEMP:

- Describes the project in detail including activities to be undertaken and relative timing.
- Provides specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impacts.
- 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.
- Outlines a monitoring regime to check the adequacy of controls as they are implemented during construction.

This CEMP meets the requirements of CoA D25, D26 relating to a Construction Environmental Management Plan. The requirements of these conditions and where they are met in this CEMP are shown in Error! Reference source not found.. CoA D21 and D22 relating to Ancillary Facilities Management Plan and Borrow Sites Management Plan are proposed to be included within the broader CEMP, and so are included within Table1-1. CoA D27 relating to Compliance Monitoring and Tracking is discussed in Chapter 8-4 of this CEMP.

Table 1-1 Conditions of approval

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<tr>
<td>Woolgoolga to Ballina Conditions of Approval 24 June 2014 (as amended);</td>
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<tr>
<td>ANCILLARY FACILITIES</td>
<td></td>
<td>Appendix B8</td>
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<td>D21</td>
<td>The Applicant shall prepare and implement an Ancillary Facilities Management Plan to detail the management of ancillary facilities associated with the SSI. The Plan shall be developed in consultation with the EPA, OEH, DPI (Fisheries) and the relevant council, and to the satisfaction of the Environmental Representative, and shall include, but not necessarily be limited to:</td>
<td></td>
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<tr>
<td></td>
<td>(a) a description of the ancillary facility (including a site layout plan), its components and details of the existing environment on and in the vicinity of the site;</td>
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<td>(b) details of the activities to be carried out at the facility, including the hours of operation, staging of</td>
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<td>operation and predicted date of commissioning;</td>
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<td>(c)</td>
<td>a description of the plant, equipment and materials to be used and/or stored on the site, including dangerous and hazardous goods;</td>
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<td>(d)</td>
<td>details of the light and heavy construction vehicle movements to and from each facility, including site access and route(s) to be used during the establishment and operation of the facility, and an assessment of potential construction traffic impacts on the local road network and access tracks;</td>
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<tr>
<td>(e)</td>
<td>a summary of the potential environmental impacts associated with the construction and operation of the facility;</td>
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<td>(f)</td>
<td>demonstrate compliance with the locational and environmental criteria in condition B73(a) — B73(n);</td>
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<td>(g)</td>
<td>details of the mitigation, monitoring and management procedures specific to the facility that would be implemented to minimise environmental and amenity impacts or, where this is not possible, feasible and reasonable measures to offset these impacts;</td>
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<tr>
<td>(h)</td>
<td>a description of how the management and mitigation measures set out in the documents listed in condition A2 will be implemented on the site, and if not, justification for such decisions particularly on those sites assessed as having a high risk of flood impacts;</td>
<td></td>
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<tr>
<td>(i)</td>
<td>an assessment of alternative site layouts where either noise management levels are predicted to be exceeded and acoustic treatment of residences is not proposed, or where such treatment is proposed (consequent to the operational impacts of the SSI) but will not be provided prior to establishment of an ancillary facility;</td>
<td></td>
</tr>
<tr>
<td>(j)</td>
<td>a cumulative noise impact statement for the ancillary facility addressing the worst-case cumulative noise impacts resulting from the concurrent operation of the site (including construction traffic movements to and from the site), nearby construction works within the SSI corridor and any other nearby construction activities associated with other road upgrade projects;</td>
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<tr>
<td>(k)</td>
<td>identification of the timing for the completion of activities at the facility and how the site will be decommissioned (including any necessary rehabilitation); and</td>
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<tr>
<td>(l)</td>
<td>mechanisms for the monitoring, review and amendment of this plan.</td>
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The plan shall be approved by the Environmental Representative prior to the establishment of the facility. In considering the approval of the plan, the Environmental Representative shall take into account the Proponent's response to public authority and council comments on the plan.

The Applicant may prepare a separate plan for each facility or include multiple sites within a single or multiple management plans.

**BORROW SITES**

D22 Prior to the commencement of construction at the borrow sites, or as otherwise agreed by the Secretary of the Department of Planning and Environment, the Applicant shall prepare and implement a **Borrow Sites Management Plan** to manage the construction, operation and rehabilitation of the borrow sites used to source construction material for the SSI. The Plan shall be prepared in consultation with the EPA, OEH and DPI (Fisheries) and to the satisfaction of the Secretary of the Department of Planning and Environment, and shall include, but not necessarily be limited to:

(a) details of construction/extraction methods and activities carried out at the borrow site;

(b) management measures to be used to minimise surface and groundwater impacts, Aboriginal and non-Aboriginal heritage, air quality, noise and vibration, biodiversity and visual impacts;

(c) consultation with sensitive receivers; and

(d) details of the rehabilitation of the borrow site, including future landform and use of the borrow site, landscaping and revegetation, and measures that would be implemented to minimise or manage the ongoing environmental effects of the site.

The Plan shall demonstrate that the construction and operation of the Lang Hill borrow site has no adverse impact on the known Oxleyan Pygmy Perch habitat waterway.

**CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN**

D25 The Applicant shall prepare and implement (following approval) a **Construction Environmental Management Plan** for the SSI, prior to the commencement of construction, or as otherwise agreed by the Secretary. The Plan shall be prepared in consultation with the EPA, OEH, DPI (Fisheries), NOW and DoE and outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the relevant government agencies and in accordance with the **Guideline for the Preparation of Environmental Management Plans** (Department of Infrastructure, Planning and Natural
The Plan shall include, but not necessarily be limited to:

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<th>Requirement</th>
<th>Reference</th>
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<tbody>
<tr>
<td>D25 (a)</td>
<td>A description of activities to be undertaken during construction of the SSI (including staging and scheduling).</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>D25 (b)</td>
<td>Statutory and other obligations that the Proponent is required to fulfil during construction, including approvals, consultations and agreements required from authorities and other stakeholders under key legislation and policies.</td>
<td>Chapter 3 and Appendix A1</td>
</tr>
<tr>
<td>D25 (c)</td>
<td>A description of the roles and responsibilities for relevant employees involved in the construction of the SSI, including relevant training and induction provisions for ensuring that employees, including contractors and sub-contractors are aware of their environmental and compliance obligations under the conditions of approval.</td>
<td>Chapter 4 and Chapter 5</td>
</tr>
<tr>
<td>D25 (d)</td>
<td>An environmental risk analysis to identify the key environmental performance issues associated with the construction phase and details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be taken to address identified potential adverse environmental impacts (including any impacts arising from the staging of the construction of the SSI). In particular, the following environmental performance issues shall be addressed in the Plan:</td>
<td>Section 3.4 and Appendix A2</td>
</tr>
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</table>

i. measures to monitor and manage dust emissions including dust from stockpiles, blasting, traffic on unsealed public roads and materials tracking from construction sites onto public roads;  

ii. measures to minimise hydrology impacts, including measures to stabilise bed and bank structures as required;  

iii. measures for the handling, treatment and management of contaminated materials;  

iv. measures to monitor and manage waste generated during construction including but not necessarily limited to: general procedures for waste classification, handling, reuse, and disposal; use of secondary waste material in construction wherever feasible and reasonable; procedures or dealing with green waste including timber and mulch from clearing activities; and measures for reducing demand on water resources (including potential for reuse of treated water from sediment control basins);  

v. measures to monitor and manage spoil, fill and materials stockpile sites including details of how spoil,
fill or material would be handled, stockpiled, reused and disposed in a Stockpile Management Protocol. The Protocol shall include details of the locational criteria that would guide the placement of temporary stockpiles, and management measures that would be implemented to avoid/minimise amenity impacts to surrounding residents and environmental risks (including surrounding water courses). Stockpile sites that affect heritage, threatened species, populations or endangered ecological communities require the approval of the Secretary, in consultation with the EPA, OEH and DPI (Fisheries);

vi. measures to monitor and manage hazard and risks including emergency management and management measures to address potential risks to the Woodburn borefield drinking water catchment. These measures shall be developed in consultation with Rous Water;

vii. the issues identified in condition D26;

viii. details of community involvement and complaints handling procedures during construction, consistent with the requirement of conditions C1 to C4;

ix. details of compliance and incident management consistent with the requirements of condition D27; and

x. procedures for the periodic review and update of the Construction Environmental Management Plan and Plans required under condition D26, as necessary (including where minor changes can be approved by the Environmental Representative).

The Plan shall be submitted for the approval of the Secretary of the Department of Planning and Environment no later than one month prior to the commencement of construction, or as otherwise agreed by the Secretary of the Department of Planning and Environment. The Plan may be prepared in stages, however, construction works shall not commence until written approval of the relevant stage has been received from the Secretary of the Department of Planning and Environment.

The approval of a Construction Environmental Management Plan does not relieve the Applicant of any requirement associated with this SSI approval. If there is an inconsistency with an approved Construction Environmental Management Plan and the conditions of this SSI approval, the requirements of this SSI approval prevail.

As part of the Construction Environmental Management Plan for the SSI, the Applicant shall prepare and implement:
<table>
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<tr>
<th>CoA no.</th>
<th>Requirement</th>
<th>Reference</th>
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<tbody>
<tr>
<td>D26 (a)</td>
<td>a <strong>Construction Noise and Vibration Management Plan</strong></td>
<td>Appendix B3</td>
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<tr>
<td>D26 (b)</td>
<td>a <strong>Construction Traffic and Access Management Plan</strong></td>
<td>Appendix B1</td>
</tr>
<tr>
<td>D26 (c)</td>
<td>a <strong>Construction Soil and Water Quality Management Plan</strong></td>
<td>Appendix B4</td>
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<tr>
<td>D26 (d)</td>
<td>a <strong>Construction Heritage Management Plan</strong></td>
<td>Appendix B5</td>
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<tr>
<td>D26 (e)</td>
<td>a <strong>Construction Flora and Fauna Management Plan</strong></td>
<td>Appendix B2</td>
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<tr>
<td>D27</td>
<td>The Applicant shall prepare and implement a Compliance Tracking Program, to</td>
<td>Section 8.4</td>
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<td>track compliance with the requirements of this approval, prior to the</td>
<td>Table 8.3</td>
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<td>commencement of construction and operate from the date of its approval to a</td>
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<td>minimum of one year following commencement of operation, or as otherwise</td>
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<td>agreed by the Secretary. The Program shall be prepared for the approval of</td>
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<td>the Secretary, and include, but not necessarily be limited to:</td>
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<td></td>
<td>(a) provisions for the notification of the Secretary prior to the</td>
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<td>commencement of construction and prior to the</td>
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<td>commencement of operation of the SSI (including prior to each stage, where</td>
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<td>works are being staged);</td>
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<td>(b) provisions for periodic review of the compliance status of</td>
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<td>the SSI against the requirements of this approval;</td>
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<td>(c) provisions for periodic reporting of compliance status to the Secretary,</td>
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<td>including a Pre-Construction Compliance Report, prior to the</td>
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<td>commencement of construction, and a Pre-Operation Compliance Report prior</td>
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<td>to the commencement of operation. These reports may be staged to suit the</td>
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<td>staged construction/operation of the SSI;</td>
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<td>(d) a program for independent environmental auditing in accordance with</td>
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<td>ISO 19011:2003 - Guidelines for Quality and/or Environmental Management</td>
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<td>Systems Auditing;</td>
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<td>(e) mechanisms for recording environmental incidents during</td>
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<td>construction and actions taken in response to those incidents;</td>
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<td>(f) provisions for reporting environmental incidents to the Secretary and</td>
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<td>relevant public authorities during construction;</td>
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<td>(g) procedures for rectifying any non-compliance identified during</td>
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<td>environmental auditing, review of compliance or incident management; and</td>
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<td>(h) provisions for ensuring all employees, contractors and sub-contractors</td>
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<td>are aware of, and comply with, the conditions of this approval relevant to</td>
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<td>their respective activities.</td>
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Full details of CoA D25 are provided in the Appendices of this CEMP relating to each of plans listed above.
CoA no. | Requirement | Reference
--- | --- | ---
CoA 6.2 | **Construction Environmental management Plan**
- Prior to the commencement of construction, the Proponent shall prepare and implement a Construction Environment Management Plan for the project. The Plan shall:
  a) outline the environmental management practices and procedures that are to be followed during construction;
  b) be prepared in consultation with the Department, DECCW and relevant public authorities;
  c) be consistent with the Framework CEMP in Appendix G of the Environmental Assessment and Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004); and
  d) include a:
    - Construction Traffic Management Plan;
    - Construction Flora and Fauna Management Plan;
    - Construction Heritage Management Plan; and

2.18 | Certain construction activities (Out of Hours Works) may be allowed to occur outside the standard construction hours with the prior written approval of the Director-General. Requests for out of hours approval will be considered for construction activities which cannot be undertaken during standard construction hours for technical or other justifiable reasons and will be considered on a case by case or activity-specific basis.

Any request for Out of Hours Works must be accompanied by:

a) details of the nature and need for activities to be conducted during the varied construction hours;

b) written evidence to the DECC and the Director-General that activities undertaken during the varied construction hours are justified, appropriate consultation with potentially affected receivers and notification of Council has been undertaken, issues raised have been addressed, and all feasible and reasonable mitigation measures have been put in place; and

c) evidence of consultation with the DECC on the proposed variation in standard construction hours.

Appendix B3
The construction noise objective for the project is to manage noise from construction (as measured by a Lmo (15minute) descriptor) so that it does not exceed the background LAg0 noise level by:

a) more than 20 dB(A) for a construction period of equal to or less than four weeks;

b) more than 10 dB(A) for a construction period of greater than four weeks, but not exceeding 26 weeks; and

c) more than 5 dB(A) for a construction period greater than 26 weeks.

Any activities that could exceed the construction noise objectives specified under this condition shall be identified and managed in accordance with a Construction Noise and Vibration Management Plan specified under Condition 6.3 d) of this approval. If the noise from construction is substantially tonal or impulsive in nature (as described in Chapter 4 of the NSW Industrial Noise Policy), 5dB(A) shall be added to the measured construction noise level when comparing the measured noise with the construction noise objectives. The Proponent shall implement all reasonable and feasible noise mitigation measures with the aim of achieving the construction noise objective.

The CEMP is also to meet the requirements of the revised Environmental Impact Statement (EIS) mitigation measures for the project as presented in the Submissions / Preferred Infrastructure Report (November 2013), presented in Table 1-2.

Table 1-2 Woolgoolga to Ballina EIS requirement for a CEMP

<table>
<thead>
<tr>
<th>Issue</th>
<th>Requirement</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Environmental Management Plan</td>
<td>A construction environmental management plan is to be prepared by each contractor and will identify measures to be implemented to minimise environmental impacts. The construction environmental management plan will be required to include any conditions of approval for the project and construction measures identified in the EIS. The CEMP will be required to include: - Roles and responsibilities for planning, approval, implementation, assessment and monitoring of environmental controls. - Required licences, approvals and permits. - Environmental legislation that will be required to be complied with. - Potential environmental impacts resulting from construction of the proposed upgrade and the control and mitigation measures to be implemented. - Objectives and targets for environmental performance. - Environmental monitoring programs and a mechanism for evaluating environmental performance. - Communication procedures.</td>
<td>W2B EIS S19.1</td>
</tr>
</tbody>
</table>
Halfway Creek to Glenugie Construction Environmental Management Plan

- Document control procedures.
- Emergency response procedures to mitigate potential environmental damage.
- Training, competence and awareness assessment procedures and programs.
- An environmental auditing program and a mechanism for control and management of non-conformances. The Construction Environmental Management Plan would provide specific information in particular areas of environmental management, either by way of direct reference or by environmental management sub-plans.

Relevant management measures and requirements for the project are included within the attached plans to this CEMP (Appendix B):

- Appendix B1 - Construction traffic and access management plan
- Appendix B2 - Construction flora and fauna management plan
- Appendix B3 - Construction noise and vibration management plan
- Appendix B4 - Construction soil and water quality management plan
- Appendix B5 - Construction heritage management plan
- Appendix B6 - Construction air quality management plan
- Appendix B7 - Construction waste and energy management plan.
- Appendix B8 – Ancillary facilities management plan
- Appendix B9 – Borrow sites management plan (developed if required)
- Appendix B10 – Construction contaminated land management plan (developed if required)
- Appendix B11 – Construction acid sulfate materials management plan

Other relevant management measures to be addressed in construction (visual, urban design and landscape, Traffic and transport, Land use and property and Social and economic) which have not been captured by specific plans are described in Appendix A7.

This CEMP is the overarching document in the environmental management system for the Project that includes a number of management documents. These are described in Section 4.1. It is applicable to all staff and sub-contractors associated with the construction of the Project.

1.3 Consultation

Extensive consultation for the Project commenced during the route selection phase and continued during the environmental impact assessment of the concept design. The primary objective of consultation was to keep stakeholders well informed and involved during each stage of Project development.

Further consultation with relevant stakeholders and government authorities has continued through the development of this CEMP and associated plans. Those consulted include:

- NSW Environment Protection Authority
- NSW Department of Primary Industries – Fisheries Conservation and Aquaculture
- NSW Office of Environment and Heritage
- Clarence Valley Council
Consultation will continue throughout the Project with relevant stakeholders and government authorities. The outcomes of this consultation will be documented where relevant in subsequent revisions of the CEMP and the management review.

### 1.4 Certification and approval

This CEMP must be approved by the Roads and Maritime Project Manager and Roads and Maritime Environmental Manager prior to submission to DP&E. Submission to DP&E is required no later than one month prior to commencement of construction or as otherwise agreed.

The CEMP must be approved by the Secretary of the Department of Planning and Environment prior to the commencement of construction.

The plans prepared under CoA D26 also require approval by the Secretary prior to commencement of construction. Further explanation and details of these documents are provided in Section 4.1.

### 1.5 Distribution

This CEMP is available to all personnel and sub-contractors via the Project document control management system. 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 Manager
- Environmental Representative
- Construction Manager
- Environmental Manager
- Communications Manager
- Roads and Maritime Representative
- Roads and Maritime Environmental Services Manager, Pacific Highway.

### 1.6 Revision

A document review process ensures that environmental documentation including this CEMP is updated as appropriate for the specific works that are occurring on-site. This includes the management review process described in Chapter 9.

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

The revised document will then be issued to the Project Manager and the Environmental Representative for certification of the changes. The Environmental Representative can approve minor changes to the CEMP. Minor changes would typically include those that:

- Are editorial in nature e.g. staff and agency/authority name changes.
- Do not increase the magnitude of impacts on the environment when considered individually or cumulatively.
- Do not compromise the ability of the Project to meet approval or legislative requirements.
Where the Environmental Representative deems it necessary, the amended CEMP will be forwarded to the Secretary for approval.

Revised versions of the CEMP will be made available through the processes described in Section 1.5.

Updates and revisions made to the CEMP throughout the project will be updated on an external server. Sub contractors will be given a hyperlink to the new revision via e-mail. A toolbox will be held on the changes and sent out with the revision.
2 Project description

2.1 General features

The general features of the project are:

- Around 12.3 kilometres of motorway standard highway, comprising a four-lane divided carriageway (two lanes in each direction) that can be upgraded to a six-lane divided carriageway in the future, if required. A six-lane divided carriageway is not included as part of the approved project.
- Two bridge crossings of waterways. Service roads and access roads to maintain connections to existing local roads and properties.
- Heavy vehicle inspection stations near Halfway Creek. Connectivity structures to help wildlife cross above or below the project.

The Woolgoolga to Ballina Pacific Highway Upgrade Environmental Impact Statement divided the alignment into 11 sections, the second stage which is applicable to CMC is:

- Section 2 - Halfway Creek to Glenugie upgrade

Should Roads and Maritime progress with a staged commencement of works, the development and submissions of Project plans (environmental management plans and reports) for approval, where applicable, will also be staged and reflect the complexity and degree of environmental risk associated with each stage of the Project.

In accordance with the requirements of CoA A7 and D25(a), details of the Project staging, including construction activities and submission of corresponding environmental plans, strategies and protocols, would be documented in the Project Staging Report. The Staging Report would be updated, or advice provided that no changes to staging are proposed, and submitted to the Secretary prior to the commencement of each stage, identifying any changes to the proposed staging or applicable CoAs.

2.1.1 Section 2: Halfway Creek to Glenugie upgrade

The works being completed by CMC which is the subject of this CEMP is the Halfway Creek to Glenugie upgrade project (Section 2) which is situated between two other upgraded sections of the Pacific Highway; Halfway Creek upgrade to the south and Glenugie upgrade to the north approximately 17km south of the NSW town of Grafton (Figure 2-1).

The section between Halfway Creek to the Glenugie upgrade is about 12.3 kilometres long, extending from the northern end of the current dual-lane section at Halfway Creek at Lemon Tree Road, to the southern end of the Glenugie upgrade at Franklins Road (Figure 2-2). This section will be A-class standard.

From Lemon Tree Road to Kungala Road, the project will duplicate the existing highway. A northbound carriageway will be constructed on the western side with the existing highway becoming the new southbound carriageway. From Kungala Road to Newfoundland State Forest, northbound and southbound carriageways will be constructed. Through this section the proposed carriageways will closely follow the existing highway.

From Newfoundland State Forest to Franklins Road, the alignment deviates to the east of the existing highway, within areas currently forming part of the State forest estate: Wells Crossing Flora Reserve and Glenugie State Forest.
Twin bridges on the main carriageway will be provided over Halfway Creek and over Wells Crossing Creek.

A heavy vehicle inspection station (HVIS) will be provided on the southbound carriageway to the west of Halfway Creek and Sanctuary Drive, replacing the existing southbound facility located about seven kilometres to the north at Glenugie.

Section 2 is being delivered by CMC, and the works undertaken for Section 2 are the subject of this CEMP.

Figure 2-1 Sections 1 and 2: Woolgoolga to Ballina
### 2.2 Construction activities and sequence

Typically the following sequences of construction activities are anticipated:

- **Site establishment** – installing boundary fencing, construction facilities, environmental controls and carrying out pre-clearing vegetation fauna surveys.
- **Relocation or protection of services** – relocating and protecting electricity, gas, water and telecommunications infrastructure affected by the Project.
- **Site preparation** – removal of harvestable timber, clearing and grubbing, topsoil stripping and storage.
- **Earthworks** – undertaking cut and fills works along the alignment to achieve desired levels, removal of unsuitable material, batter and embankment shaping.
- **Structures** – building bridges, drainage and fauna underpass facilities.
- **Pavements** – forming sub and base layers and construction final pavement finishes.
- **Road furniture** – installing signage, line marking, safety barriers and fauna overpass structures.
- **Landscaping and restoration** – reuse of topsoil, planting of native plants and seeding disturbed areas with native and cover crops species (note this will take place throughout construction as elements of the Project are complete where ongoing disturbance is not anticipated).
- **Open to traffic** – decommission construction facilities and commissioning new road and related infrastructure.

### 2.3 Compound and ancillary facilities

A number of temporary compound and ancillary facilities will be required to support construction of the Project. Primary site compounds will be established for each stage of the Project. These sites will accommodate the majority of management, engineering, specialist and administrative personnel. Typically these facilities include:

- Office accommodation.
- Staff amenities.
- Light vehicle parking.
- A plant and equipment maintenance workshop.
- Material and chemical storage.

Due to the geographical scale of the Project, a number of ancillary facilities will also be required. These are generally located closer to active work zones and support site based construction personnel. Typically these facilities will include:

- Crib sheds and minimal office accommodation.
- Concrete and asphalt plant.
- Equipment storage.
- Material storage.

A summary of the assessment criteria for ancillary facilities is provided in Section 3.7.2. The ancillary facilities assessment as part of the Ancillary facilities management plan (Appendix B8) details the location, composition and purpose of compound and ancillary facilities required for the Project. An assessment of the ancillary facility assessment criteria required by CoA B73 is also provided. This assessment shall be approved by the Environmental Representative and included within the Ancillary Facilities Management Plan required under
condition D21 Through the approval of this CEMP by DP&E it is deemed that these ancillary facilities are also approved and comply with the requirements set out in the CoA. Ancillary facilities not identified or assessed in the EIS and S/PIR will need to comply with B73, and be approved under B74 or B75.
3 Planning

3.1 Project environmental obligations
All construction personnel working on the Project have the following general obligations:

- Minimise pollution of land, air and water.
- Use pollution control equipment and keep it in proper working order.
- Preserve the natural and cultural heritage environment.
- Give notice to the Roads and Maritime and relevant authorities of a non-Aboriginal or Aboriginal heritage discovery.
- Minimise the occurrence of offensive noise. Where noise management level has been exceeded, undertake review and investigate what reasonable and feasible actions can be implemented.
- Be a good neighbour to surrounding land users.
- Keep the community informed of Project milestones, upcoming activities and duration of relevant aspects of the works.
- Use equipment with noise control features where available and ensure that it is properly maintained.
- Take all feasible and reasonable steps to ensure compliance with the requirements of this CEMP.

3.2 Legal and other requirements
The key legal, approval and other requirements that apply, or may relate to the Project arise from the following sources:

- Legislative requirements – Appendix A1 describe the primary pieces of environmental legislation applicable to the Project and any associated licensing requirements.
- Minister for Planning’s Conditions of Approval (CoA) for the Woolgoolga to Ballina Project. The requirements of these conditions and where they are met in this CEMP are shown in Appendix A1.
- The revised Environmental Impact Statement (EIS) mitigation measures for the project as presented in the Submissions / Preferred Infrastructure Report (November 2013).
- Roads and Maritime requirements - in the delivery of the Project, Roads and Maritime requires that the CMC complies with the Roads and Maritime Project Deed including specifications for the development of Environmental Management Plans, as well as AS/NZS ISO 14001:2004. Sections 3.5, 3.6, the cross-reference matrix (Appendix A1) and the Compliance Tracking Program detail where the CMC has, or will, address the specific Roads and Maritime Environmental and QA requirements.

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 e.g. during management reviews, and updated with any applicable changes in accordance with Managing Statutory Changes IMS-QA-PRO-0077. Any changes made to the legal requirements register will be communicated to the wider team where necessary through toolbox talks, specific training and other methods detailed in Chapter 5.

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

The EIS recognised that the following approvals and licences identified in the planning approval process would be obtained or are required for the Project:

- Project Approval under the EP&A Act.
- Project Approval under the EPBC Act
- Environment protection licence (EPL) under the Protection of the Environment Operations Act 1997 (PoEO Act) for any scheduled activities that are triggered such as for road construction and/or for the operation of ancillary facilities.
- Approvals under the Water Act 1912 for access to ground or surface water during construction.

In accordance with CoA A6, 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 Roads and Maritime or CMC to obtain, renew or comply with such necessary licences, permits or approvals except as provided under Section 115ZG of the EP&A Act.

The Project Approval is contained in the Compliance Tracking Program, which provides a reference to where each requirement is addressed by this CEMP or other Project documentation. A checklist of compliance with Roads and Maritime specification G36 is included as Appendix A1.

### 3.4 Environmental aspects and impacts

A risk management approach will be 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 taking into consideration the concerns of community and other key stakeholders.

The objectives of 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.
- Qualitatively evaluate the risk of adverse impacts occurring beyond those that were identified in the EIS/SPIR.

Risk assessments for the Project are based on AS/NZS 4360:1999, the Australian standard for risk management that describes the use of risk assessments in managing risk.

Appendix A2 includes a list of activities associated with the Project, related aspects and corresponding risks. Measures to minimise the identified environmental risks are also provided.

In accordance with the Risk Management Procedure (CIV-HSE-PRO-0003) all high risk environmental aspects will be incorporated into the Project Risk Register, which will act as the key project risk management document.
3.5 Environmental policy

The environmental policy describes CMC’s commitment to continual improvement in environmental performance and compliance with applicable legal requirements (refer Appendix A3).

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

3.6 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 the Project environmental policy and will assist in monitoring whether the commitments of the policy are being met.

The targets are incorporated into relevant environmental management plans.

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.

Environmental objectives and targets for the Project are provided in Table 3-1.

Table 3-1 Environmental Objectives and Targets

<table>
<thead>
<tr>
<th>Objective</th>
<th>Target</th>
<th>Measurement tool</th>
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<tr>
<td>Construction the Project in accordance with environmental approvals.</td>
<td>• Full compliance with statutory approvals and approved management plans.</td>
<td>Audits, construction compliance reporting, management view.</td>
</tr>
<tr>
<td>Compliance with all legal requirements.</td>
<td>• No regulatory infringements (PINs or prosecutions).</td>
<td>Audits, construction compliance reporting, management view.</td>
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<tr>
<td></td>
<td>• No formal regulatory warning.</td>
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<tr>
<td>Implement a rigorous and comprehensive EMS that meets the requirements of AS/NZS ISO 14001 and project approvals from state and federal governments.</td>
<td>• Address non-conformances and corrective actions within specific timeframes as committed in the relevant approve management plans.</td>
<td>Audits, management reviews.</td>
</tr>
<tr>
<td>Engage with the effected and broader community, minimise complaints and respond to any complaints within a suitable timeframe.</td>
<td>• Disseminate regular Project updates and other information through the Project website and other tools identified in the Communications and Stakeholder Engagement Strategy.</td>
<td>Review complaints register, construction compliance report, audits.</td>
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<td>• Record and response to complaints within the timeframe specified in the Communications and Stakeholder Engagement Strategy.</td>
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### 3.7 Project refinements

#### 3.7.1 General changes

Refinements to the Project may result from detailed design refinement or changed circumstances throughout construction. Roads and Maritime 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 Roads and Maritime Environmental Manager, Pacific Highway 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 impacts and/or new statutory approval requirements into the appropriate environmental management documentation.

Any design changes or changes in scope of works should be communicated to the Environmental Manager. The Environmental Manager or Environmental Officer will then undertake an additional environmental assessment and consistency review in consultation with the Roads and Maritime Environmental Manager, Pacific Highway to determine if a Project modification may be required.

Should the consistency review determine that a Project modification maybe required ie the impacts are of a nature and scale that it is not considered consistent with the Project approval, the Environmental Representative will be informed and a modification application under Section 115ZI of the EP&A Act 1979 prepared and submitted to the Secretary of the Department of Planning and Environment for determination.

The Roads and Maritime General Manager, Pacific Highway will approve all refinements that are deemed consistent with the Project approval.

#### 3.7.2 Ancillary facilities assessment criteria

Ancillary facilities are defined as a “temporary facility for construction, including for example an office and amenities compound, construction compound, batch plant (concrete or bitumen), materials storage compound, maintenance workshop, testing laboratory or material stockpile area”.

The location of the main site compound and ancillary facilities are nominated, assessed and detailed in as part of Appendix B8 Ancillary facilities management plan. Circumstance may arise during construction where additional, or changes to the location of, ancillary facilities are required.
Where this situation arises, an assessment against the criteria detailed in CoA B73 will be undertaken. This criteria requires that ancillary facilities:

(a) be located more than 50 metres from a waterway (100 metres for a State Environmental Planning Policy No. 14 wetland or known Oxleyan Pygmy Perch habitat waterway);
(b) not impact on connectivity structures or vegetation leading to a connectivity structure;
(c) be located within or adjacent to the SSI boundary;
(d) have ready access to the road network;
(e) be located in areas of low ecological significance and require no clearing of native vegetation;
(f) be located more than 50 metres from threatened species and endangered ecological communities and their habitats;
(g) be located on relatively level land;
(h) be separated from the nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant) and comply with construction noise management levels at sensitive receivers;
(i) be above the 20 year ARI flood level unless a contingency plan to manage flooding is prepared and implemented;
(j) have minor impacts on flood storage and not result in obstruction of floodplain flow or blockage of culverts and drains;
(k) not unreasonably affect the land use of adjacent properties;
(l) operate in accordance with the construction hours set out in conditions B15 and B16;
(m) provide sufficient area for the storage of material to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours; and
(n) be located in areas of low heritage conservation significance (including areas identified as being of Aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the SSI.

The Applicant shall undertake an assessment of the facility against the above criteria in consultation with the relevant public authority(s) and the relevant council. The assessment shall be approved by the Environmental Representative and included in the Ancillary Facilities Management Plan required under CoA D21 (refer Appendix B8).

Note that any proposed additional ancillary facilities and changes to ancillary facilities will be required to meet all relevant CoA where applicable as described in Appendix A1.
4 Implementation and operation

This CEMP is the overarching management plan for a suite of environmental management documents. It provides a structured and systematic approach environmental management.

The primary purpose of the system of documentation is to:

- Ensure compliance with all applicable environmental laws, obligations and approvals.
- To minimise environmental impacts.

The structure of the environmental management system for the Project is shown in Figure 4-1.

**Figure 4-1 Environmental management system structure**
4.1 Environmental management system documentation

4.1.1 Construction environmental management plan

This CEMP provides the system to manage and control the environmental aspects of the Project during pre-construction and construction. It identifies all requirements applicable to activities described in Chapter 2. It also provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled. The strategies defined in this CEMP have been developed with consideration of the Project approval requirement, safeguards and mitigation measures presented in the environmental assessment and approval documents. This CEMP establishes the system for implementation, monitoring and continuous improvement to minimise impacts from the Project on the environment.

This CEMP is consistent with:


The CEMP and associated plans required under CoA D25 and D26 will be provided to the Secretary of the Department of Planning and Environment for approval.

4.1.2 Other environmental management plans and strategies

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

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

A list of construction plans and strategies for the Project, and their approval requirements, are provided in Table 4-1 Environmental Management Plans and Strategies.

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

Consultation with DoE is required for the Construction Flora and Fauna Management Plan, the Construction Soil and Water Quality Plan and the Ancillary Facilities Management Plan. The Minister may choose to call in these plans for approval under the EPBC Act if required.

As no contaminated land has been identified within the project boundaries a Contaminated Land Management Plans have not been included. However an Unexpected Contaminated Land Find procedure has been included should contaminants be discovered. CMC do not intend to open a new or use an existing borrow pit therefore no Borrow Pit Management Plan has been included.
Table 4-1 Environmental Management Plans and Strategies

<table>
<thead>
<tr>
<th>Document name</th>
<th>Document number</th>
<th>Approval pathway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction traffic and access management plan (Appendix B1)</td>
<td>CN1001-CIV-EN-TMP-0002</td>
<td>DP&amp;E approval</td>
</tr>
<tr>
<td>Construction flora and fauna management plan, including threatened species</td>
<td>CN1001-CIV-EN-TMP-0003</td>
<td>DP&amp;E approval</td>
</tr>
<tr>
<td>management plans and weed management plan (Appendix B2)</td>
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<td></td>
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<tr>
<td>Construction noise and vibration management plan including a blast management</td>
<td>CN1001-CIV-EN-TMP-0004</td>
<td>DP&amp;E approval</td>
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<td>plan (Appendix B3)</td>
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<td>Construction soil and water quality management plan (Appendix B4)</td>
<td>CN1001-CIV-EN-TMP-0005</td>
<td>DP&amp;E approval</td>
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<td>Construction heritage management plan (Appendix B5)</td>
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<td>DP&amp;E approval</td>
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<tr>
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<td>approval</td>
</tr>
<tr>
<td>Construction waste and energy management plan including surplus material</td>
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<td>Roads and Maritime</td>
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<tr>
<td>management plan (Appendix B7)</td>
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<td>approval</td>
</tr>
<tr>
<td>Ancillary facilities management plan (Appendix B8)</td>
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<td>Environmental Representative</td>
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<td>Borrow sites management plan (Appendix B9)</td>
<td>To be developed if required.</td>
<td>DP&amp;E approval</td>
</tr>
<tr>
<td>Construction contaminated land management plan (Appendix B10)</td>
<td>To be developed if required.</td>
<td>Roads and Maritime</td>
</tr>
<tr>
<td>Construction acid sulphate materials management plan (Appendix B11)</td>
<td>CN1001-CIV-EN-TMP-0010</td>
<td>Roads and Maritime</td>
</tr>
</tbody>
</table>

4.1.3 Environmental work method statements

Environmental Work Method Statements (EWMS) are prepared to manage and control all activities that have the potential to negatively impact on the environment. EWMS will be prepared prior to the commencement relevant construction activities on site and will incorporate relevant mitigation measures and controls from management 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 progressively in the lead up to and throughout construction in consultation with relevant members from the Project team, and approved by the Environment Manager.
EWMS for activities identified as having high environmental risk will undergo a period of consultation with stakeholders and authorities prior to approval. A list of upcoming/future EWMS will be provided to ERG participants during regular meetings. The ERG will determine which EWMS are high risk and require consultation and those that do not.

EWMS for activities likely to be considered high risk due to their proximity to environmentally sensitive areas include:

- Working platforms in or adjacent to waterways.
- Temporary waterway crossings.
- Site compound establishment.
- Stockpile management
- Public road accesses and managing mud tracking.
- Batch plant establishment and operation.
- Managing runoff from curing processes.
- Clearing and grubbing.
- Sediment basin, construction and management.
- Dewatering activities.
- Soft soil treatment.
- Piling.
- Blasting.
- Tannin Leachate
- Topsoil Stripping
- Bridge Demolition

All construction personnel and sub-contractors undertaking a task governed by an EWMS must participate in training on the EWMS, and acknowledge that they have read and understood their obligations prior to commencing work.

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

A register of EWMS will be maintained in Appendix A4.

4.1.4 Erosion and sediment control plans

Erosion and Sediment Control Plans (ESCPs) are planning documents that clearly show the site layout and the approximate location of erosion and sediment control structures onsite. They cover all construction stages from initial vegetation clearing through to rehabilitation when erosion and sediment control are no longer required and are removed. ESCP will be developed and implemented across the Project where there is a risk of erosion and sediment loss.

ESCPs will be developed in accordance with the Construction Soil and Water Quality Management plan (Appendix B4) once approved.

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

ESCP will be developed by environment staff in consultation with the superintendent, site engineers, supervisor and other relevant site personnel, as required. They will be modified to reflect site condition at the time of construction. The Environmental Manager will approve
ESCP in the first instance. Minor changes thereafter will be approved by environment staff in consultation with the Environmental Manager, as required.

ESCPs will be developed for all work areas prior to commencing activities.

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

- Noise sensitive receivers e.g. residential dwellings, educational institutions.
- Flora features, including threatened species and endangered ecological communities.
- Aboriginal and non-Aboriginal heritage sites including assessment boundaries, items, places, objects and sites.
- Local waterways.
- Recorded threatened fauna sightings.
- State / Flora Reserves
- Areas of vegetation to be retained
- Contaminated sites
- Monitoring locations for groundwater, surface water and dust
- Clearing limit boundary

The sensitive area plans are presented in Appendix A5. 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.

4.1.6 System procedures, forms and other documents
The Project environmental management system procedures, forms and other documents provide instructions and records related to both environmental and non-environmental activities throughout the Project.

Project specific procedures will be developed in accordance with the requirements for the Project. Where applicable, existing contractor procedures and work instructions will be applied or amended for use on the Project.

A register of relevant environmental procedures and forms are maintained in Appendix A4.

4.2 Resources, roles, 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 4-2.
4.2.1 Environmental Representative

The environmental responsibilities of the Environmental Representative are detailed in CoA D23 and include:

a) Be the principal point of advice in relation to the environmental performance of the Project.

b) Monitor the implementation of environmental management plans and monitoring programs required under the Project Approval and advise the Proponent upon the achievement of these plans / programs.

c) Consider and advise the Proponent on matters specified in the CoA, and other licences and approvals related to the environmental performance and impacts of the Project.
d) Ensure that environmental auditing is undertaken in accordance with the Environmental Management System.

e) Approve / reject minor amendments to the CEMP.

f) Approve / reject ancillary facilities in accordance with CoA B73 and B74.

g) Require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.

h) Be consulted in responding to the community concerning the environmental performance of the Project where the resolution of points of conflict between the Proponent and the community is required.

Also in accordance with CoA D24:
The Environmental Representative shall prepare and submit to the Secretary a monthly report on the Environmental Representative’s actions and decision on matters specified in condition D23 for the preceding month. The reports shall be submitted for the duration of construction of the SSI, unless otherwise agreed by the Secretary.

4.2.2 Roads and Maritime Environmental Manager

The environmental responsibilities of the Roads and Maritime Environmental Manager include (but are not limited to):

- 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 General Manager, Pacific Highway.
- Monitor the environmental performance of the Project in relation to Roads and Maritime requirements.

4.2.3 Roads and Maritime Representative

The environmental responsibilities of the Roads and Maritime Representative include (but are not limited to):

- Evaluate and advise on compliance with Roads and Maritime 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 the Department of Planning and Environment.

4.2.4 Project Manager

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

- Ensure all works comply with relevant regulatory and Project requirements.
- Ensure the requirements of the 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 Roads and Maritime, 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 the 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.

4.2.5 Construction Manager

The environmental responsibilities of the Construction Manager include (but are not limited to):
- Plan construction works in a manner that avoids or minimises impact to environment.
- Ensure the requirements of the CEMP are fully implemented.
- Ensure construction personnel manage construction works in accordance with statutory and approval requirements.
- Ensure environmental management procedures and protection measures are implemented.
- Ensure all Project personnel attend an induction prior to commencing works.
- Liaise with Roads and Maritime, the Environmental Representative and other government authorities as required.
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

4.2.6 Superintendent

The environmental responsibilities of the superintendent include (but are not limited to):
- Communicate with all personnel and sub-contractors regarding compliance with the CEMP and site-specific environmental issues.
- Ensure all site workers attend an environmental induction prior to the commencement of works.
- Coordinate the implementation of the CEMP.
- Coordinate the implementation and maintenance of pollution control measures.
- Identify resources required for implementation of the CEMP.
- 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.

4.2.7 Environmental Manager

The environmental responsibilities of the Environmental Manager include (but are not limited to):
- Overall responsibility for the implementation of environmental matters on the Project.
- Development, implementation, monitoring and updating of the CEMP and associated environmental 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 undertaken 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.
• Approve / reject Out of Hours Works activities. These works shall be conducted in accordance with the Out of Hours Works Protocol (OOHW Protocol)

• 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 Roads and Maritime and regulatory authorities.
• Preparing reports on a monthly basis outlining the Project Works undertaken and the achievements that have been met, as well as identifying those areas where improvements were made.
• 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 ESCP.
• Develop and facilitate induction, toolbox talks and other training programs regarding environmental requirements for all site personnel.
• Notify Roads and Maritime 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 Manager, Construction Manager and Superintendent.
• Assist the Communications Manager to resolve environment-related complaints.

4.2.8 Environmental Officer

The environmental responsibilities of the Environmental Officer include (but are not limited to):

• Assist in preparing the CEMP (including any future revisions) in accordance with all relevant requirements.
• Develop ESCP in consultation with the superintendent, site engineers, supervisor and other relevant site personnel, as required.
• Undertake 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.
• Assist in identifying environmental risks.
• Advise the Environmental Manager and Construction Manager of the need to stop work immediately prior to non-conformance/non-compliance occurring. 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 impacts.
• Provide reports to the Environmental Manager on any major issues resulting from the Project.
• Assist all site staff with issues concerning Project environmental matters.
• Assist in developing training programs regarding 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 Manager, Construction Manager, Superintendent and Environmental Manager.

4.2.9 Communications Manager
The environmental responsibilities of the Communications Manager include (but are not limited to):
• Ensure that all community consultation activities are carried out in accordance with approved plans and strategies.
• Report any environmental issues to the Environmental Manager raised by stakeholders or members of the community.
• Communicate general Project progress, performance and issues to stakeholders including the community.
• Maintain the 24 hour complaints hotline.

4.2.10 Project/Site Engineers
The environmental responsibilities of the Project / Site engineers include (but are not limited to):
• 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.

4.2.11 Supervisor
The environmental responsibilities of the supervisor include (but are not limited to):
• Undertake any environmental duties as defined by the superintendent or Project/site engineer.
• Control field works and implement/maintain effective environmental controls.
• Where required, undertake environmental risk assessment of works prior to commencement.
• Ensure site activities comply with EWMS and relevant records are kept.
• Ensure all site workers are site inducted prior to commencement of works.
• Attend to any spills or environmental incidents that may occur on-site.
• Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent.
• Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Manager, Construction Manager, Superintendent or Environmental Manager.

4.2.12 Soil Conservationist
A consultant project soil conservationist has been appointed for the duration of the project. The project soil conservationist will:
• Conduct ESCP reviews and site inspections weekly throughout the construction period as per the G36 Specification (or at an alternate timeframe agreed to by Roads and Maritime).
• Inspections will be documented and any improvements, maintenance or actions required will be closed out in a timely manner.
• Work alongside environmental personnel, construction personnel, drainage designers and engineers to advise on aspects of drainage design, culverts, chutes, drains, lining materials and timing.
• Assist in project training in regards to project erosion and sediment control issues.
• The appointed soil conservation consultancy is Onsite Environmental Services

4.2.13 Wider Project Team (including sub-contractors)
The environmental responsibilities of the wider Project Team (including sub-contractors) include (but are not limited to):
• Comply with the relevant requirements of the CEMP, or other environmental management guidance as instructed by a member of the Project's management.
• Participate in the mandatory Project/site induction program.
• Report any environmental incidents to the supervisor immediately or as soon as practicable if reasonable steps can be adopted to control the incident.
• Undertake remedial action as required to ensure environmental controls are maintained in good working order.
• Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Manager, Construction Manager, Superintendent or Environmental Manager.

4.3 Sub-contractor management
Environmental requirements and responsibilities are to be specified to sub-contractors in the contract documentation. As part of the selection process, consideration will also to 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.

### 4.4 CEMP availability

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 personnel contact details, will be removed from all documents provided or made available to the public.

An electronic copy of the CEMP is provided on the Project website.
5 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 (eg safety) in accordance with the Training Procedure (CIV-HS-PRO-0002) and the HSE Communication and Consultation Procedure (CIV-HSE-PRO-0003).

5.1 Environmental induction

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

Short-term 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 will include, but not limited to, an overview of:

- Relevant details of the CEMP including purpose and objectives.
- Key environmental issues.
- Conditions of environmental licences, permits and approvals.
- Specific environmental management requirements and responsibilities.
- Mitigation measures for the control of environmental issues.
- Incident response and reporting requirements.
- Information relating to the location of environmental constraints.

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 and monitor implementation.

5.2 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 EWMS 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.
- 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.
- Minimise noise at ancillary sites at the start of and end of work shift and meal breaks, during out of hours work (e.g. slamming vehicle doors, loud talking, revving engines, etc.); and
- Hygiene practices to stop the spread of diseases and pathogens from affected to non-affected areas.

Toolbox attendance is mandatory and attendees of toolbox talks are required to sign an attendance form (Toolbox Record CIV-HS-FRM-0007) and the records maintained.

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

A refresher general environmental awareness training session will be conducted as required, but no less than every 6 months, based on environmental risk assessment and turnover of project personnel. An example of the training schedule is included below in Table 5-1 and will be further developed throughout construction. The Environmental Manager will review the training schedule and monitor implementation.

**Table 5-1  Example Environmental Training Schedule**

<table>
<thead>
<tr>
<th>Training</th>
<th>Project Manager</th>
<th>Superintendent</th>
<th>Engineers</th>
<th>Environmental staff</th>
<th>Community staff</th>
<th>Foreman</th>
<th>Leading Hand</th>
<th>Labourers</th>
<th>Sub-contractors</th>
<th>Administration staff</th>
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</table>

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 5.3) or provision in worker crib sheds / break facilities.

The Environmental Representative will review and approve the training program and monitor implementation.
### 5.3 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 will conduct a daily pre-start meeting with the site workforce before the commencement of work each day (or shift) or where changes occur during a shift. Daily pre-start meetings are generally succinct in nature and take approximately 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 using the Pre-start meeting record (CIV-HSE-FRM-0009).
6 Communication

6.1 Internal communication

Environmental communications will be conducted in accordance with the HSE Communication and Consultation Procedure (CIV-HSE-PRO-0006).

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

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 Environmental Representative and relevant Roads and Maritime 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 regarding environmental issues and aspects will be through awareness training as described in Section 5.2.

6.2 External and government authority consultation

The Environmental Manager will be the main point of contact regarding specific environmental issues. The Environmental Manager has the responsibility to report on the ongoing environmental performance of the Project to Roads and Maritime, Environmental Representative and EPA. The Environmental Manager will report regularly to Roads and Maritime on progress and any key environmental matters and to the EPA through monthly EPL reports.

6.3 Stakeholder and community communication

6.3.1 Communications and Stakeholder Engagement Strategy

A Communications and Stakeholder Engagement Strategy has been developed to provide an approach to stakeholder and community communications in accordance with the requirements of CoA C1. The strategy identifies opportunities for providing information and consulting with the community and stakeholders during the construction phase of the Project. The strategy defines:

- The engagement groups.
- The key messages of the Project.
- The range of tools that will be used to interact with community and stakeholders.

Communication tools defined in the strategy include:

- Targeted community open days.
- Advertisements.
- Displays.
- Door-knock.
• Letterbox drops.
• Signage.
• Website.
• Focus meetings.
• 1800 number and email address.

The Communications and Stakeholder Engagement Strategy will be submitted to DP&E for approval prior to the commencement of construction and is to be maintained throughout construction as per CoA C1. A Community Action Plan has been developed and approved for section 2 in accordance with the Woolgoolga to Glenugie Communications and Stakeholder Engagement Strategy.

6.3.2 Complaints and enquiries procedure

A Complaints and Enquiries Procedure, consistent with AS 4269: Complaints Handling, will be developed for the Project, in accordance with the requirements of CoA C2 and C3.

All community inquiries and complaints related to the construction activities will be referred to the 24-hour community information line (1800778900). A postal address PO Box 1565 Grafton, 2460 and email address communityHC2G@cmc.net.au has been provided for receipt of complaints and enquiries. The telephone number, the postal address and the email address were published in newspapers circulating in the local area prior to the commencement 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.

Attempts will be made to resolve all complaints in accordance with the Communications and Stakeholder Engagement Strategy. An initial response to complaints will be provided within 24 hours of a complaint being received. A further detailed response, including steps taken to resolve the issue(s) that lead to the complaint, will be provided within 10 days. All complaints should be closed off in the stakeholder database. At all times the stakeholder will be kept informed of when they will receive a response.

The Environmental Manager will apply an adaptive approach to ensure that corrective actions are applied in consultation with the appropriate construction staff to allow modifications and improvements in the management of any environmental issues resulting in community complaints. The Environmental Representative to be consulted where resolution of community complaints is required.
7 Incidents and emergencies

In the event of an environmental incident, Roads and Maritime Environmental Incident Classification and Reporting Procedure will be implemented. The full procedure is provided in Appendix A6.

The procedure provides references to:

- Types of incidents.
- Criteria for classifying of environmental incidents.
- Processes for systematically responding to and managing emergency situations.
- Processes, and legal requirements (e.g. Acts, Regulations, EPL), for reporting and notification of an environmental incident.

The procedure covers the management of events such as, but not limited to:

- Spills of fuels, oils, chemicals and other hazardous materials.
- Unauthorised discharge from sediment basins or other containment devices.
- Unauthorised clearing or clearing beyond the extent of the Project boundary or premises.
- Inadequate installation and subsequent failure of temporary erosion and sediment controls.
- Unauthorised damage or interference to threatened species, endangered ecological communities or critical habitat.
- Unauthorised harm or desecration to Aboriginal objects and Aboriginal places.
- Unauthorised damage or destruction to any State or locally significant relic or Heritage item.
- Unauthorised damage to marine vegetation and mangroves.
- Unauthorised dredging or reclamation works within a watercourse.
- Potential contamination of waterways or land.
- Accidental starting of a fire or a fire breaking out of containment.
- Any potential breach of legislation, including a potential breach of a condition of: an environment protection licence; CoA approval; or any agency permit condition.
- Works undertaken without appropriate approval or assessment under the EP&A Act.
- Works undertaken that are not in accordance with a Project assessment.
- Unauthorised dumping of waste.

In accordance with the requirements of CoA D27, the Compliance Tracking Program will document:

- Mechanisms for reporting and recording incidents and actions taken in response to those incidents.
- Provisions for reporting environmental incidents to the Secretary during construction and operation.
- Procedures for rectifying any non-compliance identified during review of incident management.

Typically, environmental incidents will be notified verbally immediately and in writing within one hour of any incident occurring to the Roads and Maritime Representative and the Environmental Representative. Incident reports will be provided to the Roads and Maritime Representative and the Environmental Representative within 24 hours of the incident occurring, including lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident. All efforts will be undertaken immediately to avoid and reduce impacts 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.

All incidents will be reported internally to the CMC HSE Manager in accordance with the Incident Management Procedure (CIV-HS-PRO-0004) and the Incident Notification and Reporting Guide (CIV-HS-GUI-0002). Incidents will be reported using the Incident Report (CIV-HS-FRM-0011) and minor incidents will be recorded on a Minor Environmental Incident Log (CIV-EN-FRM-0195).

The EPA will be immediately notified of any environmental incidents or pollution incidents by the Environment Manager on or around the site via the EPA Environment Line (telephone 131 555) in accordance with Part 5.7 of the PoEO Act. The circumstances where this will take place include:

- If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial.
- If actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds $10,000.

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

The DPE will be notified of environmental incidents and non-conformances with the conditions of approval.

NSW Heritage Council and Heritage Division of the OEH will be notified of non-aboriginal heritage incidents.

Roads and Maritime Environment Branch and Project team will maintain all records relating to environmental incidents.

Procedures for specific emergencies such as Fauna rescue and Spill Response are outlined in their corresponding sub plans in the Appendices of this document.
8 Inspections, monitoring and auditing

8.1 Environmental inspections

Environmental inspections will be conducted in accordance with the HSE Inspections and Monitoring Procedure (CIV-HSE-PRO-0006).

As well as work under the contract these inspections will work in environmentally sensitive areas and site preparedness for adverse weather conditions, including adequacy of environmental controls and availability of emergency equipment.

8.1.1 Weekly and post rainfall site inspections

The Environmental Manager and/or Environmental Officers will undertake weekly and post rainfall inspections of the work sites to evaluate the effectiveness of environmental controls. Post rainfall inspections occur typically within 24 hours of a rainfall event that exceeds 10 millimetres rainfall or as required by the EPL. The Environmental Officers will record inspection findings on an inspection checklist form.

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

8.1.2 Environmental Representative, Roads and Maritime and ERG inspections

The Environmental Representative, Roads and Maritime staff and members of the ERG will undertake regular inspections of works sites, and in particular critical activities throughout construction of the Project. Inspections by the Environmental Representative and Roads and Maritime 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 monthly or three-monthly 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.

8.1.3 Pre-work inspections

Prior to the commencement of works on each shift, an inspection will be carried out and will include a check of relevant environmental controls and resources required to ensure effective operation and maintenance. Works are not to commence unless inspections are found to be satisfactory.

The Supervisor will undertake the inspections.

8.2 Monitoring

Monitoring will be undertaken to validate the impacts predicted for the Project, to measure the effectiveness of management plans, environmental controls and implementation of this CEMP, and to address approval requirements. The monitoring requirements for required aspects are included in the relevant management plans and summarised in Table 8-1.
<table>
<thead>
<tr>
<th>CoA</th>
<th>Description</th>
<th>Relevant Sub-Plan</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>B24 (c)</td>
<td>Monitoring procedures to be implemented in regards to blast management and mitigation measures</td>
<td>Construction noise and vibration management plan (Appendix B3)</td>
<td>Refer to plan</td>
</tr>
<tr>
<td>D8 (d)</td>
<td>Ecological monitoring as part of Threatened Species Management Plans</td>
<td>Construction flora and fauna management plan (Appendix B2).</td>
<td>Annual reporting of results to the Secretary and relevant regulatory authorities including the DoE.</td>
</tr>
<tr>
<td>D12 (e)(f)</td>
<td>Water Quality Monitoring Program to monitor impacts on surface and groundwater quality and resources and wetlands.</td>
<td>Construction soil and water quality management plan (Appendix B4).</td>
<td>Reporting of results to DP&amp;E, EPA, DPI and NOW.</td>
</tr>
<tr>
<td>D20 (j)</td>
<td>Monitoring procedures for the built elements and landscaping (including weed control).</td>
<td>Urban Design and Landscape Plan</td>
<td>Refer to Urban Design and Landscape Plan</td>
</tr>
<tr>
<td>D21 (l)</td>
<td>Monitoring of the construction compound and ancillary facilities management.</td>
<td>Ancillary Facilities Management Plan (B…</td>
<td>Refer Section 2.4 and Appendix B8</td>
</tr>
<tr>
<td>D23 (b)</td>
<td>Monitoring the implementation and outcomes of EMPs and monitoring programs by the Environmental Representative.</td>
<td>N/A</td>
<td>Report to Roads and Maritime</td>
</tr>
<tr>
<td>D25 (d)(v)</td>
<td>Monitor and measure dust emissions including dust from stockpile, blasting, traffic on unsealed roads and materials tracking from construction sites onto public roads</td>
<td>Construction Air Quality Management Plan (Appendix B6)</td>
<td>Refer to plan</td>
</tr>
<tr>
<td>D26 (a)(v)</td>
<td>Monitoring of noise and vibration proposed, how results of monitoring recorded and reported, how to rectify any non-compliance</td>
<td>Construction noise and vibration management plan (Appendix B3)</td>
<td>Refer to plan</td>
</tr>
<tr>
<td>D26 (b)(vii)</td>
<td>Monitoring of construction traffic and access management plan.</td>
<td>Construction traffic and access management plan (Appendix B1)</td>
<td>Refer to plan</td>
</tr>
<tr>
<td>D26 (c)(ix)</td>
<td>Monitoring of effectiveness of soil and water quality management measures and the soil and water quality management plan.</td>
<td>Construction soil and water quality management sub plan (Appendix B4).</td>
<td>Refer to plan</td>
</tr>
<tr>
<td>D26 (d)(iii)</td>
<td>Protection / monitoring of Aboriginal cultural heritage sites and historic heritage items and the heritage management plan.</td>
<td>Construction heritage management plan (Appendix B5)</td>
<td>Refer to plan</td>
</tr>
<tr>
<td>CoA</td>
<td>Description</td>
<td>Relevant Sub-Plan</td>
<td>Reporting Requirements</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>D26 (e)</td>
<td>Monitoring of the flora and fauna management plan.</td>
<td>Construction flora and fauna management plan (Appendix B2).</td>
<td>Refer to plan</td>
</tr>
<tr>
<td>D28 (a)</td>
<td>Monitoring of noise and vibration, effectiveness of noise mitigation measures</td>
<td>Construction noise and vibration management plan (Appendix B3)</td>
<td>Operational Noise Compliance Report</td>
</tr>
</tbody>
</table>

The monitoring procedure will address how these activities will be undertaken.

The monitoring procedure will include:

- Purpose and scope.
- Minimum acceptable frequency and standards listed in applicable approvals, licences and regulations.
- Relevant EPA approved methods, Australian Standards or, in the absence of an Australian Standard, industry acceptable procedures.
- Targets and parameters.
- Processes for response to any exceedances of targets/standards.
- Processes for recording and reporting results.

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

All environmental non-conformances will be managed in accordance with the Non-Conformances and Improvements Procedure (IMS-QA-PRO-0006) and clause 3.10 of the environmental specification G36.

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 8.6 will be implemented. Steps in the process will typically include:

- A review and 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 (e.g., 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 in accordance with the Monitoring and Measuring Equipment procedure (IMS-QA-PRO-0010).
8.3 Auditing and reporting

Table 8-2 presents auditing requirements that are applicable to the Project.

8.3.1 Contractor audits

A risk based internal environmental auditing program will be developed and reviewed follow each audit. Internal auditing will be undertaken generally on a six monthly basis throughout the Project in accordance with the Internal Audit Procedure (IMS-QA-PRO-0009). The purpose of auditing is to verify compliance with:

- This CEMP and associated plans.
- Approval requirements (CoAs).
- Any relevant legal and other requirements (e.g. licences, permits, regulations, Roads and Maritime contract documentation).

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.

8.3.2 Independent external audits

External auditing will be undertaken by an independent environment auditor in accordance with ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing.

Table 8-2 Audit requirements

<table>
<thead>
<tr>
<th>No.</th>
<th>Audit Type</th>
<th>Requirement</th>
<th>Timing</th>
<th>Responsibility</th>
<th>Recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internal audit</td>
<td>Verify compliance with approval and legal requirements, Roads and Maritime specifications and construction documentation</td>
<td>The first audit within three months of the commencement of construction and then at six monthly intervals thereafter. The final submitted within five working days of contract completion date.</td>
<td>Environmental Manager</td>
<td>Project Manager, Roads and Maritime</td>
</tr>
<tr>
<td>2</td>
<td>External independent audit</td>
<td>Verify compliance with approval and legal requirements, Roads and Maritime specifications, construction documentation and any other commitments.</td>
<td>Six monthly</td>
<td>Environmental Manager</td>
<td>Project Manager, Roads and Maritime</td>
</tr>
</tbody>
</table>
8.4 Compliance tracking program

A Compliance Tracking Program has been developed for the Project. The requirements of the Compliance Tracking Program, as prescribed in CoA D27 are:

CoA D27: The Applicant shall develop and implement a **Compliance Tracking Program** to track compliance with the requirements of this approval. The Program shall be submitted to the Secretary of the Department of Planning and Environment for approval prior to the commencement of construction and operate for a minimum of one year following commencement of operation, or as otherwise agreed by the Secretary of the Department of Planning and Environment. The Program shall include, but not necessarily be limited to:

a) Provisions for the notification of the Secretary prior to the commencement of construction and prior to the commencement of operation of the Project (including prior to each stage, where works are being staged).

b) Provisions for periodic review of the compliance status of the Project against the requirements of the Project approval.
c) Provisions for periodic reporting of compliance status to the Secretary, including a Pre-
Construction Compliance Report, during construction reporting and a Pre-Operation
Compliance Report.

d) A program for independent environmental auditing in accordance with ISO 19011:2003 -
Guidelines for Quality and/ or Environmental Management Systems Auditing.

e) Mechanisms for recording environmental incidents during construction and actions taken
in response to those incidents.

f) Provisions for reporting environmental incidents to the Secretary and relevant public
authorities during construction.

g) procedures for rectifying any non-compliance identified during environmental auditing,
review of compliance or incident management; and

h) provisions for ensuring all employees, contractors and sub-contractors are aware of, and
comply with, the conditions of this approval relevant to their respective activities.

The Compliance Tracking Program describes how the requirements of CoA D27 will be met
and sets out a program and frequency for compliance reporting and independent auditing.
The compliance reporting required under the Compliance Tracking Program will record how
the CoA has been addressed. A summary of the required compliance reporting, as required
by CoA D27, is provided in Table 8-3.

Note: The contractor is required to track and report on the compliance status of all
construction related CoA.

Table 8-3  Compliance reporting

<table>
<thead>
<tr>
<th>No.</th>
<th>Report Requirement</th>
<th>Timing</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Compliance tracking program CoA D27</td>
<td>Describes how the requirements of CoA D27 will be met and sets out a program and frequency for compliance reporting and independent auditing.</td>
<td>Prior to construction</td>
</tr>
<tr>
<td>2</td>
<td>Pre-Construction Compliance Report CoA D27</td>
<td>Review of compliance status of the Project against the requirements of the Project approval prior to construction</td>
<td>At least 4 weeks prior to construction commencing</td>
</tr>
<tr>
<td>3</td>
<td>Construction reporting CoA D27</td>
<td>Periodic review of compliance status of the Project against the requirements of the Project approval during construction</td>
<td>Six months following the commencement of construction and then at six month intervals thereafter</td>
</tr>
</tbody>
</table>
8.5 Other reporting

Prior to, during and following construction, various reports will be prepared to fulfil internal Roads and Maritime and contractor reporting needs, and requirements under the Project approval.

Table 8-4 sets out the reporting requirement 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 8-4 will be amended to reflect these changes.

### Table 8-4 Reporting requirements

<table>
<thead>
<tr>
<th>No.</th>
<th>Report</th>
<th>Requirement</th>
<th>Timing</th>
<th>Responsibility</th>
<th>Recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monthly environmental report</td>
<td>For incorporation in Project Monthly Reports including environmental statistics (ie incidents, regulatory action, complaints on environmental issues), regulatory and authority considerations, monitoring program performance and key environmental issues.</td>
<td>Monthly</td>
<td>Environmental Manager</td>
<td>Roads and Maritime</td>
</tr>
<tr>
<td>No.</td>
<td>Report</td>
<td>Requirement</td>
<td>Timing</td>
<td>Responsibility</td>
<td>Recipient</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>2</td>
<td>EPL monthly report</td>
<td>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, or reporting on other licence requirements.</td>
<td>Within 10 working days of the end of each calendar month.</td>
<td>Environmental manager</td>
<td>EPA</td>
</tr>
<tr>
<td>3</td>
<td>EPL annual returns</td>
<td>Report on compliance with EPL.</td>
<td>Within 60 days of the anniversary of the EPL.</td>
<td>Environmental Manager</td>
<td>EPA</td>
</tr>
<tr>
<td>4</td>
<td>ER inspection report</td>
<td>Report of site environmental performance following routine inspections.</td>
<td>Monthly</td>
<td>Environmental Representative</td>
<td>Roads and Maritime /DP&amp;E</td>
</tr>
<tr>
<td>5</td>
<td>Environmental risk assessment</td>
<td>Conducted for each construction stage, Project changes and significant issues.</td>
<td>Prior to construction during development of CEMP and as required thereafter.</td>
<td>Environmental Manager, Construction Manager</td>
<td>Roads and Maritime</td>
</tr>
<tr>
<td>6</td>
<td>Monitoring results</td>
<td>Report on monitoring data recorded and potential exceedances against criteria.</td>
<td>Monthly</td>
<td>Environmental Manager, Environmental Officer (s)</td>
<td>Roads and Maritime</td>
</tr>
<tr>
<td>7</td>
<td>RMS and/or EPA environmental inspection reports</td>
<td>Response to matter raised in Roads and Maritime and/or EPA site inspections.</td>
<td>As required. (Typically every two weeks for Roads and Maritime inspection reports and monthly for EPA inspection reports).</td>
<td>Environmental Manager, Environmental Officer (s)</td>
<td>Roads and Maritime /EPA</td>
</tr>
<tr>
<td>No.</td>
<td>Report</td>
<td>Requirement</td>
<td>Timing</td>
<td>Responsibility</td>
<td>Recipient</td>
</tr>
<tr>
<td>-----</td>
<td>--------</td>
<td>-------------</td>
<td>--------</td>
<td>---------------</td>
<td>-----------</td>
</tr>
<tr>
<td>8</td>
<td>Internal audit report</td>
<td>Verify compliance with approval and legal requirements, Roads and Maritime specifications and construction documentation</td>
<td>The first audit within three months of the commencement of construction and then at six monthly intervals thereafter. The final submitted within five working days of contract completion date.</td>
<td>Environmental Manager</td>
<td>Project Manager, Roads and Maritime</td>
</tr>
<tr>
<td>9</td>
<td>External independent audit report</td>
<td>Verify compliance with approval and legal requirements, Roads and Maritime specifications, construction documentation and any other commitments.</td>
<td>Six monthly</td>
<td>Environmental Manager</td>
<td>Project Manager, Roads and Maritime</td>
</tr>
<tr>
<td>10</td>
<td>Site Audit Report</td>
<td>Report on outcomes of Phase 2 contamination investigations. Where remediation is required, site audit statement(s) shall be prepared verifying that the site has been remediated to a standard that is consistent with the intended land use.</td>
<td>Prior to commencement of site preparation and excavation activities in areas identified as having moderate to high risk of contamination.</td>
<td>Environmental Manager, Environmental Officer (s)</td>
<td>Roads and Maritime</td>
</tr>
<tr>
<td>11</td>
<td>Independent Environmental Audit</td>
<td>Report on environmental performance and compliance, and adequacy of the environmental management system.</td>
<td>Within twelve months of the commencement of operation.</td>
<td>Environmental Manager, Environmental Officer (s)</td>
<td>Roads and Maritime</td>
</tr>
</tbody>
</table>
8.6 Non-conformity, corrective and preventative actions

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

Corrective actions will be implemented in response to an event and are intended to ensure that prompt and immediate action is taken to correct the event in accordance with the Non-Conformance and Improvements procedure (IMS-QA-PRO-0006). The Project Manager will ensure that corrective actions identified on daily and weekly inspections and audits and incident reports are transferred to the HSE Corrective Action Log (CIV-HS-FRM-0096) and timeframes and responsibilities assigned. Outstanding actions will be reviewed at weekly project meetings.

The Environmental Representative, Roads and Maritime Representative or public authority may also raise a non-conformance or improvement opportunity using the same process.

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

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

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

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

Procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management are also documented in the Compliance Tracking Program.
9 Review and improvement

Management reviews are undertaken 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 also meet as least 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 impacts 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 issues raised by ERG.
- 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 feeding into other Project documents.
10 Documentation

10.1 Environmental records
The Environmental Manager is responsible for maintaining all environmental management documents as current at the point of use. All project records will be managed and maintained for the life of the project in accordance with the Record Management Procedure (CIV-QA-GUI-0008) and will include, but not be limited to, the following:

- 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.

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.

10.2 Document control
All documents will be maintained and managed in accordance with the Document Control Procedure (CIV-QA-PRO-0007).

CMC or Roads and Maritime where relevant, will coordinate the preparation, review and distribution, as appropriate, of the environmental documents listed above. During the Project, the environmental documents will be stored at the main site compound.

CMC will implement a document control procedure to control the flow of documents within and between Roads and Maritime, stakeholders and subcontractors.

The procedure will also ensure that documentation is:

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

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

Appendix A1 Legal and other requirements
Appendix A2 Environmental aspects and impacts
Appendix A3 Environmental policies
Appendix A4 Document register
Appendix A5 Sensitive area plans
Appendix A6 Environmental incident classification and reporting
Appendix A7 Other relevant management measures
Appendix A8 Compliance Tracking Program Woolgoolga to Ballina Stage 1
Appendix B1 Construction traffic and access management plan
Appendix B2 Construction flora and fauna management plan
Appendix B3 Construction noise and vibration management plan
Appendix B4 Construction soil and water quality management plan
Appendix B5 Construction heritage management plan
Appendix B6 Construction air quality management plan
Appendix B7 Construction waste and energy management plan
Appendix B8 Ancillary facilities management plan
Appendix B9 Borrow Sites Management Plan (Developed if required)
Appendix B10 Construction Contaminated Land Management Plan (Developed if required)
Appendix B11 Construction Acid Sulfate Materials Management Plan
Appendix A1

Register of legal and other requirements
### Table 1 Legal register

<table>
<thead>
<tr>
<th>Act</th>
<th>Activity / aspect</th>
<th>Requirement</th>
<th>Reference</th>
<th>Part 5.1 applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Environmental Planning and Assessment Act 1979</em></td>
<td>All</td>
<td>Comply with the terms 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.</td>
<td>S115ZI</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Water Management Act 2000</em></td>
<td>Water access and use</td>
<td>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.</td>
<td>S56</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do not use water on land (unless supplied by a water utility, irrigation corporation or in accordance with basic landholder rights) without a water use approval.</td>
<td>S60A S89 S91A</td>
<td></td>
</tr>
<tr>
<td><em>Water Management Act 2000</em></td>
<td>Water management works</td>
<td>Do not construct/use a water supply work, drainage work or flood work without the appropriate approval.</td>
<td>S90 S91B S91C S91D</td>
<td>No</td>
</tr>
<tr>
<td>Act</td>
<td>Activity / aspect</td>
<td>Requirement</td>
<td>Reference</td>
<td>Part 5.1 applicability</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------</td>
<td>------------------------</td>
</tr>
<tr>
<td><em>Water Management Act 2000</em></td>
<td>Waterfront land.</td>
<td>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.</td>
<td>S91</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public authorities are exempt from the need to obtain a controlled activity approval.</td>
<td></td>
<td></td>
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<td></td>
<td><em>Water Management (General) Regulation 2004</em> (cl.39A)</td>
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<tr>
<td><em>Water Act 1912</em></td>
<td>Surface water</td>
<td>Obtain a licence or permit for construction or use of ‘work’ for purposes including the taking and using of water.</td>
<td>S21B</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Groundwater</td>
<td>Obtain a licence where interference with groundwater is likely to occur.</td>
<td>S112</td>
<td>S112 does not apply to the Crown. RMS is therefore not required to obtain a licence under this provision.</td>
</tr>
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<td></td>
<td></td>
<td><em>Water (Part 8 General) Regulation 1995.</em></td>
<td>S121A</td>
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<td></td>
<td>Floodplains</td>
<td>Obtain an approval for controlled works. These include works which occur on a designated floodplain, which can prevent land from being flooded or which can affect water flow to or from a river or lake.</td>
<td>S180</td>
<td>An exemption in relation to roads potentially applies – see clause 4 of the Water (Part 8-General) Regulation 1995.</td>
</tr>
<tr>
<td>Act</td>
<td>Activity / aspect</td>
<td>Requirement</td>
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<td>Part 5.1 applicability</td>
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</tr>
<tr>
<td><em>Protection of the Environment Operations Act 1997</em></td>
<td>Water pollution</td>
<td>Do not cause water pollution (other than to a sewer), except in accordance with the conditions of any EPA licence (i.e. Environment Protection Licence (EPL)).</td>
<td>S120</td>
<td>Yes</td>
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<td></td>
<td>S122</td>
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<tr>
<td></td>
<td>Noise</td>
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</tr>
<tr>
<td><em>Protection of the Environment Operations Act 1997</em></td>
<td>Plant maintenance and operation</td>
<td>Do not operate plant if it emits noise caused by poor maintenance or operation.</td>
<td>S139</td>
<td>Yes</td>
</tr>
<tr>
<td><em>Protection of the Environment Operations Act 1997</em></td>
<td>Materials management</td>
<td>Do not cause noise by failing to properly and efficiently deal with materials.</td>
<td>S140</td>
<td>Yes</td>
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<td></td>
<td>Contaminated material</td>
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<tr>
<td><em>Protection of the Environment Operations Act 1997</em></td>
<td>Land pollution</td>
<td>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.)</td>
<td>S142A – S142E</td>
<td>Yes</td>
</tr>
<tr>
<td><em>Contaminated Land Management Act 1997</em></td>
<td>Reporting contamination</td>
<td>Notify the EPA if</td>
<td>S60</td>
<td>Yes</td>
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<td>• 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.</td>
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<td>• Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land.</td>
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<td>• Contamination meets other criteria that may be prescribed by the regulations.</td>
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<td>Activity / aspect</td>
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<td>Reference</td>
<td>Part 5.1 applicability</td>
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<tr>
<td>Noxious Weeds Act 1993</td>
<td>Weed control</td>
<td>As a public authority occupier of land, control noxious weeds on the land as required under the control category or categories specified in relation to the weeds concerned. Notify relevant control authority within 3 days of becoming aware that a notifiable weed (W1 weed) is on land. (or ought reasonably to have known). Must not scatter or cause to scatter notifiable weed material.</td>
<td>S13 S16 S30</td>
<td>Yes</td>
</tr>
<tr>
<td>National Parks and Wildlife Act 1974</td>
<td>Native fauna</td>
<td>Do not harm any animal that is of a threatened species population or ecological community, or its habitat except in accordance with a planning approval. Do not harm critical habitat except as in accordance with a planning approval. Do not harm native fauna (other than listed unprotected fauna) except in accordance with a planning approval or licence.</td>
<td>Part 8A</td>
<td>Yes</td>
</tr>
<tr>
<td>Native Vegetation Act 2003</td>
<td>Flora and native vegetation conservation</td>
<td>Only clear native vegetation in accordance with a planning approval or property vegetation plan.</td>
<td>S12</td>
<td>Yes</td>
</tr>
<tr>
<td>National Parks and Wildlife Act 1974</td>
<td>Flora and native vegetation conservation</td>
<td>Do not pick protected native plants without a licence.</td>
<td>S117 S131</td>
<td>Yes</td>
</tr>
<tr>
<td>Act</td>
<td>Activity / aspect</td>
<td>Requirement</td>
<td>Reference</td>
<td>Part 5.1 applicability</td>
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<tr>
<td><em>Fisheries Management Act 1994</em></td>
<td>Mangroves, seagrasses and marine vegetation</td>
<td>Do not harm any mangroves, seagrasses or other marine vegetation on public water land protected by the regulations without a permit.</td>
<td>S205</td>
<td>No</td>
</tr>
<tr>
<td><em>Fisheries Management Act 1994</em></td>
<td>Fish passage</td>
<td>Do not block fish passage without a permit.</td>
<td>S219</td>
<td>No</td>
</tr>
<tr>
<td><em>Environment Protection and Biodiversity Conservation Act, 1999 (Commonwealth)</em></td>
<td>Flora and fauna conservation</td>
<td>Do not kill, injure or take a member of a listed threatened species without a permit.</td>
<td>Part 13</td>
<td>Yes</td>
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<tr>
<td>All</td>
<td>Comply with the terms of any EPBC Act approval for the project.</td>
<td></td>
<td></td>
<td>Yes</td>
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<tr>
<td>Waste</td>
<td>Littering</td>
<td>Do not litter in a public place or an open private place. Do not litter from a vehicle. Only deposit advertising material in receptacles provided for mail or newspapers or under the door of the premises. Do not deposit advertising material on or in vehicles.</td>
<td>Part 5.6A</td>
<td>Yes</td>
</tr>
<tr>
<td><em>Protection of the Environment Operations Act 1997</em></td>
<td>Waste and transportation</td>
<td>Do not undertake a scheduled waste activity unless in accordance with an environment protection licence. 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:</td>
<td>Part 3.2 Schedule 1</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- Is Virgin Excavated Natural Material.
- 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
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<tr>
<th>Act</th>
<th>Activity / aspect</th>
<th>Requirement</th>
<th>Reference</th>
<th>Part 5.1 applicability</th>
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<td></td>
<td></td>
<td>Excavated Natural Material, recycled aggregates and raw mulch. These exemptions are conditional and require some chemical testing of materials before they are placed onto land.</td>
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<td></td>
<td>A licence must be obtained if more than 2,500 tonnes (or cubic metres, whichever is lesser) are stored on a stockpile site at any one time, or more than 30,000 tonnes of waste is received per year from off site.</td>
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<td>Only transport waste to a facility that can lawfully accept the waste.</td>
<td>S143</td>
<td>Yes</td>
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<td></td>
<td>Do not dispose of waste in a manner that harms or is likely to harm the environment.</td>
<td>S115</td>
<td>Yes</td>
</tr>
<tr>
<td>Protection of the Environment Operations (Waste) Regulation 2005</td>
<td>Waste and transportation</td>
<td>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.</td>
<td>Regulation cl.49</td>
<td>Yes</td>
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<td></td>
<td>Comply with record keeping requirements in relation to the transport of certain types of waste.</td>
<td>Regulation Part 3</td>
<td>Yes</td>
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<td>Act</td>
<td>Activity / aspect</td>
<td>Requirement</td>
<td>Reference</td>
<td>Part 5.1 applicability</td>
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<tr>
<td><strong>Heritage</strong></td>
<td><strong>Heritage</strong></td>
<td>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.</td>
<td>S56-57</td>
<td>No</td>
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<td>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.</td>
<td>S139</td>
<td>No</td>
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<td></td>
<td>Do not disturb or excavate land on where a relic has been discovered or exposed.</td>
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<td></td>
<td>Notify the heritage Council on discovery of a relic.</td>
<td>S146</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>National Parks and Wildlife Act 1974</strong></td>
<td>Aboriginal places and objects</td>
<td>Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.</td>
<td>S86</td>
<td>No</td>
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<td>S90</td>
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<td></td>
<td>Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.</td>
<td>S89A</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)</strong></td>
<td>Protection of areas and objects</td>
<td>Report any discovery of Aboriginal remains to the Federal Minister for the Environment.</td>
<td>S20</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.</td>
<td>S22</td>
<td>Yes</td>
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<td>Act</td>
<td>Activity / aspect</td>
<td>Requirement</td>
<td>Reference</td>
<td>Part 5.1 applicability</td>
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</table>
| Protection of the Environment Operations Act 1997 | 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).  
- Emitting an ozone depleting substance. | S115, S116, S117 | Yes |
| Protection of the Environment Operations Act 1997 | Control equipment | Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices). | S167 | Yes |
| Protection of the Environment Operations Act 1997 | Notification of pollution incidents | Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened. | S148 | Yes |
| Protection of the Environment Operations Act 1997 | 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 |
<p>| Environmentally Hazardous Chemicals Act, 1985 | Hazards and risks | Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes. | S28 | Yes |
| Dangerous Goods (Road and Rail Transport) Act 2008 | Hazards and risks | Ensure that dangerous goods are transported in a safe manner. | S9 | Yes |</p>
<table>
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<tr>
<th>Act</th>
<th>Activity / aspect</th>
<th>Requirement</th>
<th>Reference</th>
<th>Part 5.1 applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pesticides Act 1999</strong></td>
<td>Hazards and risks</td>
<td>Use pesticides in an environmentally sensitive manner. Do not use an unregistered pesticide without a permit. Read the label or permit for the pesticide. Use registered pesticides in accordance with instructions on the label. Do not use any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act. Compliance with pesticide codes of practice is required.</td>
<td>S12 S13 S14 S15 S17</td>
<td>Yes</td>
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<tr>
<td>Requirement</td>
<td>Relevant section of CEMP or supporting documentation</td>
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<tr>
<td>Implement a Contractors Environmental Management System (CEMS)</td>
<td>This document</td>
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<tr>
<td>An environmental policy must be included in the CEMS</td>
<td>Appendix A3</td>
<td></td>
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</tr>
<tr>
<td>Prepare and implement a CEMP in accordance with ISO 14001 Clause 4.</td>
<td>This document</td>
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<tr>
<td>Nominate the Environmental Manager directly responsible for ensuring that the requirements of the CEMS are implemented and maintained.</td>
<td>Section 4.2</td>
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<tr>
<td>Indicate how suitable resources will be assigned to ensure that the CEMP is fully implemented.</td>
<td>Section 4.2</td>
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<tr>
<td>Detail the relationship between the designated Environmental Manager and other personnel responsible for implementing the CEMP.</td>
<td>Section 4.2</td>
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<tr>
<td>Include a matrix or index in the CEMP showing where the environmental protection requirements of G36 have been addressed.</td>
<td>This table</td>
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<tr>
<td>Advise RMS Representative of any changes to the CEMS or CEMP</td>
<td>Chapter 9</td>
<td></td>
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<tr>
<td>Monitor and evaluate environmental performance.</td>
<td>Chapter 8</td>
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<tr>
<td>Detail how control of non-conformity, corrective and preventive actions will be implemented and closed out.</td>
<td>Section 8.6</td>
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<tr>
<td>Schedule and undertake CEMS audits and CEMP compliance audits.</td>
<td>Section 8.3</td>
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</tr>
<tr>
<td>A CEMP must be prepared and include environmental protection practices, resources and sequence of activities required to comply with relevant environmental legislation, conditions of any applicable licence, approval and permit, ISO 14001 Clause 4.</td>
<td>This document</td>
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<tr>
<td>The CEMP must be either incorporated or part of the project quality plan.</td>
<td>Noted</td>
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<tr>
<td>The CEMP must identify potential adverse environmental effect, applicable regulatory requirements and/or compliance limits, with a particular emphasis on a risk-based</td>
<td>Appendix A2</td>
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<tr>
<td>Requirement</td>
<td>Relevant section of CEMP or supporting documentation</td>
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<tr>
<td>Appropriate environmental protection measures must be documented to keep environmental effects within compliance limits.</td>
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<tr>
<td>The CEMP must include all supplementary plans for environmental protections</td>
<td>Appendix B1 – Appendix B11</td>
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<tr>
<td>The CEMP must indicate the names, responsibilities and authority of your site management personnel who have primary responsibility for implementing the CEMP, monitoring its effectiveness, rectifying and reporting any environmental deficiencies, controlling further construction activities until deficiencies are rectified and keeping your environmental records.</td>
<td>Section 4.2</td>
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<tr>
<td>The CEMP must identify the Environmental Manager as the authorised contact person for communications with the RMS Representative and EPA on environmental matters.</td>
<td>Section 4.2</td>
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<tr>
<td>The CEMP must detail how changes to the environmental management documentation and data are to be identified and communicated to relevant project personnel.</td>
<td>Section 1.6</td>
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<td>The CEMP must include details of:</td>
<td>Contacts, Section 4.2, Chapter 6, Chapter 7</td>
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<td>• Key emergency response personnel showing responsibilities and contact details including all-hours telephone numbers.</td>
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<td>• Emergency services (e.g. ambulance, fire brigade, spill clean-up services).</td>
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<td>• Communications strategy (internal and external).</td>
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<td>• Containment measures to be taken in the event of emergency situations that may arise during the Contractor’s Work and procedures for restoration.</td>
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<tr>
<td>All Environmental Incidents must be managed and reported in accordance with the RTA Environmental Incident Classification and Management Procedure.</td>
<td>Appendix A7</td>
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</tr>
<tr>
<td>EPA will be notified via the EPA Environment Line (telephone 131 555) of any environmental incidents or pollution incidents on or around the Site in accordance with Part 5.7 of the Protection of the Environment Operations Act 1997 (NSW) (POEO Act), in the following circumstances:</td>
<td>Chapter 7 and Appendix A7</td>
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<td>• If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial.</td>
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<td>Requirement</td>
<td>Relevant section of CEMP or supporting documentation</td>
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<td>If actual or potential loss or property damage (including clean-up costs)</td>
<td>Chapter 5</td>
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<td>associated with an environmental incident exceeds $10,000.</td>
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<td>Notify RMS verbally immediately, and in writing within 24 hours, of all</td>
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<td>environmental incidents.</td>
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<tr>
<td>Ensure that all staff and subcontractors working on the Site are provided</td>
<td>Contacts</td>
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<td>with environmental training to achieve a level of competence and awareness</td>
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<td>appropriate to their assigned activities before they commence their assigned</td>
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<td>activities.</td>
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<td>Include in the CEMP the procedures to be implemented to ensure subcontractor</td>
<td>Section 4.3</td>
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<td>compliance.</td>
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<tr>
<td>The CEMP must identify at least two people (and their contact telephone</td>
<td>Contacts</td>
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<td>numbers) who will be available to be contacted by the EPA on a 24 hour</td>
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<td>basis and who have authority to take immediate action to shut down any</td>
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<td>activity, or to effect any pollution control measures, as directed by an</td>
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<td>authorised officer of the EPA.</td>
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<td>Notify local residents about new or changed construction activities which</td>
<td>Section 6.3</td>
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<td>will affect access to their properties or otherwise significantly disrupt</td>
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<td>residents’ use of their premises.</td>
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<td>Inform residents of the proposed work outside normal working hours.</td>
<td>Section 6.3</td>
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<tr>
<td>The CEMP must include a procedure for notifying RMS and all relevant</td>
<td>Section 6.3</td>
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<tr>
<td>authorities in advance of proposed extension to hours of work.</td>
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<tr>
<td>Report on complaint about any environmental issue, including pollution,</td>
<td>Section 6.3</td>
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<tr>
<td>arising from the Works.</td>
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<tr>
<td>Maintain environmental records to demonstrate compliance with the CEMP.</td>
<td>Section 8.3, Section 8.4 and Section 8.5</td>
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<tr>
<td>Document in the CEMP and implement a checking procedure to verify that work</td>
<td>Section 8.3</td>
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<tr>
<td>is in compliance with this Specification.</td>
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<tr>
<td>Undertake inspections and surveillance, and report on performance on high</td>
<td>Chapter 8</td>
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<tr>
<td>risk events and activities, works in environmentally sensitive areas, the</td>
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<td>adequacy of operational</td>
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<tr>
<td>Requirement</td>
<td>Relevant section of CEMP or supporting documentation</td>
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<td>----------------------------------------------------------------------------</td>
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<tr>
<td>Develop and implement a risk-based auditing program.</td>
<td>Section 8.3</td>
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<tr>
<td>Implement and document in the CEMP a waste and recycling material data collection program.</td>
<td>Appendix B7</td>
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<tr>
<td>Detail in the CEMP the location of environmental controls in environmentally sensitive areas.</td>
<td>Appendix A5</td>
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<tr>
<td>Identify obligations under environmental legislation relevant to the Work.</td>
<td>Appendix A1</td>
<td></td>
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<tr>
<td>Obtain all necessary approvals, licences and permits required for the work and carry out work in accordance with the requirements.</td>
<td>Section 3.3</td>
<td></td>
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<tr>
<td>Identify construction activities and access requirements to the construction site and the other areas affected by the Work.</td>
<td>Appendix B1</td>
<td></td>
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<tr>
<td>Prepare and implement a construction traffic and access management plan</td>
<td>Appendix B1</td>
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<tr>
<td>Prepare and implement a construction soil and water quality management plan addressing:</td>
<td>Appendix B4</td>
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<tr>
<td>- Erosion and sedimentation control.</td>
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<td>- Water extraction.</td>
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<td>- Dewatering.</td>
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<td>- Works in waterways</td>
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<tr>
<td>- Impacts on groundwater from construction.</td>
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<tr>
<td>Prepare and implement a construction air quality management plan.</td>
<td>Appendix B6</td>
<td></td>
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<tr>
<td>Prepare and implement a construction noise and vibration management plan.</td>
<td>Appendix B3</td>
<td></td>
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</tr>
<tr>
<td>Manage clearing, mulch, flora and fauna. Prepare and implement a construction flora and fauna management plan.</td>
<td>Appendix B2</td>
<td></td>
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<tr>
<td>Requirement</td>
<td>Relevant section of CEMP or supporting documentation</td>
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<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>Include fauna habitat conservation measures in the CEMP. The CEMP must include provisions for compliance with the EPBC Act and Threatened Species Conservation Act where listed threatened species or migratory species are affected.</td>
<td>Appendix B2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan and execute the Work so as to minimise the possibility of pollution of the Site and adjoining areas from chemicals, dangerous goods and other potential contaminants.</td>
<td>Appendix B4</td>
<td></td>
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</tr>
<tr>
<td>The CEMP must include details of the management of the bunded area including, but not be limited to, monitoring of the bunded areas, drainage requirements and procedures to meet environmental requirements and to ensure that bund capacities are maintained.</td>
<td>Appendix B4</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Plan and execute the Work so as to minimise the possibility of pollution of the Site and adjoining areas from chemicals, dangerous goods and other potential contaminants.</td>
<td>Appendix B4</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Prepare and implement a construction heritage management plan to manage Aboriginal and non-Aboriginal heritage.</td>
<td>Appendix B5</td>
<td></td>
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<tr>
<td>Manage contaminated land.</td>
<td>Appendix B4</td>
<td></td>
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<tr>
<td>Prepare and implement a construction waste and energy management Plan.</td>
<td>Appendix B7</td>
<td></td>
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</tr>
<tr>
<td>The CEMP must contain details of types and quantities of proposed material likely to be generated and proposed methods of disposal, recycling or re-use of such surplus materials.</td>
<td>Appendix B7</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Reinstate all disturbed areas both on and off the Site.</td>
<td>Appendix B4, Design and Landscape Plan</td>
<td></td>
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<tr>
<td>Prepare and implement an ancillary facilities management plan.</td>
<td>Appendix B8</td>
<td></td>
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<tr>
<td>Prepare and implement a borrow sites management plan.</td>
<td>Appendix B9 (If required, no borrowing to occur)</td>
<td></td>
<td></td>
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<tr>
<td>Prepare and implement a construction contaminated land management plan</td>
<td>Appendix B10 (not required Section 2)</td>
<td></td>
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</tr>
<tr>
<td>Prepare and implement a construction acid sulphate materials management plan</td>
<td>Appendix B11 (Not required Section 2)</td>
<td></td>
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</tr>
</tbody>
</table>
Appendix A2

Environmental aspects and impacts register

This Environmental Aspect and Impact Register has been prepared by Arup to supplement the Environmental Risk Analysis conducted as part of the Woolgoolga to Ballina Environmental Impact Statement (EIS). This register has been updated with relevant risks as included in the Project Risk Register for the Halfway Creek to Glenugie project.

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 safeguards.

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 (June 2014), and review of the environmental risks identified by the EIS and the Submissions / Preferred Infrastructure Report.

This Environmental Aspects and Impact Register is to be revisited and revised as part of the construction contract.
<table>
<thead>
<tr>
<th>Issue</th>
<th>Construction activity / aspect</th>
<th>Potential impact</th>
<th>Risk level prior</th>
<th>Indicative Mitigation Measures (to be considered and where applicable further developed in)</th>
<th>Risk level</th>
<th>Management Documents / Training Required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydrology and flooding</strong></td>
<td>Waterway crossings</td>
<td>Alteration to flood behaviour due to road infrastructure structures placed on floodplain</td>
<td>A (high)</td>
<td>Design drainage structures to cope with design flood events.</td>
<td>B (moderate)</td>
<td>CONSTRUCTION SOIL AND WATER QUALITY MANAGEMENT PLAN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increases in flood affinity levels during flood events</td>
<td>A (high) ii</td>
<td>Locate compounds / plant / storage above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented.</td>
<td>B (moderate) ii</td>
<td>EWMS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increases in duration of flooding inundation</td>
<td>A (high) iii</td>
<td>Evacuation and access will be assessed in consultation with landowners.</td>
<td>A (high) i</td>
<td>Establish design for temporary waterway crossings.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increases in flood impacts and damage costs on residential properties and cane land</td>
<td>B (moderate) iv</td>
<td>Design and build temporary crossings to be stabilised and minimise scour / erosion during flood events.</td>
<td>B (moderate) iv</td>
<td>Induction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change to creek bed and bank stability due to increases in runoff volumes and flow rates</td>
<td>B (moderate) v</td>
<td>Install scour protection as early as possible.</td>
<td>C (low) v</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Impacts to flood evacuation and access movements</td>
<td>B (moderate) vi</td>
<td>Look at predicting flood events from gauges or rainfall predictions.</td>
<td>C (low) vi</td>
<td></td>
</tr>
<tr>
<td><strong>Soils, sediments and water</strong></td>
<td>Clearing and grubbing</td>
<td>Potential for groundwater discharge during construction, resulting in localised drawdown of groundwater resources</td>
<td>B (moderate)</td>
<td>Appropriately designed erosion control structures (eg sedimentation basins, ERSED-, silt fences and sand bags) will be installed, maintained and cleaned regularly.</td>
<td>C (low)</td>
<td>CONSTRUCTION SOIL AND WATER QUALITY MANAGEMENT PLAN</td>
</tr>
<tr>
<td></td>
<td>Earthworks</td>
<td>Changes to water chemistry altering aquatic habitats, including threatened species habitats</td>
<td>A (high) iii</td>
<td>Locate spoil stockpiles, plant and equipment away from drainage lines, watercourses or stormwater drains in accordance with established criteria.</td>
<td>B (moderate) iii</td>
<td>EWMS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Major impacts to various sensitive receiving environments through accidental release of water pollutants during construction</td>
<td>B (moderate) iv</td>
<td>Develop and implement a groundwater management strategy</td>
<td>C (low) iv</td>
<td>ERSED training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Impact to water quality due to fuels and leaks and inappropriate storage of material</td>
<td>B (moderate) v</td>
<td>Install clean water diversions to ensure clean and dirty water are not mixed on site.</td>
<td>C (low) v</td>
<td>RMS mulch and tannin protocol</td>
</tr>
<tr>
<td></td>
<td>Sediment basin management</td>
<td>Changes in water chemistry, in particular pH values, affecting aquatic ecosystems</td>
<td>B (moderate) vi</td>
<td>Storage, compound access and parking areas sealed, as early during works as practicable.</td>
<td>C (low) vi</td>
<td>Unexpected discovery of contamination land procedure</td>
</tr>
<tr>
<td></td>
<td>Drainage works</td>
<td>Exposed soils during earthworks or landscaping will erode and cause sedimentation of waterways and aquatic environments</td>
<td>A (high) vii</td>
<td>Chemical storage meets WorkCover and EPA bunding/storage requirements.</td>
<td>B (moderate) vii</td>
<td>Induction</td>
</tr>
<tr>
<td></td>
<td>Water use / extraction</td>
<td>Potential acidic leachate from exposure of acid sulfate soils</td>
<td>C (low) viii</td>
<td>Wheel mud reduction/ cleaning measures at exit of all sites where required.</td>
<td>C (low) viii</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Concrete works</td>
<td>Potential release of tannins from stored mulch piles</td>
<td>A (high) ix</td>
<td>Well designed temporary waterway crossings minimising risk of fines in waterways and designed to address larger flow volumes.</td>
<td>B (moderate) ix</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Batch plant operations</td>
<td>Disturbance of contaminated material causing pollution</td>
<td>C (low) viii</td>
<td>Buffer zones of vegetation will be maintained adjacent to waterways for as long as practical.</td>
<td>C (low) viii</td>
<td></td>
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<tr>
<td></td>
<td>Temporary access road construction / removal from waterway areas.</td>
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<td></td>
<td>Rehabilitation and landscaping works of disturbed areas</td>
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<td></td>
<td>Bridge construction</td>
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<td></td>
<td>Waterway crossings</td>
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Woolgoolga to Ballina construction environmental management plan - Appendix A2
<table>
<thead>
<tr>
<th>Issue</th>
<th>Construction activity / aspect</th>
<th>Potential impact</th>
<th>Risk level prior</th>
<th>Indicative Mitigation Measures</th>
<th>Risk level</th>
<th>Management Documents / Training Required</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Landscape</td>
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<td></td>
<td>Noxious weed treatment</td>
<td></td>
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<tr>
<td>Biodiversity</td>
<td>Clearing of native vegetation</td>
<td>Clearing and fragmentation of native vegetation, including threatened ecological communities and loss of habitat for threatened species</td>
<td>A (high) i</td>
<td>Induct personnel on biodiversity issues and mitigation measures.</td>
<td>B (moderate) i</td>
<td>CONSTRUCTION FLORA AND FAUNA MANAGEMENT PLAN</td>
</tr>
<tr>
<td></td>
<td>Stockpile/haul road construction near vegetation</td>
<td>Loss and fragmentation of terrestrial fauna habitat impacting on threatened species and populations, including direct impacts on threatened flora and potential impacts on threatened fauna as a result of habitat loss and fragmentation</td>
<td>A (high) ii</td>
<td>Ensure vegetation clearing boundaries are clearly marked and visible as per CONSTRUCTION FLORA AND FAUNA MANAGEMENT PLAN</td>
<td>B (moderate) ii</td>
<td>Threatened Species Management Plans</td>
</tr>
<tr>
<td></td>
<td>Works near / in creeks and temporary crossings</td>
<td>Loss and fragmentation of riparian and aquatic habitat</td>
<td>A (high) iii</td>
<td>Prior to construction, identify and fence all flora and fauna habitat areas required to be protected.</td>
<td>B (moderate) iii</td>
<td>Nest Box Plan</td>
</tr>
<tr>
<td></td>
<td>General earthworks near vegetation</td>
<td>Direct mortality of protected and threatened fauna</td>
<td>B (moderate) iv</td>
<td>Minimise clearing of all vegetation and undertake progressive revegetation.</td>
<td>B (moderate) iv</td>
<td>Threatened Flora Management Plan</td>
</tr>
<tr>
<td></td>
<td>Vehicular movements</td>
<td>Creation of barriers to fauna movement</td>
<td>B (moderate) v</td>
<td>Locate and construct fauna crossings in accordance with the Connectivity Strategy.</td>
<td>B (moderate) v</td>
<td>EWMS</td>
</tr>
<tr>
<td></td>
<td>Open excavation works</td>
<td>Edge effects from road noise, light and wind turbulence</td>
<td>B (moderate) vi</td>
<td>Implement ongoing weed monitoring and management programs.</td>
<td>C (low) vi</td>
<td>WMS</td>
</tr>
<tr>
<td></td>
<td>Use of chemicals</td>
<td>Invasion and spread of terrestrial and aquatic weeds and pest fauna species</td>
<td>B (moderate) vii</td>
<td>Disturbed areas will be monitored for effective soil stabilisation and restoration / rehabilitation.</td>
<td>C (low) vii</td>
<td>Vegetation clearing procedure</td>
</tr>
<tr>
<td></td>
<td>Noise impacts</td>
<td>Impacts on aquatic habitat resulting from impacts on hydrology, groundwater and water quality</td>
<td>A (high) viii</td>
<td>Implement a staged clearing process and undertake fauna rescue during clearing as required.</td>
<td>B (moderate) viii</td>
<td>Fauna handling and rescue procedure</td>
</tr>
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<td></td>
<td>Bushfires</td>
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<td></td>
<td>Engage arborist to provide advice on habitat tree health and</td>
<td></td>
<td>Induction</td>
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<tr>
<td>Issue</td>
<td>Construction activity / aspect</td>
<td>Potential impact</td>
<td>Risk level prior to mitigation</td>
<td>Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)</td>
<td>Risk level following mitigation</td>
<td>Management Documents / Training Required</td>
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</tbody>
</table>
| Visual amenity, urban design and landscaping | • General earthworks and construction  
• Stockpiling  
• Open excavation works  
• Clearing of vegetation  
• Construction site compounds  
• Rehabilitation of disturbed land  
• Bridge design  
• Cuttings and cut finishes  
• Evening / night works                                                                 | • Potential spread of disease pathogens  
• Change to landscape character and visual environment as a result of large cuttings, bridges, interchanges and realignment of the highway away from the existing road corridor  
• Temporary visual impacts as a result of construction activities and ancillary facilities  
• Poor management of revegetation by CMC                                                                 | B (moderate) ix  
B (moderate) i  
B (moderate) ii  
B (moderate) iii                                                                 | • Landscape and rehabilitation plan including extensive seeding planting in required areas will be developed and implemented.  
• Landscape treatments will incorporate the surrounding landscape types and vegetation patterns and address viewscapes.  
• Embankments and cuttings will be stabilised by the use of appropriate landscape treatments.  
• The use of night-lighting will be minimised where possible during the construction phase and directed away from residential areas.  
• Site compounds and areas surrounding them will be kept tidy and be regularly cleaned and maintained.  
• Undertake landscaping and revegetation works in accordance with the approved Urban Design and Landscape Plan.  
• Monitoring and weed control.                                                                 | C (low) ix  
C (low) i  
C (low) ii  
C (low) iii                                                                 | Urban Design Landscape Plan  
EWMS  
CONSTRUCTION FLORA AND FAUNA MANAGEMENT PLAN Induction |
| Aboriginal heritage                        | • Early works including non-substantial construction activities e.g. services relocations.  
• Planned salvage of Aboriginal heritage items  
• Clearing of vegetation  
• Initial removal of topsoil  
• Construction of site compounds and stockpile areas  
• Temporary access roads                                                                 | • Disturbance and / or destruction of Aboriginal sites, artefacts and cultural places  
• Impacts on unknown Aboriginal sites or artefacts  
• Change in visual integrity of cultural area  
• Finding / disturbing burials or human remains  
• Impact (machinery vibration, stockpiles, blasting) during the construction period to identified sites                                                                 | B (moderate) i  
A (high) ii  
A (high) iii  
B (moderate) iv  
C (low) v                                                                 | • Prior to construction, identify and assess Aboriginal heritage items on proposed sites and predict potential impacts.  
• Induct personnel on heritage issues and mitigation measures.  
• Protect identified heritage items with protective fencing, exclusion zones or flagging and signage from being disturbed during construction.  
• Undertake salvage works in accordance with the CONSTRUCTION HERITAGE MANAGEMENT PLAN prior to impacting site.  
• If design changes or construction activities impact on areas outside of those identified in the EIS, OEH and relevant Aboriginal groups will be consulted and approval obtained pre any required salvage.  
• Implement unexpected find procedures as required.                                                                 | C (low) i  
B (moderate) ii  
B (moderate) iii  
C (low) iv  
C (low) v                                                                 | CONSTRUCTION HERITAGE MANAGEMENT PLAN  
EWMS  
CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN Induction  
Unexpected archaeological find procedure  
Education and training package Induction |
| Non-Aboriginal historic heritage            | • Early works  
• Clearing of vegetation                                                                 | • Disturbance and/or destruction of items of heritage significance, including items listed on heritage registers                                                                 | B (moderate) i                                                                 | • Prior to construction, identify and assess non- Aboriginal heritage items on proposed sites and predict potential impacts.                                                                 | C (low) i                                                                 | CONSTRUCTION HERITAGE MANAGEMENT PLAN |

Woolgoolga to Ballina construction environmental management plan - Appendix A2
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<th>Risk level following mitigation</th>
<th>Management Documents / Training Required</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>• Initial removal of topsoil</td>
<td>• Change in the visual character of historic heritage items, precincts or places</td>
<td>B (moderate) ii</td>
<td>• Induct personnel on heritage issues and safeguards. • Protect identified heritage items with protective fencing, exclusion zones or flagging from being disturbed during construction. • Undertake archival recording as specified in the CONSTRUCTION HERITAGE MANAGEMENT PLAN. • Regular inspection of heritage protection fencing. • Implement unexpected find procedures as required. • Landholder consultation.</td>
<td>C (low) ii</td>
<td>EWMS CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN Unexpected archaeological find procedure Education and training package Induction</td>
</tr>
<tr>
<td></td>
<td>• Construction of site compounds and stockpile areas</td>
<td>• Vibration damage during the construction period to identified sites</td>
<td>B (moderate) iii</td>
<td></td>
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<tr>
<td></td>
<td>• Temporary access roads</td>
<td>• Impact on undiscovered or undocumented heritage sites.</td>
<td>B (moderate) iv</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Traffic and transport</td>
<td>• Temporary access roads</td>
<td>• Temporary disruptions / delays to local and highway traffic</td>
<td>A (high) i</td>
<td>• Develop and update Traffic Management Plans for all stages of work. • Identify and assess roads likely to be affected by Project construction and develop methods to minimise traffic increases. • Undertake before and after dilapidation surveys on local roads • Traffic controllers and / or signage for both egress and ingress off the work sites. • All vehicles carrying materials to be adequately covered to prevent any loss of material, which may cause driver safety issues. • Sweeping of road immediately after spillage of material from construction vehicle • Liaise with schools and service providers</td>
<td>B (moderate) i</td>
<td>CONSTRUCTION TRAFFIC AND ACCESS MANAGEMENT PLAN CONSTRUCTION AIR QUALITY MANAGEMENT PLAN CONSTRUCTION WASTE AND ENERGY MANAGEMENT PLAN EWMS</td>
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<tr>
<td></td>
<td>• General earthworks and construction</td>
<td>• Temporary restrictions to private access roads</td>
<td>B (moderate) ii</td>
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<tr>
<td></td>
<td>• Import of material / plant / equipment.</td>
<td>• Permanent adjustment to some private property access roads and local / regional roads</td>
<td>A (high) iii</td>
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<td></td>
<td>• Construction site compounds</td>
<td>• Changed traffic patterns</td>
<td>B (moderate) iv</td>
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<td></td>
<td>• Construction vehicle movements and deliveries</td>
<td>• Noise vibration and dust nuisance to residents on haul routes</td>
<td>A (high) v</td>
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<td></td>
<td>• Travel to /from site</td>
<td>• Delays/interruptions to school bus services and bus stops</td>
<td>B (moderate) i</td>
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<td>Noise and vibration</td>
<td>• Site establishment</td>
<td>• Temporary noise impacts on sensitive receivers during construction</td>
<td>A (high) i</td>
<td>• Liaise (agreements where applicable) with local communities and affected residents. • Adherence to working hours in CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN unless otherwise</td>
<td>B (moderate) i</td>
<td>CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN</td>
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<tr>
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<td>• Clearing and grubbing</td>
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<td></td>
<td>• Demolition</td>
<td>• Temporary vibration impacts on sensitive receivers during construction</td>
<td>B (moderate) ii</td>
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Woolgoolga to Ballina construction environmental management plan - Appendix A2
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<th>Issue</th>
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<th>Risk level prior to mitigation</th>
<th>Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)</th>
<th>Risk level following mitigation</th>
<th>Management Documents / Training Required</th>
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<tr>
<td></td>
<td>• Earthworks and drainage</td>
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<td>approved. • Implement Out of Hours Works Procedure. • Implement operational noise mitigation measures as early as possible. • Respite periods for particularly noisy / short duration activities (in accordance with regulatory guidelines and/or CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN). • Construction equipment selected, operated and maintained to minimise noise impacts and where necessary fitted with silencers and “smart” reversing alarms. • Reduced use of horns to signal trucks loaded where residences close by. • Minimise impacts from saw cutting / use effective shielding. • Regular noise monitoring to monitor predicted verses actual noise levels. • Implementing management measures where regenerated noise is found to be excessive and agreements are not in place. • Managing construction vehicle routes and speed of vehicles. • Modelling vibration impacts and monitoring where impacts are predicted. • Establish and maintain complaints management system. • Building condition reports on potentially impacted buildings as required by Project approval. • Undertake trial blasting to establish site law for follow up blasting.</td>
<td></td>
<td>CONSTRUCTION WASTE AND ENERGY MANAGEMENT PLAN Procedure Induction</td>
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<td>• Blasting crushing and screening</td>
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<td></td>
<td>• Bridge work</td>
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<td>• Piling</td>
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<td>• Paving</td>
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<td></td>
<td>• Saw cutting</td>
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<td></td>
<td>• Rock hammering and drilling</td>
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<td></td>
<td>• Quarrying</td>
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<td></td>
<td>• Road furnishing</td>
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<td>Greenhouse gas emissions</td>
<td>• Vehicular movements</td>
<td>Greenhouse gases emitted from construction plant, equipment and vehicles</td>
<td>(moderate) i</td>
<td>• Vegetation clearance minimised where feasible. • Reuse of materials maximised where possible. • Maximise use of resources with recycled components / contents. • Efficient use of plant and equipment • Regular maintenance of plant and equipment</td>
<td>(low) i</td>
<td>CONSTRUCTION WASTE AND ENERGY MANAGEMENT PLAN EWMS Induction</td>
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<td></td>
<td>• Vehicle emissions</td>
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<td>• Equipment / plant use</td>
<td>Greenhouse gases embodied in materials consumed in construction or impacted by the project, such as vegetation removal and soil disturbance</td>
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<td></td>
<td>• Site establishment</td>
<td>Potential for decreases in air quality during construction associated with dust generating activities and emissions from heavy construction machinery</td>
<td>(moderate) i</td>
<td>• Induct personnel on air quality issues and safeguards. • Suppress dust on unsealed surfaces, stockpiles and other exposed surfaces. • Modify or cease operations during high winds. • All trucks on public roads to cover loads. • Vehicles, equipment, machinery used and all facilities – designed, operated and maintained to control the emission of</td>
<td>(low) i</td>
<td>CONSTRUCTION AIR QUALITY MANAGEMENT PLAN EWMS CONSTRUCTION SOIL AND WATER QUALITY MANAGEMENT PLAN ESCP</td>
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<td>• Bulk earthworks</td>
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<td>• Spoil handling – including liming of</td>
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<td>• Potential adverse health effects</td>
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<td>(low) iii</td>
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<td>Issue</td>
<td>Construction activity / aspect</td>
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<td>Risk level prior to mitigation</td>
<td>Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)</td>
<td>Risk level following mitigation</td>
<td>Management Documents / Training Required</td>
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<td>Acid Sulphate Soils.</td>
<td>Stockpiling</td>
<td>Impacts on water quality and vegetation health from dust deposition</td>
<td>C (low) iv</td>
<td>smoke, dust, odours and fumes.</td>
<td>C (low) iv</td>
<td>Complaints procedure Induction</td>
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<td>Vehicular movements</td>
<td>Complaints from neighbours</td>
<td>B (moderate) v</td>
<td>Vegetation clearing to be staged to minimise time and area that surfaces are exposed.</td>
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<td></td>
<td>Material haulage</td>
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<td>All disturbed areas stabilised, revegetated and/or landscaped as soon as practicable.</td>
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<td>Batch plant</td>
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<td>Install shake down/ wheel wash facilities</td>
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<td>Vehicle emissions</td>
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<td>No burning or incineration of any material at any time.</td>
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<td>Handling of chemicals, waste and hazardous goods</td>
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<td>Regularly inspect erosion control measures.</td>
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<td></td>
<td>Impacts on water quality and vegetation health from dust deposition</td>
<td>C (low) iv</td>
<td>Install shake down/ wheel wash facilities</td>
<td>C (low) iv</td>
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<tr>
<td></td>
<td></td>
<td>Complaints from neighbours</td>
<td>B (moderate) v</td>
<td>No burning or incineration of any material at any time.</td>
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<td>Regularly inspect erosion control measures.</td>
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<td>Dust monitoring.</td>
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<td>Regularly apply dust suppression such as water trucks and street sweepers</td>
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<td>Resource management and waste</td>
<td>General earthworks</td>
<td>Disposal of unsuitable or surplus earthworks material</td>
<td>B (moderate) i</td>
<td>Refine cut-and-fill balance and maximise reuse of material on site.</td>
<td>C (low) i</td>
<td>CONSTRUCTION WASTE AND ENERGY MANAGEMENT PLAN EWMS Induction</td>
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<td>Vegetation clearing</td>
<td>Disposal of green waste (not including millable timber)</td>
<td>B (moderate) ii</td>
<td>Develop and implement a resource management strategy.</td>
<td>C (low) ii</td>
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<td>Open excavation works</td>
<td>Disposal of materials resulting from replacement of existing pavements</td>
<td>B (moderate) iii</td>
<td>Maintain a waste register.</td>
<td>C (low) iii</td>
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<td>Spoil handling</td>
<td>Depletion or sterilisation of non-renewable resources, including sand and aggregate materials</td>
<td>B (moderate) iv</td>
<td>Manage waste in accordance with the Waste Classification Guidelines and PoEO Act.</td>
<td>C (low) iv</td>
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<tr>
<td></td>
<td>Stockpiling</td>
<td>Direct impacts to existing quarries</td>
<td>B (moderate) v</td>
<td>Use recycled products where possible</td>
<td>C (low) v</td>
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<td>Quarrying</td>
<td>Difficult disposal of waste materials including hazardous waste</td>
<td>B (moderate) vi</td>
<td>Undertake additional waste classification where required</td>
<td>C (low) vi</td>
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<td></td>
<td>Material haulage</td>
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<td>Locate appropriate waste removal contractor and/or appropriately licenced waste facilities in the area</td>
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<td>Handling of chemicals, waste and hazardous goods</td>
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<td>Source local products, where possible as part of the resource management strategy.</td>
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Woolgoolga to Ballina construction environmental management plan - Appendix A2
Appendix A3

Environmental Policy
Environmental policy

Civil Mining and Construction Pty Ltd (CMC) is committed to the principles of ecologically sustainable development, prevention of pollution, and to minimising the adverse effects of our operations on the Environment. This will be achieved through our Environmental Management System (EMS) that covers all facets of construction, maintenance and projects completed by CMC.

The EMS provides a framework for the Company to:

- Conform to all relevant legislation, regulations and guidelines.
- Carry out its activities in an environmentally responsible manner using best practice methodology.
- Complies with the requirements of ISO14001:2004

These goals will be achieved by having documented procedures to:

- Identify aspects of our activities that could impact on the Environment.
- Assess the significance of these impacts.
- Set objectives and targets to suitably address these impacts.
- Involve all company personnel in the process by means of training and communication.
- Consider the concerns of and communicate with interested parties.
- Have a regular program of audits to ensure all aspects of the EMS are functioning correctly.
- Maintain a policy of continual improvement through regular Management Reviews.

The implementation and maintenance of this Policy is the responsibility of the Company Systems Manager who will be given adequate resources and authority to implement and apply the Policy.

This Policy is a public document that will be displayed at the Company Office and made available to all interested parties.

Civil Mining and Construction Pty Ltd activities are primarily the construction of Civil Works including but not restricted to; Roads, Bridges, Subdivisions, Car Parks, Drainage Works, and Revetment Walls. The Company also has an extensive Plant Hire inventory.

Peter Kendall
Managing Director
Appendix A4

Document Register
Table 1 Environmental document register

<table>
<thead>
<tr>
<th>Environmental Policy</th>
<th>Outlines the Contractors environmental management commitments.</th>
<th>CIV-EN-POL-0002</th>
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<td>Construction environmental management plan</td>
<td>Policy</td>
<td>CN1001-CIV-EN-TMP-0001</td>
<td>Halfway Creek to Glenugie Pacific Highway upgrade Construction Environmental Management Plan</td>
<td>Secretary, Department of Planning and Environment, DP&amp;E</td>
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<td>Legal and other requirements</td>
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<td>Risk assessment Objectives and targets</td>
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<td>Roles and responsibilities</td>
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<td>Communication and training</td>
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<td>Environmental management plans</td>
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<td>Construction traffic and access management plan (Appendix B1)</td>
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Appendix A5
Sensitive Area Plans
Environmental Sensitive Area Maps

Approved Project Boundary (date)

Clearing Boundary*

*Where the Clearing Boundary is not visible it may be covered by the Approved Project Boundary (date). Check with GIS mapping IFC Clearing package drawings or with an Environmental Representative for further information.

New Road Design

Flora Reserve

Receivers

Commercial Recievers

Waterways

Aboriginal Sites

Contaminated Sites

Non-Aboriginal Historic Sites

Dust Monitors

Area not cleared due to northbound carrigeway omission

Hollow Trees


Threatened Flora


Habitat Tree


Vegetation Communities

Endangered Ecological Communities

Lowland Rainforest of SubTropical Australia

Sub-Tropical Coastal Floodplain Forest of the NSW North Coast Bioregion

Swamp Sclerophyll on the Coastal Flood Plains of the NSW North Coast, Sydney Basin and South East Corner. Bioregions. Note:1

Sub-Tropical Costal Floodplain Forest of the NSW North Coast Bioregion

Swamp Sclerophyll on the Coastal Flood Plains of the NSW North Coast, Sydney Basin and South East Corner. Bioregions. Note: 2

General Vegetation Communities

Blackbutt - Bloodwood Dry Healthy Open Forest On Sandstone

Blackbutt - Tallowwood Dry Grassy Open Forest Of The Central Parts North Coast

Blackbutt Grassy Open Forest Of The Lower Clarence Valley Of The North Coast

Needlebark Stringybark - Red Bloodwood Heathly Woodland On Sandstone

Orange Gum (Eucalyptus Bancroftii) Open Forest Of The North Coast

Scribbly Gum - Needlebark Stringybark Heathly Open Forest Of Coastal Lowlands

Scribbly Gum - Red Bloodwood Heathly Open Forest Of The Coastal Lowlands

Spotted Gum - Grey Box - Grey Ironbark Dry Open Forest Of The Clarence Valley

Spotted Gum - Grey Ironbark - Pink Bloodwood Open Forest Of The Clarence Valley

Threatened Fauna

Black-chinned Honeyeater

Black-necked Stork

Brown Treecreeper

Brush-tailed Phascogale

Bush Stone-curlew

Common Planigale

Emu, Dromaius novaehollandiae

Giant Barred Frog

Green-thighed Frog

Grey-headed Flying-fox

Hoary Wattled Bat

Hooded Robin

Little Bent-wing Bat

Northern Banjo Frog

Powerful Owl

Rufous Bettong

Spotted-tailed Quoll

Square-tailed Kite

Squirrel Glider

Wallum Froglet

Yellow-bellied Glider

Frog habitat

Frog Ponds

Fauna Crossings

1. This refers to Black Bean – Weeping Lilly Pilly riparian forest of the North Coast

2. This refers to Swamp Mahogany swamp forest of the coastal lowlands of the North Coast

Document No: HC2G-EV-ESAM-0001

Environmental Sensitive Area Map

Revision: 0

Date: 2015/04/15

Sheet: 1/15
Appendix A6

Environmental incident and classification procedure
Refer to the Incident Guide (CIV-HSE-GUI-0002) for more information, and contact the HSE Manager if you have any concerns or questions.

A CRITICAL INCIDENT is a severe crisis such as one or multiple fatalities/serious injuries, a natural disaster which seriously affects operations, a large fire, explosion, sabotage, material release, serious environmental issues, ethical or reputational damage. If the incident falls into this category, follow the Critical Incident Management procedure CIV-HSE-PRO-0058.
ENVIRONMENTAL INCIDENT CLASSIFICATION AND REPORTING PROCEDURE

September 2014
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1 BACKGROUND

1.1 Purpose

To ensure that Roads and Maritime Services has processes to classify and report environmental incidents that may occur during Roads and Maritime managed activities and to comply with its statutory obligations to report certain incidents.

1.2 Scope and Coverage

This Procedure is for the use of all Roads and Maritime staff in all regions and divisions where environmental incidents may occur, including where incidents occur during the course of Roads and Maritime’s contractors or alliance members undertaking works. The procedure is to clearly define the requirements of Roads and Maritime staff and contractors to report environmental incidents. The procedure does NOT cover environmental incidents caused by traffic accidents or boating accidents nor marine oil and chemical spills covered by the National Plan1.

The Roads and Maritime Environmental Incident Classification and Reporting Procedure relates to incidents involving Roads and Maritime or its contractor/alliance partners and is for internal reporting processes as outlined in this procedure.

An environmental incident is not only necessarily when an event caused by Roads and Maritime or its contractors, but one that occurs on a site under their control or management.

Environmental incidents can involve (but not be limited to) the following:

- spills of fuels, oils, chemicals and other hazardous materials;
- unauthorised discharge from sediment basins or other containment devices;
- unauthorised clearing or clearing beyond the extent of the project boundary or premises;
- inadequate installation and subsequent failure of temporary erosion and sediment controls;
- any adverse health or well-being impacts on persons due to activities by Roads and Maritime or its contractors causing adverse environmental conditions;
- an unexpected find of contaminated soils or other potentially hazardous substances;
- unauthorised damage or interference to native vegetation, threatened species, endangered ecological communities or critical habitat;
- unauthorised harm to Aboriginal objects and Aboriginal places; or
- unauthorised damage to any State or locally significant relic or Heritage item;
- unauthorised damage to protected marine vegetation and mangroves;
- dredging or reclamation works within a watercourse without appropriate authorisation;
- potential contamination of waterways or land;
- accidental starting of a fire or a fire breaking out of containment;

---

1 The National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances
- any breach of legislation including a condition of an environment protection licence, a Department of Planning and Infrastructure (DP&I) approval; a Local Government development consent; or any government agency permit condition;
- works impacting outside an approved area or undertaken without appropriate approval or assessment under the *Environmental Planning & Assessment Act 1979*.
- works undertaken that are not in accordance with a determined Review of Environmental Factors (REF). and
- unauthorised dumping of waste by Roads and Maritime, its contractors or others.

An environmental incident, for the purposes of these guidelines, need not necessarily be an incident that comprises a breach of legislation. Nonetheless it is important to capture this information for reasons including the environmental improvement of Roads and Maritime practices and contractor performance.

### 1.3 Responsibilities

All Roads and Maritime staff and contractors are responsible for reporting an environmental incident when they become aware of an incident. Appendix 2 summarises the general roles and responsibilities of Roads and Maritime staff. Regional Maintenance Delivery shall manage environmental incidents in accordance with the Roads and Maritime responses as detailed in Table 2 of this document.

Supervisors and managers are responsible for ensuring environmental incidents are reported to the appropriate level as set out in this document.

**Environment Branch** is responsible for:
- assisting with advice and the reporting process;
- monitoring environmental incidents;
- monitoring and reviewing this procedure; and
- giving advice on whether environmental incidents need to be reported to external agencies.

**Legal Branch** is responsible for providing legal advice, assisting with investigations of incidents and preparation of reports for the Environment Protection Authority and other regulators for major incidents.

### 1.4 Evaluation

The environmental incident register is used to record and monitor all environmental incidents within Roads and Maritime. The register will assist with record keeping, reporting and determining improvements to incident response. The register is kept by Environment Branch. Environment Branch is responsible for entering incidents on the register and monitoring and measuring the effectiveness of incident management and of this procedure.
2 CLASSIFICATION, NOTIFICATION AND REPORTING PROCESS

2.1 Environmental Incident Classification

There are three categories of environmental incidents / events that are to be identified and managed as shown in Table 1. They include:

1. Category 1;
2. Category 2; and
3. a Reportable Event.

2.1.1 Category 1 Incidents

Category 1 incidents are potentially the most serious incidents. They generally reflect breaches of environmental legislation.

Category 1 incidents can be divided into several sub-groups;

- Environmental Breaches against the Protection of the Environment Operations Act 1997 (POEO Act). These include:
  
  o water pollution incidents that actually or potentially pollute waters. Such incidents include sediment laden water moving off a site due to inadequate controls being put in place; the intentional discharge of waters that are polluted or outside the limits set by environment protection licences or approvals; chemical/oil spills, discharges or spills to waters from the Rozelle Maritime marina or Maritime operated vessels; and sewage/septic overflows.
  
  o odour pollution incidents that involve the emission of an offensive odour.
  
  o dust pollution involving the generation of excessive dust and/or levels that might unreasonably impact on nearby residences/users of land.
  
  o noise pollution involving the generation of offensive noise.
  
  o fire that travels beyond site boundary causing or potentially causing adverse impact to the environment or community.
  
  o breaches of environment protection licence conditions.
  
  o unauthorised or illegal waste disposal by Roads and Maritime, its contractors or others.

- Conservation Breaches
  
  o of the National Parks and Wildlife Act 1974 and the Environment Protection and Biodiversity Conservation Act (Cth) 1999 such as unauthorised harm to threatened species, endangered populations, endangered ecological communities or critical habitat or to land reserved under the National Parks and Wildlife Act 1974, and
  
  o of the Fisheries Management Act 1994 such as unauthorised harm to threatened aquatic species and protected marine vegetation or unauthorised dredging or reclamation works within a watercourse.

- Heritage Breaches of the National Parks and Wildlife Act 1974 and the Heritage Act 1977 such as the unauthorised damage to any State or locally significant relic or Heritage item or to Aboriginal objects or places.
• Planning Breaches of the Environmental Planning and Assessment Act 1979 such as undertaking works without required approval or assessment or the failure to comply with an approval condition.

2.1.2 Category 2 Incidents

Category 2 incidents are generally less environmentally serious and have lower maximum penalties. Nevertheless, there are sound policy reasons why these incidents need to be identified and reported, including in order to track potential trends that may lead to Category 1 incidents. Category 2 incidents include:

• those incidents that have been classified and reported as a Category 1 incident and have been reclassified as a Category 2 incident by Principal Manager Environment Operations (PMEO). PMEO will assess all Category 1 incidents in consultation with relevant senior environmental staff (and Legal Branch if necessary) and undertake an objective assessment of the environmental / conservation / heritage significance or the legislative breach and may reclassified the incident category for reporting and KPI purposes. Reporting officers will be advised of any reclassifications.

• spills that do not leave the site boundary or Maritime vessel and are cleaned up without material environmental harm or residual environmental impact such as small plant hydraulic spills.

• a fire that is contained on site and does not cause or potentially cause adverse impact to the environment or community.

• failure to implement a component of Environment Management Plan or work method statement that does not result in a Category 1 incident.

2.1.3 Reportable Events

This category captures those environmental incidents that occur outside the scope of reasonable controls and mitigation. Reportable events fall into four groups:

• those relating to erosion and sediment control, that occur as a result of weather events that are beyond the design capacity of controls, and where those environmental controls have been properly (appropriate and in compliance with all requirements and guidelines) designed, installed and maintained. It recognises that some incidents, such as those due to extremely intense rainfall events, cannot be controlled even with properly designed, installed and maintained controls. For the incident to be classified as a reportable event it will need to be demonstrated that appropriate and properly installed and maintained environmental controls and management systems were in place prior to and during the event.

• an unexpected archaeological find that has been discovered and not previously identified during previous environmental assessments and is being managed in accordance with the ‘Roads and Maritime Standard Management Procedure - Unexpected Archaeological Finds’.

• an unexpected threatened species find that has been discovered and not previously identified during previous environmental assessments and is being managed in accordance with the ‘Roads and Maritime Biodiversity Guidelines – unexpected threatened species finds procedure’.

• any formal complaint or warning from a regulatory agency.

• an unexpected find of contaminated soils, asbestos or other potentially hazardous substances.

• any adverse impact to human health caused by an activity resulting in adverse environmental conditions.
### Table I  Environmental Incident Classification Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Incident type</th>
<th>Primary Legislative Requirements and offence provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>Material, odour, fire or noise that travels beyond site boundary causing or potentially causing adverse impact to the environment or community.</td>
<td>s.120 POEO Act – water pollution, sediment laden water, chemical/oil spill and sewage/septic overflow; s.116 POEO Act – leaks and spills generally s.129 POEO Act - offensive odour; s.126 POEO Act - dust exceeding reasonable levels without active management measures in place. s.139 POEO Act - offensive noise</td>
</tr>
<tr>
<td>Category 1</td>
<td>Discharge of waters from site not in accordance with any applicable REF determination / approval / environment protection licence condition.</td>
<td>s.120, s.116 and s.64 POEO Act; s.75D EP&amp;A Act</td>
</tr>
<tr>
<td>Category 1</td>
<td>Discharges or spills to waters from the Rozelle Maritime marina or Maritime operated vessels,</td>
<td>s.120 POEO Act – water pollution, sediment laden water, chemical/oil spill and sewage/septic overflow; s.116 POEO Act – leaks and spills generally</td>
</tr>
<tr>
<td>Category 1</td>
<td>Unauthorised harm to threatened species, endangered populations, endangered ecological communities or critical habitat.</td>
<td>NPW Act particularly s.118A, s.118C and s.118D.</td>
</tr>
<tr>
<td>Category 1</td>
<td>Unauthorised harm to threatened aquatic species and protected marine vegetation or unauthorised dredging or reclamation works within a watercourse.</td>
<td>Fisheries Management Act (1994) particularly s. 199 and 204A.</td>
</tr>
<tr>
<td>Category 1</td>
<td>Unauthorised damage to any State or locally significant relic or Heritage item.</td>
<td>Heritage Act 1977 particularly s. 57, s.119, s.139 and s.156. EPBC Act 1999 s.15A, B &amp; C</td>
</tr>
<tr>
<td>Category 1</td>
<td>Unauthorised harm to Aboriginal objects and Aboriginal places.</td>
<td>NPW Act particularly s.86 and s.87. EPBC Act 1999 s.15A, B &amp; C</td>
</tr>
<tr>
<td>Category 1</td>
<td>Failure to comply with a REF determination / approval / environment protection licence condition.</td>
<td>EP&amp;A Act particularly s.75D, s.76A, s.115W; POEO Act particularly s.64; FM (G) Reg particularly s.337A, NPW Act particularly s.90 and s.141.</td>
</tr>
<tr>
<td>Category 1</td>
<td>Works undertaken without required approval or environmental assessment.</td>
<td>EP&amp;A Act particularly s.75D and s.111.</td>
</tr>
<tr>
<td>Category 1</td>
<td>Material harm to the environment or persons as per Part 5.7 of POEO Act</td>
<td>POEO Act particularly s.148 (notification requirements).</td>
</tr>
<tr>
<td>Category 1</td>
<td>Unauthorised disposal/transport of waste</td>
<td>S115, 142A, 143, 144, POEO Act.</td>
</tr>
</tbody>
</table>
### Category 2

<table>
<thead>
<tr>
<th>Incident Description</th>
<th>Act/Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spills that do not leave a site boundary and are cleaned up without material</td>
<td>POEO Act including s.120 and s.142A.</td>
</tr>
<tr>
<td>environmental harm or residual environmental impact.</td>
<td></td>
</tr>
<tr>
<td>A fire that is contained on site and does not cause or potentially cause adverse</td>
<td>Potentially EP&amp;A Act particularly s.111</td>
</tr>
<tr>
<td>impact to the environment or community.</td>
<td></td>
</tr>
<tr>
<td>Failure to implement component of Environment Management Plan or work method</td>
<td>EP&amp;A Act particularly s.111</td>
</tr>
<tr>
<td>statement that does not result in a Category 1 incident.</td>
<td></td>
</tr>
</tbody>
</table>

### Reportable Events

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Source/Act/Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material travelling beyond a site boundary, and where it can be demonstrated that the erosion and sediment control plan has been prepared and the controls have been installed appropriately, are being maintained well, and the weather (rain, wind etc) event exceeds the design capacity of the controls.</td>
<td></td>
</tr>
<tr>
<td>An unexpected find of contaminated soils, asbestos or other potentially hazardous substances.</td>
<td></td>
</tr>
<tr>
<td>An unexpected archaeological find and is being managed in accordance with the &quot;Roads and Maritime Standard Management Procedure - Unexpected Archaeological Finds&quot;</td>
<td></td>
</tr>
<tr>
<td>A formal complaint or warning from a regulatory agency.</td>
<td></td>
</tr>
</tbody>
</table>

## 2.2 Environmental Incident Reporting

Table 2 details the response to each incident category and Appendix 2 gives information in relation to who is responsible for the various management actions described below. The table provides information of the type of response and whether it is required to be undertaken by Roads and Maritime and/or the Roads and Maritime contractor. It is important to note that, Roads and Maritime’s Regional Maintenance Delivery are to follow the procedure in accordance with the Roads and Maritime required responses rather than as a Roads and Maritime contractor.

In general, Category 1 incidents are the most serious and incorporate quick notification to Environment Branch and Table 2 details the investigation and reporting procedure. Category 2 incidents are generally less serious with more flexible notification and reporting timeframes.

If in doubt, treat all incidents as Category 1 and in consultation with PMEO, a decision can be made to reclassify the category.

### 2.2.1 Category 1 Incidents

i. Where it is possible and necessary, all work in the relevant area should cease and actions should be implemented to prevent adverse impact to the environment or community. Common sense dictates the extent of the 'stop work', however experience indicates that in the majority of incidents allow work to continue, with only those activities in the close vicinity to cease. If the incident is a pollution incident and if it threatens public health, property or the environment, follow the procedures detailed in section 2.3.1.

ii. Advise the relevant Environment Manager (and Regional Maintenance Delivery Environment Manager for Regional Maintenance Delivery projects) as soon as Roads and Maritime staff become aware of the incident occurring. The Environment Manager in turn advises Environment Branch (GM Environment, Principal Manager Environment Operations or Principal Manager Environment Policy Planning and Assessment). Roads and Maritime contractors are to advise Roads and Maritime Project Site Management.
iii. Environment Branch will also notify the Chief Executive and relevant Directors of significant Category 1 incidents as soon as possible and ideally within 24 hours of the incident occurring.

iv. Pollution incidents that cause or threaten material harm to the environment or humans must be notified immediately after becoming aware of the incident - refer to section 2.4. NOTE: The General Manager Environment or PMEO may also discuss incidents with EPA or DP&I whether there is a requirement to notify those agencies or not.

v. The Project Manager needs to ensure that the environmental incident report form is completed and submitted to Environment Branch (and Quality Systems Coordinator (QSC) for Regional Maintenance Delivery projects).

vi. Following consultation with PMEO, undertake an investigation into the cause, nature and management response to the incident and check that any measures recommended to prevent further incidents are implemented.

2.2.2 Category 2 Incidents

i. If necessary, stop work in relevant area and/or take immediate actions to prevent adverse impact to the environment, community or heritage.

ii. Advise relevant Environment Manager (and QSC for Regional Maintenance Delivery projects) of the incident.

iii. The Project Manager needs to ensure that the environmental incident report form is completed and submitted to relevant Environment Manager, Environment Branch (and QSC for Regional Maintenance Delivery projects).

iv. Following consultation with PMEO, undertake an investigation into the cause, nature and management response to the incident and check that any measures recommended to prevent further incidents are implemented.

2.2.3 Reportable Events

Environment Manager is to advise Principal Manager Environment Operations of the event by email.
### Table 2: Environmental Incident Reporting Response

<table>
<thead>
<tr>
<th>Category 1 Reporting Response</th>
<th>Roads and Maritime Response</th>
<th>Contractor Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stop work in relevant area (if necessary) and take immediate actions to prevent adverse impact to the environment or community.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2. For Category 1 POLLUTION INCIDENTS refer to section 2.4 below. For all other Category 1 incidents follow the points below.</td>
<td>✓</td>
<td>✓ (Advise Roads and Maritime Project Site Management)</td>
</tr>
<tr>
<td>• For Roads and Maritime contractors and projects, immediately advise relevant Environment Manager (Roads and Maritime contractors to advise Roads and Maritime Project Site Management) who <strong>must immediately</strong> advise Environment Branch by phone.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>• For Regional Maintenance Delivery projects <strong>immediately</strong> advise Team Leader/Works Supervisor/Project Delivery Manager/District Works/Section Manager who <strong>must immediately</strong> advise the Regional Maintenance Delivery Environment Manager, and regional environment staff by phone Environment Branch who <strong>must immediately</strong> advise Environment Branch by phone.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3. Notify relevant authorities of pollution incidents that cause or threaten material harm to the environment or humans immediately after becoming aware of the incident - refer to section 2.4.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4. Complete the environmental incident report form 624 (Regional Maintenance Delivery form 400) and submit to PMEO by email within 3 days of the date of the incident.</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>6. Following consultation with PMEO, review the cause, nature and management response to the incident</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Category 2 Reporting Response

<table>
<thead>
<tr>
<th>Category 2 Reporting Response</th>
<th>Roads and Maritime Response</th>
<th>Contractor Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stop work in relevant area (if necessary) and take immediate actions to prevent adverse impact to the environment or community.</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
| 2. • For Roads and Maritime contractors and projects advise relevant regional Environment Manager (Roads and Maritime contractors to advise Roads and Maritime Project Site Management).  
  • For Regional Maintenance Delivery projects advise Team Leader/Works Supervisor/Project Delivery Manager/District Works/Section Manager. | ✓                           | ✓                   |
| 3. Complete the environmental incident report form 624 (Regional Maintenance Delivery form 400) and submit to PMEO by email within 3 days of the date of the incident. | ✓                           | ✓                   |
| 4. Following consultation with PMEO, review the cause, nature and management response to the incident | ✓                           | ✓                   |

### Reportable Event

<table>
<thead>
<tr>
<th>Reportable Event</th>
<th>Roads and Maritime Response</th>
<th>Contractor Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Environment Manager to advise Principal Manager Environment Operations by email. [Roads and Maritime contractors to advise Roads and Maritime Project Site Management]</td>
<td>✓</td>
<td>✓ (Advise Roads and Maritime Project Site Management)</td>
</tr>
</tbody>
</table>
2.3 When Must A Regulatory Agency Be Notified Of An Environmental Incident?

There are specific statutory requirements relating to the notification of pollution or environmental incidents to relevant regulatory agencies. These are summarised in table 3 below.

Table 3: Environmental Incident Notification Requirements

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Regulating Authority</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>POEO Act 1997</td>
<td>EPA and relevant authorities</td>
<td>Section 148 – requirement to immediately notify pollution incidents occurring during an activity that cause or threaten material harm to the environment.</td>
</tr>
<tr>
<td>Heritage Act 1977</td>
<td>EPA</td>
<td>Section 146 – requirement to notify the Heritage Council of the location of the relic once a relic has been discovered or located.</td>
</tr>
<tr>
<td>National Parks and Wildlife Act 1974</td>
<td>EPA</td>
<td>Section 89A – requirement to notify the location of an Aboriginal object that is the property of the Crown.</td>
</tr>
<tr>
<td>Commonwealth Aboriginal and Torres Strait Islanders Heritage Protection Act, 1984</td>
<td>Department of Sustainability, Environment, Water, Population and Communities</td>
<td>Section 20 – requirement to notify the Minister of the discovery of Aboriginal remains.</td>
</tr>
<tr>
<td>Contaminated Land Management Act 1997</td>
<td>EPA</td>
<td>Section 60 – requirement to notify if Roads and Maritime activities have contaminated land or if Roads and Maritime owns land that has been contaminated.</td>
</tr>
<tr>
<td>Rural Fires Act 1997</td>
<td>NSW Fire Brigades</td>
<td>Section 64 – requirement to notify an appropriate fire officer of the inability to extinguish any fire burning during a bush fire danger.</td>
</tr>
</tbody>
</table>

Should an environmental incident have the potential to impact on a drinking water supply, the relevant water supply authority must also be advised.

2.4 POEO Act Notification of Material Harm

Under Part 5.7 of the POEO Act, there is a duty to notify each relevant authority (identified below) of a pollution incident, where material harm to the environment is caused or threatened. Material harm includes actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial or that results in actual or potential loss (refer definitions in s147 of POEO Act) or property damage of an amount over $10,000.
The following notification procedure only relates to pollution incidents.

Conservation, heritage and planning breaches described in Section 2.1 are not included in the definition of a pollution incident with respect to Part 5.7 of the POEO Act.

Roads and Maritime is not responsible for notifying a pollution incident caused by a traffic or vehicle accident where notification has already occurred. Notification is required by the person carrying on the activity “immediately upon becoming aware” of the incident.

IMPORTANT NOTE

- The following procedure is to be followed by all Roads and Maritime staff and contractors.

- Any actual or potential material harm to a person’s health or well being or the environment as a result of a pollution incident must be reported immediately to Principal Manager Environment Operations on 0428 608 758.

- Contractors who hold an environment protection licence for their activities are responsible for notifying EPA and the relevant authorities in accordance Part 5.7 of the POEO Act and any relevant Conditions of their EPL.

- Contractors undertaking works without an EPL are responsible for notifying Roads and Maritime, EPA and the relevant authorities in accordance Part 5.7 of the POEO Act. If the incident occurs on a premises that is regulated by an environment protection licence, refer to the Pollution Incident Response Management Plan.

As soon as a Roads and Maritime employee becomes aware of a Category 1 pollution incident, all Roads and Maritime environment officers and project managers are to immediately notify Principal Manager Environment Operations on 0428 608 758 of all Category 1 pollution incidents. PMEO will assist in making an assessment of the incident and determine whether or not to formally notify the incident to the EPA and other relevant authorities.

If for any reason that PMEO is not contactable, staff should contact their regional Roads and Maritime Environment Managers (or Regional Maintenance Delivery Environmental Manager for Regional Maintenance Delivery projects) to assist in assessing whether an incident triggers the notification requirement.

In any case, if no assistance can be obtained within a reasonable time, you are required to notify the relevant authorities in the order of notification outlined in the table below and provide each agency with the information required in section 2.5 of this procedure. Even if you do not have all the information, you must notify each agency with the information you have at hand and ensure that they are updated as soon as further relevant information becomes available.

In circumstances where there is doubt about the need to notify or the relevance of a particular agency, Roads and Maritime should always err on the side of notification. When in doubt, communicate!
The relevant authorities and contact details for a pollution incident where material harm to human health or the environment is caused or threatened are given below in Table 4.

### Table 4: Appropriate Authorities for Part 5.7 Incident Notification

<table>
<thead>
<tr>
<th>Relevant Authority</th>
<th>Contact Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire and Rescue NSW</td>
<td>1300 729 579 (for Environmental harm)</td>
</tr>
<tr>
<td></td>
<td>000 (for human health or safety incidents)</td>
</tr>
<tr>
<td>EPA environment line</td>
<td>131 555</td>
</tr>
<tr>
<td>The Ministry of Health</td>
<td>Via the local Public Health Unit see Appendix 3</td>
</tr>
<tr>
<td>WorkCover Authority</td>
<td>131 050</td>
</tr>
<tr>
<td>The appropriate regulatory authority</td>
<td>Your Local Council or Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council)</td>
</tr>
<tr>
<td>Local Council</td>
<td>Please call Division of Local Government on 4428 4100 to find relevant local council contacts or visit their website on <a href="http://www.dlg.nsw.gov.au/">http://www.dlg.nsw.gov.au/</a></td>
</tr>
</tbody>
</table>

The appropriate contact for the relevant local council and Public Health Unit will vary. All necessary contact numbers should be found in advance and stored for immediate access should a pollution incident need to be notified.

### Relevant authorities notification order

- **If the incident presents an immediate threat to human health or property, Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service should be contacted first for emergency assistance**
  - call Fire and Rescue NSW on 000 first then
  - EPA environment line
  - The Ministry of Health
  - WorkCover Authority
  - Local Authority (Council)

- **If there is not an immediate threat to human health or the environment:**
  - call EPA environment line first then
  - Local Authority (Council)
  - The Ministry of Health
  - WorkCover Authority
  - Fire and Rescue NSW on 1300 729 579

All of the above authorities (whether considered relevant or not) must be contacted for each pollution incident to satisfy notification obligations.

### 2.5 The relevant information to provide

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

1. The relevant information about a pollution incident required under section 148 consists of the following:
   a. the time, date, nature, duration and location of the incident,
   b. 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,
   c. the circumstances in which the incident occurred (including the cause of the incident, if known),
   d. the action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known,
   e. other information prescribed by the regulations.

2. The information required by this section is the information known to the person notifying the incident when the notification is required to be given.

If the information required to be included in a notice of a pollution incident by subsection (1) (c), (d) or (e) is not known to that person when the initial notification is made but becomes known afterwards, that information must be notified in accordance with section 148 immediately after it becomes known.

Note: if a pollution incident occurs, the above information, is to be initially communicated verbally to each relevant authority and is to be followed by written notification within 7 days of the date on which the incident occurred (Clause 101 POEO (Gen) Regs).

Complying with these notification requirements does not remove the need to comply with any other obligations for incident notification, for example, those that apply under other environment protection legislation such as an EPL condition or legislation administered by WorkCover.

2.6 Other Agencies

It is the responsibility of Environment Managers to liaise with Environment Branch prior to notifying other regulatory agencies of relevant environmental incidents.

2.7 Incident Reporting

It is important that there is consistency in the way that an environmental incident is reported. Therefore, incidents must be reported by project staff and project managers through the Environmental Incident Report Form (refer Appendix 1, Form 624 available here or Form 400 for Regional Maintenance Delivery projects available here). The incident report form and any subsequent reports must only include factual information. Speculation about the causes and outcomes are not to be included. The completed reports must be forwarded through regional Environment Managers or relevant Project Manager to the Principal Manager Environment Operations.

The incident reporting form requires that certain information be provided as below:
• the name of the project, contractor and Roads and Maritime Region;
• the date, time and duration of the incident;
• an outline of the incident including:
  o a brief description of the incident. If the incident relates to a “failure to comply 
    with a REF determination / approval / licence condition” provide details of the 
    approval or licence number and condition;
  o the exact location and extent of the incident;
  o the circumstances in which the incident occurred (including the cause of the 
    incident, if known): and
  o how it was identified.
• identification of the potential incident category;
• a description of what actions/control measures were taken to rectify the incident and 
  prevent a recurrence of the incident;
• details regarding any notification of the advice to EPA or other authorities such as DP&I; 
  and
• sign off by:
  o the person making the report; and
  o the Environment Manager or project manager.

The information from the form will be entered into the Environment Branch Environmental 
Incident Register for the purposes of record keeping, reporting (e.g. annual environment report 
and regular KPI assessments) and to monitor and improve responses to environmental 
incidents. Directorates are encouraged to keep their own environmental incident registers to 
manage environmental issues at a local level.

Information contained in the form or report should be verified by the relevant Project Manager 
by checking:
• the initial reports of the incident – who made the first report, at what time, and what 
  information was provided, what instructions for actions were given; and
• the incident diary or field notes kept by those involved in the incident – identify and 
  investigate any inconsistencies.

Should initial forms or reports be subsequently found to have ambiguities or other errors, then 
these should be annotated with full explanation and clarification within the initial forms/reports. 
A copy of the original form/report must be retained on file.

Incidents which may have caused material harm to the environment, damaged heritage, 
impacted on biodiversity matters or which are potential breaches of the POEO Act or conditions 
of environment protection licences may be investigated and prosecuted by EPA. DP&I 
authorised officers have the same investigative powers as authorised EPA officers.

The Principal Manager Environment Operations must be contacted in relation to these incidents 
and document control must be observed. This includes any communications, documents, 
records, written statements or reports (for example, emails and file notes) internally between 
Roads and Maritime personnel.

Under the POEO Act and the EP&A Act, EPA and DP&I can require Roads and Maritime to 
provide information and records regarding an incident to assist in their investigations, for 
extample letters, emails, memoranda, drawings, files and other project information. Roads and 
Maritime must submit any information requested by the agencies.
Should Roads and Maritime receive a request from a regulatory authority for a written report regarding an environmental incident, the relevant Project Manager must immediately contact Environment Branch and Legal Branch for advice. Communications with Legal Branch, for the purpose of obtaining legal advice in relation to incidents, may be subject to legal professional privilege. Documents that may be the subject to legal privilege should be clearly identified and sent to Legal Branch prior to producing them to a regulatory agency. Such documents may not be required to be produced to the agencies under written notices to provide information. Environment Branch will provide advice and will co-ordinate a response with Legal Branch. Environment Branch and Legal Branch will assist in the investigation of incidents, prepare legal advice and assist with the preparation of reports to EPA, OEH and DP&I.
## Appendix 1 Environmental incident report Form

Form 624 available [here](#) or Form 400 for Regional Maintenance Delivery projects available [here](#)

---

### Environmental Incident Report - 624

Complete this form for all environmental incidents that occur due to Roads and Maritime Services works or on Roads and Maritime worksites. The purpose of this form 624 is to alert Environment Branch to potential environmental incidents. It does not represent the Roads and Maritime final position for any incident reported on this form.

**Remember!** Complete all fields prior to submitting form. Be succinct, stick to the facts and do not make assumptions. Only record information you know to be correct.

<table>
<thead>
<tr>
<th>Project name:</th>
<th>Region:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor name:</td>
<td></td>
</tr>
</tbody>
</table>

#### Incident details

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Description

Provide a brief description of what happened during the incident.

#### Exact location of the incident

Include changes, landmarks, features, nearest cross street, etc to make it easier to identify later. Provide a sketch if appropriate.

#### Quantity or volume of material escaped or causing incident

Provide an estimate if quantity unknown.

#### Estimated distance to nearest waterway

Include stormwater drains and dry watercourses.

#### What activity was being undertaken when the incident occurred?

#### How was the incident identified? (e.g. Roads and Maritime employee, Council, community, complaint)

#### Name & contact details of complainant (where relevant)

---

### Potential Category 1 Incident

- Material, odour or noise that travels beyond site boundary causing or potentially causing adverse impact to the environment or community.
- Discharge of waters from site not in accordance with any applicable REF determination / approval / environment protection licence condition.
- A fire that travels beyond site boundary.
- Unauthorised harm or desecration to Aboriginal objects and Aboriginal places.
- Failure to comply with a REF determination / approval / environment protection licence condition.

- Unauthorised harm or damage to native vegetation, threatened species, endangered populations, endangered ecological communities or critical habitat.
- Unauthorised harm or damage to threatened aquatic species and protected marine vegetation or unauthorised dredging or reclamation works within a watercourse.
- Unauthorised damage or destruction to any State or locally significant relic or heritage item.
- Material harm to the environment or persons as per Part 5.7 of POEO Act. (including harm on site)
- Works undertaken outside approved areas, without required approval or environmental assessment.

### Potential Category 2 Incident

- Spills that do not leave the site boundary and are cleaned up without material environmental harm or residual environmental impact.
- A fire contained on site without causing impact to the environment.

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Please refer to page 2 for submitting details.

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Catalogue No: 45062565 Form No: 624 (08/2014) ABN 76 256 371 088
Any other details of the incident (including any information which did not fit in spaces above, as well as any special circumstances of the day or the location):

What immediate actions/control measures were taken to rectify or contain the incident?

What corrective action has been taken to prevent similar incidents recurring?

Sign off (officer making report)

Print name: ____________________________  Sign: ____________________________

Position: ____________________________  Date: ____________________________

Notification of EPA and other relevant authorities - To be completed by the relevant Project Manager or Regional Environment Manager

Was EPA notified?  [ ] Yes  [ ] No - If No, provide reasons for not notifying EPA

Who notified the EPA?

Name: ____________________________  Position: ____________________________

Notification method:  [ ] telephone  [ ] on site  Date: ____________________________  Time: ____________________________  [ ] am  [ ] pm

Has there been a EPA Environment Line Complaint?  [ ] Yes  [ ] No  EPA Complaint No: ____________________________

Was any of the following authorities notified?

[ ] Fire & Rescue  [ ] Local Government  [ ] WorkCover  [ ] Ministry of Health

Other authorities notified and why (eg NSW Fire & Rescue, Dept of Planning & Infrastructure, Department of Primary Industries)

[ ]

Is there an EPL for the project site?

[ ] Yes - Was the Pollution Incident Response Management Plan implemented?  [ ] Yes  [ ] No

[ ]

Sign off (Regional Environment Manager/Project Manager)

Print name: ____________________________  Sign: ____________________________

Position: ____________________________  Date: ____________________________

Please submit all completed forms to Environment Branch via Fax: 8588 4173 or email at environmentalperformanceimprovement@rms.nsw.gov.au
Regional Maintenance Delivery staff to forward completed form to QSC; QSC to forward form to LEO and R.M.D. Environment Manager (Fax: 9598 7881).

Catalogue No. 45062565  Form No. 624 (06/2014)  ABN 76 236 371 088

Page 2 of 2
### APPENDIX 2 ROADS AND MARITIME CONTACTS

<table>
<thead>
<tr>
<th>Role</th>
<th>Location</th>
<th>Telephone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Manager Environment</td>
<td>Miller Street</td>
<td>8588 5730</td>
<td></td>
</tr>
<tr>
<td>Principal Manager Environment Operations</td>
<td>Miller Street</td>
<td>8588 5765</td>
<td>0428 608 758</td>
</tr>
<tr>
<td>Principal Manager Environment Policy, Planning and Assessment</td>
<td>Miller Street</td>
<td>8588 5740</td>
<td>0439 595 361</td>
</tr>
<tr>
<td>Maritime Division Emergency Planner Officer</td>
<td>Rozelle office</td>
<td>9563 8476</td>
<td>0428 740 520</td>
</tr>
<tr>
<td>Senior Environment Specialist – Biodiversity</td>
<td>Miller Street</td>
<td>8588 5740</td>
<td>0439 595 361</td>
</tr>
<tr>
<td>Senior Environment Specialist - Heritage</td>
<td>Miller Street</td>
<td>8588 5754</td>
<td>0400 474 405</td>
</tr>
<tr>
<td>Environment Manager Motorways</td>
<td>Miller Street</td>
<td>8588 4372</td>
<td>0408 989 693</td>
</tr>
<tr>
<td>Environment Manager Sydney</td>
<td>Parramatta</td>
<td>8849 2516</td>
<td>0411 148 513</td>
</tr>
<tr>
<td>Environment Manager Western</td>
<td>Parkes</td>
<td>6861 1644</td>
<td>0439 240 297</td>
</tr>
<tr>
<td>Environment Manager Southern</td>
<td>Wollongong</td>
<td>6492 9515</td>
<td>0447 443 957</td>
</tr>
<tr>
<td>Environment Manager Northern</td>
<td>Grafton</td>
<td>6640 1072</td>
<td>0411 406 519</td>
</tr>
<tr>
<td>Environment Manager South-West</td>
<td>Wagga Wagga</td>
<td>8588 5766</td>
<td>0417 652 929</td>
</tr>
<tr>
<td>Environment Manager Hunter</td>
<td>Newcastle</td>
<td>49240440</td>
<td>0413 483 539</td>
</tr>
<tr>
<td>Environment Manager Pacific Highway North</td>
<td>Grafton</td>
<td>6640 1375</td>
<td>0419 248 583</td>
</tr>
<tr>
<td>Environment Manager Pacific Highway South</td>
<td>Newcastle</td>
<td>4924 0281</td>
<td>0411 126 989</td>
</tr>
<tr>
<td>Environmental Manager Regional Maintenance Delivery</td>
<td>Rockdale</td>
<td>9598 7721</td>
<td>0418 113 942</td>
</tr>
</tbody>
</table>

2 Currently vacant. Contact Principal Manager Environment Policy, Planning and Assessment
### APPENDIX 3 CONTACT DETAILS FOR PUBLIC HEALTH UNITS

<table>
<thead>
<tr>
<th>Public Health Unit</th>
<th>Contact Details</th>
<th>After Hours Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goulburn Office</td>
<td>Locked Bag 11, Goulburn, 2580&lt;br&gt;Ph: 02 4824 1840&lt;br&gt;Fax: 02 4824 1831 / 4822 5038 (s)</td>
<td>Ph: 02 6080 8900 (diverts to Albury Base Hospital)&lt;br&gt;- ask for Public Health Officer on call,</td>
</tr>
<tr>
<td>Albury Office</td>
<td>PO Box 3095, Albury, 2640&lt;br&gt;Ph: 02 6080 8900&lt;br&gt;Fax: 02 6080 8999</td>
<td>Ph: 02 6080 8900 (diverts to Albury Base Hospital)&lt;br&gt;- ask for Public Health Officer on call,</td>
</tr>
<tr>
<td>Broken Hill Office</td>
<td>PO Box 457, Broken Hill, 2880&lt;br&gt;Ph: 08 8080 1499&lt;br&gt;Fax: 08 8080 1683 / 1196 (s)</td>
<td>Ph: 08 8080 1333 (Broken Hill Base Hospital)&lt;br&gt;- ask for Public Health Officer on call, if no answer:&lt;br&gt;Mob: 0417 685 259</td>
</tr>
<tr>
<td>Dubbo Office</td>
<td>PO Box 739, Dubbo, 2830&lt;br&gt;Ph: 02 6841 5569&lt;br&gt;Fax: 02 6841 5571 (s)</td>
<td>Ph: 02 6885 8666 (Dubbo Base Hospital)&lt;br&gt;- ask for Public Health Officer on call, if no answer:&lt;br&gt;Mob: 0418 866 397&lt;br&gt;- ask for Public Health Officer on call</td>
</tr>
<tr>
<td>Bathurst Office</td>
<td>PO Box 143, Bathurst, 2795&lt;br&gt;Ph: 02 6339 5601&lt;br&gt;Fax: 02 6339 5173 (s)</td>
<td>Mob: 0428 400 526&lt;br&gt;- ask for Public Health Officer on call</td>
</tr>
<tr>
<td>Newcastle Office</td>
<td>Locked Bag 10, Wallsend, 2287&lt;br&gt;Ph: 02 4924 6477&lt;br&gt;Fax: 02 4924 6490 / 4922 3164 (s)</td>
<td>Ph: 02 4924 6477 (diverts to John Hunter Hospital)&lt;br&gt;- ask for Public Health Officer on call</td>
</tr>
<tr>
<td>Tamworth Office</td>
<td>Locked Mail Bag 9783, NEMSC 2348&lt;br&gt;Ph: 02 6764 8000&lt;br&gt;Fax: 02 6766 3890 (s)</td>
<td>Ph: 02 6764 8000 (diverts to Public Health Officer on call)</td>
</tr>
<tr>
<td>Matraville Office</td>
<td>PO Box 150, Matraville 2036&lt;br&gt;Ph: 02 9311 2707&lt;br&gt;Fax: 02 9700 3747 (s)</td>
<td>Ph: 02 9311 2707</td>
</tr>
<tr>
<td>Public Health Unit</td>
<td>Contact Details</td>
<td>After Hours Contact</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Port Macquarie Office                  | PO Box 126, Port Macquarie 2444 Ph: 02 6588 2750 Fax: 02 6588 2837              | **Pager Service:** 1300 555 555  
**Communicable Disease:** 48073  
**Environmental Health:** 149 377  
If no answer phone: Mob 0417 244 966 or Mob 0407 904 280 |
| Lismore Office                         | PO Box 498, Lismore 2480 Ph: 02 6620 7585 Fax: 02 6622 2151 / 6620 2552 (s)     | **Pager Service:** 1300 555 555  
**Communicable Disease:** 48073  
**Environmental Health:** 149 377  
If no answer phone: Mob 0417 244 966 or Mob 0407 904 280 |
| Hornsby Office                         | Hornsby Hospital, Palmerston Rd, Hornsby 2077 Ph: 02 9477 9400 Fax: 02 9482 1650 / 1358 (s) | Ph: 02 9477 9123  
(Hornsby Hospital)  
- ask for Public Health Officer on call |
| Gosford Office                         | PO Box 361, Gosford, 2250 Ph: 02 4349 4845 Fax: 02 4349 4850 (s)               | Ph: 02 4320 2111  
(Gosford Hospital)  
- ask for Public Health Nurse on call |
| Randwick Office                        | Locked Bag 88, Randwick 2031 Ph: 9382 8333 Fax: 02 9382 8334 / 8314 (s)         | Ph: 02 9382 2222  
(Prince of Wales Hospital)  
- ask for Public Health Nurse on call |
| Wollongong Office                      | Locked Bag 9, Wollongong 2500 Ph: 02 4221 6700 Fax: 02 4221 6759 (s)            | Ph: 02 4222 5000  
(Wollongong Hospital)  
- ask for Public Health Officer on call |
| Eastern Zone(Camperdown Office)        | PO Box 374, Camperdown 2050 Ph: 02 9515 9420 Fax: 02 9515 9440 Fax: 02 9515 9467 (s) | Ph: 02 9515 6111  
(Royal Prince Alfred Hospital)  
- ask Public Health Officer on call |
<table>
<thead>
<tr>
<th>Public Health Unit</th>
<th>Contact Details</th>
<th>After Hours Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penrith Office</td>
<td>PO Box 63, Penrith 2751 Ph: 02 4734 2022 Fax: 02 4734 3300 / 3444 (s)</td>
<td>Ph: 02 9845 5555 (Westmead Hospital) - ask for Public Health Officer on call</td>
</tr>
<tr>
<td>Parramatta Office</td>
<td>Locked Bag 7118, Parramatta BC 2150 Ph: 02 9840 3603 Fax: 02 9840 3608 / 3591 (s)</td>
<td>Ph: 02 9845 5555 (Westmead Hospital) - ask for Public Health Officer on call</td>
</tr>
</tbody>
</table>
## APPENDIX 4 ROLES AND RESPONSIBILITIES

### RESPONSIBILITY (CATEGORY 1 & 2 INCIDENTS)

<table>
<thead>
<tr>
<th>Role</th>
<th>Project Manager</th>
<th>Environment Manager or Delegate</th>
<th>Principal Manager Environment Operations</th>
<th>Executive Environment Committee</th>
<th>Roads and Maritime</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Overview &amp; Performance Review</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oversee environmental incident implementation, review its suitability and adequacy against Roads and Maritime policy, legislative requirements and relevant external party (i.e. EPA) incident management protocols</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review incident management performance and provide feedback on incident management performance</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Incident Management &amp; Investigation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide adequate resources for managing environmental incidents</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure environmental incidents are responded to in a timely manner by adequately trained personnel</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure employees are adequately trained in managing environmental incidents</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide adequate resources for incident investigation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide adequate and timely advice to those Roads and Maritime employees affected by or involved in environmental incidents</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liaise and respond to media enquiries / coverage of environmental incidents or nominating appropriate media contact</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Ensure that when not available to fulfil incident management roles and responsibilities, these responsibilities are delegated to an available and appropriate Roads and Maritime employee</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Incident Administration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop, maintain and control Roads and Maritime environmental incident management procedures and supporting guidance material</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track the corrective action / follow up implementation identified within environmental incident reports</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Coordinate the Environment Executive Committee’s review of environmental incidents</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordinate and implement environmental incident training</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordinate environmental incident performance reporting</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>General</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adhere to the requirements of this Roads and Maritime procedure and supporting document</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Identify opportunities for improvement with environmental incident management and prevention</td>
<td></td>
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APPENDIX A7
Other relevant management measures
Halfway Creek to Glenugie
Pacific Highway Upgrade
APRIL 2015
Contents

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### Glossary / Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>CEMP</td>
<td>Construction Environmental Management Plan</td>
</tr>
<tr>
<td>CMC</td>
<td>Civil Mining and Construction Pty Ltd</td>
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<tr>
<td>CoA</td>
<td>Condition of approval</td>
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<tr>
<td>DP&amp;I</td>
<td>Former NSW Department of Planning and Infrastructure (now DP&amp;E)</td>
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<tr>
<td>DP&amp;E</td>
<td>NSW Department of Planning and Environment</td>
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<tr>
<td>EEC</td>
<td>Endangered Ecological Community</td>
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<tr>
<td>ENM</td>
<td>Excavated Natural Material</td>
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<td>EIS</td>
<td>Woolgoolga to Ballina Pacific Highway Upgrade Environmental Impact Statement (December, 2012)</td>
</tr>
<tr>
<td>EPA</td>
<td>NSW Environment Protection Authority</td>
</tr>
<tr>
<td>EP&amp;A Act</td>
<td>NSW Environmental Planning and Assessment Act 1979</td>
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<td>EPBC Act</td>
<td>Commonwealth Environmental Protection and Biodiversity Conservation Act 1999</td>
</tr>
<tr>
<td>ESCP</td>
<td>Erosion and Sediment Control Plan</td>
</tr>
<tr>
<td>EWMS</td>
<td>Environmental Work Method Statements</td>
</tr>
<tr>
<td>FM Act</td>
<td>NSW Fisheries Management Act 1994</td>
</tr>
<tr>
<td>CHMP</td>
<td>Construction Heritage Management Plan</td>
</tr>
<tr>
<td>Minister, the</td>
<td>NSW Minister for Planning</td>
</tr>
<tr>
<td>NOW</td>
<td>NSW Office of Water</td>
</tr>
<tr>
<td>NPW Act</td>
<td>NSW National Parks and Wildlife Act 1974</td>
</tr>
<tr>
<td>OEH</td>
<td>NSW Office of Environment and Heritage</td>
</tr>
<tr>
<td>Project, the</td>
<td>Pacific Highway Upgrade – Halfway Creek to Glenugie Project,</td>
</tr>
<tr>
<td>Secretary</td>
<td>Secretary of the Department of Planning and Environment</td>
</tr>
<tr>
<td>SPIR</td>
<td>Woolgoolga to Ballina Pacific Highway Upgrade Submissions Preferred Infrastructure Report (November, 2013)</td>
</tr>
<tr>
<td>RMS, Roads and Maritime Services</td>
<td>NSW Roads and Maritime Services</td>
</tr>
<tr>
<td>VENM</td>
<td>Virgin Excavated Natural Material</td>
</tr>
<tr>
<td>CWEMP</td>
<td>Construction Waste and Energy Management Plan</td>
</tr>
<tr>
<td>WRAPP</td>
<td>Waste Reduction and Purchasing Policy</td>
</tr>
</tbody>
</table>

## 1 Other environmental mitigation and management measures
A range of environmental requirements are identified in the various environmental documents, including the EIS, Submissions / Preferred Infrastructure Report, supplementary assessments, Conditions of Approval and RMS documents, and from recent experience on similar road projects.

Relevant management measures and requirements for the project are included within the plans attached to this CEMP (Appendix B):

- Appendix B1 - Construction traffic and access management plan
- Appendix B2 - Construction flora and fauna management plan
- Appendix B3 - Construction noise and vibration management plan
- Appendix B4 - Construction soil and water quality management plan
- Appendix B5 - Construction heritage management plan
- Appendix B6 - Construction air quality management plan
- Appendix B7 - Construction waste and energy management plan
- Appendix B8 – Ancillary facilities management plan
- Appendix B11 – Construction acid sulphate materials management plan

Other relevant management measures to be addressed in construction (Visual, urban design and landscape, Traffic and transport, Land use and property and Social and economic) which have not been captured by specific plans are described in this document, see Tables 1.1 to 1.4.
Table 1-1 Visual, urban design and landscape management and mitigation measures

<table>
<thead>
<tr>
<th>ID</th>
<th>Measure / Requirement</th>
<th>When to implement</th>
<th>Responsibility</th>
<th>Reference</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>VISUAL, URBAN DESIGN AND LANDSCAPE</strong></td>
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<tr>
<td>UD1</td>
<td>If further noise modelling identifies that noise walls are required, further visual assessment address the visual implications of the change. Their location and design will be in accordance with the Noise Wall Design Guideline (RTA, 2007) and the principles identified in Working Paper – Urban design, Landscape Character and Visual Impact (Section 4.6.3).</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (UD1)</td>
</tr>
<tr>
<td>UD2</td>
<td>The project will be carried out in accordance with the urban design and landscaping strategy, as identified in Section 11.4.1 of this EIS. Detailed landscape design for all project batters, and median planting areas will be developed in accordance with the Landscape Guidelines (RTA, 2008), the requirements of the Working Paper – Biodiversity (Section 5.2.2) and the landscape strategy to provide a robust, successful and effective planting design.</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (UD3)</td>
</tr>
</tbody>
</table>
| UD3 | The built form of the project, including consideration of the height, bulk, scale, materials and finishes for:  
  - Bridges.  
  - Retaining walls.  
  - Cuttings and embankments.  
  - Road barriers.  
  - Signage.  
  - Fences.  
  - Clear zones.  
  - Topsoil management.  
  - Water quality control ponds.  
  - Fauna crossing.  
  - Place marking and cultural plantings.  
  The project will be designed in accordance with the design principles identified in Working Paper – Urban Design, Landscape Character and Visual Impact, and relevant Roads and Maritime guidelines. | Pre-construction  | Project Engineer / Site Engineer | Submissions / PIR (UD4) |
<p>| UD4 | Further assessment will be undertaken of the impact of overshadowing on areas surrounding the project, interchanges and overpasses near | Pre-construction  | Project Engineer / Site Engineer | Submissions / PIR (UD5) |</p>
<table>
<thead>
<tr>
<th>ID</th>
<th>Measure / Requirement</th>
<th>When to implement</th>
<th>Responsibility</th>
<th>Reference</th>
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<tbody>
<tr>
<td></td>
<td>residential properties.</td>
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<tr>
<td>UD5</td>
<td>Measures to mitigate visual impacts to viewpoints will be implemented, as identified in Table 11-42 and Working Paper – Urban Design, Landscape Character and Visual Impact. If any further viewpoints were identified during detailed design that have a moderate–high or high impact, screen planting also be considered.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (UD6)</td>
</tr>
<tr>
<td>UD6</td>
<td>Disturbed areas will be progressively revegetated throughout the construction period.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (UD7)</td>
</tr>
<tr>
<td>UD7</td>
<td>Where required, typical landscape treatments for ancillary facilities in forest areas will include:</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (UD8)</td>
</tr>
<tr>
<td></td>
<td>· Providing screen planting.</td>
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<td></td>
<td>· Considering reinstatement of disturbed forest in heavily forested.</td>
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<td></td>
<td>· Considering the importance of the visual landscape at each location and allowing restoration of important forest vegetation to prominent ridge lines or other landscape elements where feasible and reasonable.</td>
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<td></td>
<td>· Negotiating with private landowners, as applicable, to determine future treatments for other non-forested ancillary facility locations.</td>
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<td></td>
<td>· Re-grading disturbed areas to achieve a sustainable and functional landform.</td>
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<tr>
<td></td>
<td>· Stabilising all surfaces in accordance with good engineering and environmental practice.</td>
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<tr>
<td>UD8</td>
<td>Typical landscape treatments for ancillary facilities in agricultural areas will include:</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (UD9)</td>
</tr>
<tr>
<td></td>
<td>· Considering returning remnant agricultural land to agricultural uses.</td>
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<td></td>
<td>· Providing screen planting.</td>
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<tr>
<td></td>
<td>· Reinstating riparian vegetation through ancillary facilities, where practicable, in the open landscape.</td>
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<tr>
<td></td>
<td>· Considering the visual landscape at each ancillary facility and considering restoration of important forest vegetation to prominent ridge lines or other landscape elements where feasible and reasonable.</td>
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<tr>
<td></td>
<td>· Re-grading disturbed areas to achieve a sustainable and functional landform.</td>
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<tr>
<td></td>
<td>· Stabilising all surfaces in accordance with good engineering and environmental practice.</td>
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<td>Measure / Requirement</td>
<td>When to implement</td>
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<td>Reference</td>
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<tr>
<td>UD9</td>
<td>The extent of excavation and the landscaping strategy at borrow sites will be reviewed considering material requirements on the project and the visual impact on the resultant cuttings.</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (UD10)</td>
</tr>
<tr>
<td>UD10</td>
<td>Landscape and rehabilitation works will be monitored and remedial measures implemented where required until vegetation has stabilised.</td>
<td>Operation</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (UD13)</td>
</tr>
<tr>
<td>UD11</td>
<td>The mounding profile of any earth mound will blend suitably into the existing landscape setting. Any mounding to be landscaped will be compacted in 1.5 metre layers with 1:3 maximum batter slopes where reasonable in consideration of constraints within the project corridor. Where feasible and reasonable, permanent mounds will be treated with ameliorants and overlaid with topsoil to minimum 150 millimetres to ensure suitable planting conditions are achieved.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (UD14)</td>
</tr>
</tbody>
</table>
### Table 1-2 Traffic and transport management and mitigation measures

<table>
<thead>
<tr>
<th>ID</th>
<th>Measure / Requirement</th>
<th>When to implement</th>
<th>Responsibility</th>
<th>Reference</th>
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<tbody>
<tr>
<td></td>
<td><strong>TRAFFIC AND TRANSPORT</strong></td>
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<tr>
<td>T&amp;T1</td>
<td>Construction traffic management plans will be prepared and implemented for work sites. They will include:</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR</td>
<td>(T&amp;T1)</td>
</tr>
<tr>
<td></td>
<td>- Identification of all public roads to be used by construction traffic.</td>
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<td></td>
<td>- Management methods to direct construction traffic to use identified roads.</td>
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<tr>
<td></td>
<td>- Identification of all public roads that may be partially or completely closed during construction, and the expected timing and duration of closures.</td>
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<td></td>
<td>- Details on likely impacts on existing traffic (including pedestrians, vehicles, cyclists and disabled persons).</td>
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<td>- Temporary traffic arrangement measures, including property access.</td>
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<td></td>
<td>- Details on access to construction sites, including entry and exit locations, and measures to prevent construction vehicles queuing on public roads.</td>
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<td></td>
<td>- A response plan for any incident involving construction traffic.</td>
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<td></td>
<td>- Mechanisms for monitoring, reviewing and amending the success of the plans.</td>
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<td></td>
<td>The traffic management plans be prepared in consultation with councils.</td>
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<tr>
<td>T&amp;T2</td>
<td>Traffic control schemes will be inspected as follows:</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR</td>
<td>(T&amp;T3)</td>
</tr>
<tr>
<td></td>
<td>- Pre-start and pre-closedown inspections of short-term traffic controls.</td>
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<td></td>
<td>- Weekly inspections of long-term traffic controls.</td>
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<td></td>
<td>- Night-time inspections of long-term traffic controls.</td>
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<tr>
<td>T&amp;T3</td>
<td>Vehicle movement plans and haulage route plans will be prepared. Drivers will be briefed on these vehicle movement plans during project induction. Delivers be planned to occur outside peak traffic periods, where possible. To minimise queuing of construction vehicles on the highway, site personnel use two-way radios to call up haulage trucks from layover areas on a 'just in time' basis.</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR</td>
<td>(T&amp;T4)</td>
</tr>
<tr>
<td>T&amp;T4</td>
<td>Applications for Road Occupancy licences will be submitted to Roads and Maritime Services and the relevant council at least 10 days prior to construction.</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR</td>
<td>(T&amp;T5)</td>
</tr>
<tr>
<td>ID</td>
<td>Measure / Requirement</td>
<td>When to implement</td>
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<tr>
<td>T&amp;T5</td>
<td>Pre-construction road dilapidation reports will be prepared for all roads likely to be used by construction traffic. Post-construction road dilapidation reports will be prepared following the completion of construction for all roads assessed prior to construction. Dilapidation resulting from construction activity will be repaired. Copies of road dilapidation reports will be sent to the relevant roads authority.</td>
<td>Pre-construction and construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (T&amp;T6)</td>
</tr>
<tr>
<td>T&amp;T6</td>
<td>Access be maintained to properties during construction including, where necessary and feasible, temporary alternative access unless otherwise agreed with property owners. Where any legal access is permanently affected, alternative access to an equivalent standard to and from a public road will be provided where a property has no other legal means of access and where such alternative access is feasible and practical. Where alternative access arrangements are not feasible or practical and a property is left with no access to a public road, negotiations will be undertaken with the relevant property owner for acquisition of the property in accordance with the provisions of the \textit{Land Acquisition (Just Terms Compensation) Act 1991}.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (T&amp;T7)</td>
</tr>
<tr>
<td>T&amp;T7</td>
<td>Where changes in access affect bus stop locations, temporary alternatives will be provided in conjunction with bus operators and affected schools to maintain access during construction.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (T&amp;T8)</td>
</tr>
<tr>
<td>T&amp;T8</td>
<td>Where access to State forest land is affected during construction, a new access route will be provided in consultation with the Department of Primary Industries (Forests NSW).</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (T&amp;T9)</td>
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<td>Measure / Requirement</td>
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<tr>
<td>LU1</td>
<td>Ongoing communication and consultation will be undertaken with directly affected property owners about the property acquisition process. This includes the provision of information on the timing of acquisitions, and the process for property acquisitions under the Land Acquisition (Just Terms Compensation) Act 1991 and Roads and Maritime Land Acquisition Policy (RTA, 1999).</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (LU1)</td>
</tr>
<tr>
<td>LU2</td>
<td>Ongoing consultation will be undertaken with directly affected property owners during the detailed design phase to identify measures to mitigate potential impacts on the use and viability of land. This will relate to matters such as adjustments to fencing, access, farm infrastructure and relocation of impacted ancillary structures, as required.</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (LU2)</td>
</tr>
<tr>
<td>LU3</td>
<td>Property adjustments will be completed for fencing, access tracks, cattle underpasses and other farm infrastructure in consultation with the impacted land owner.</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (LU3)</td>
</tr>
<tr>
<td>LU4</td>
<td>The Fencing Strategy will be further developed during detailed design, in consultation with relevant stakeholders. This will build upon the principles of the strategy described in Chapter 3 of the Submissions and Preferred Infrastructure Report (Roads and Maritime, 2013).</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (LU4)</td>
</tr>
<tr>
<td>LU5</td>
<td>Sterilisation and severance of land uses and lots will be minimised by amalgamating severed parcels of land together, where possible, with provision of road access, in accordance with the project’s remnant land use strategy.</td>
<td>Pre-construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (LU5)</td>
</tr>
<tr>
<td>LU6</td>
<td>Where required, acquisition of State forests will be minimised in accordance with the provisions of the Forestry Act 2012. Revocation of land dedicated or reserved as national parks or nature reserves will be in accordance with the National Parks and Wildlife Act 1974. Acquisition of land owned by Local Aboriginal Land Councils will be in accordance with the provisions of the Aboriginal Land Rights Act 1983.</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (LU6)</td>
</tr>
<tr>
<td>LU7</td>
<td>A remnant land strategy to minimise land use severance and sterilisation, and a mitigation strategy for final land uses will be developed in consultation with the Clarence Valley.</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions / PIR (LU7)</td>
</tr>
<tr>
<td>LU8</td>
<td>Access to properties near construction works will be maintained, including where required for the movement of farm equipment and livestock between properties, unless otherwise agreed with landowners.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (LU9)</td>
</tr>
<tr>
<td>ID</td>
<td>Measure / Requirement</td>
<td>When to implement</td>
<td>Responsibility</td>
<td>Reference</td>
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<tr>
<td>LU9</td>
<td>Where temporary changes to property access are required during construction, alternative access will be determined in consultation with affected property owners and tenants.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU10) / PIR</td>
</tr>
<tr>
<td>LU10</td>
<td>There will be ongoing communication with local communities about changes to the local road network, including likely delays and disruptions and alternative accesses if required.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU11) / PIR</td>
</tr>
</tbody>
</table>

**Construction impacts to primary industry, including forestry, an agriculture uses**

<table>
<thead>
<tr>
<th>ID</th>
<th>Measure / Requirement</th>
<th>When to implement</th>
<th>Responsibility</th>
<th>Reference</th>
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</thead>
<tbody>
<tr>
<td>LU11</td>
<td>Where possible, onsite reuse of any spoil is the preferred solution for managing the impacts, although alternative options for the reuse or disposal of spoil will be identified in the surplus material management plan.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU12) / PIR</td>
</tr>
<tr>
<td>LU12</td>
<td>The management of surplus material will be further developed during detailed design, in consultation with relevant stakeholders. This will build upon the principles of the strategy described in Chapter 3 of the Submissions and Preferred Infrastructure Report (Roads and Maritime, 2013).</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions (LU13) / PIR</td>
</tr>
<tr>
<td>LU13</td>
<td>Forestry Corporation of NSW will be able to harvest millable timber in affected State forests prior to works commencing. However, consideration will also be given to opportunities for the productive use of trees removed from non-State forest areas of the project, including ancillary facilities where necessary.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU14) / PIR</td>
</tr>
<tr>
<td>LU14</td>
<td>Environmental management measures will be implemented to minimise potential for impacts on adjoining agricultural uses, including from changes in water quality and spread of weeds and pests.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU15) / PIR</td>
</tr>
<tr>
<td>LU15</td>
<td>Where pesticides are required during construction, implement appropriate environmental management measures to avoid potential impacts on adjoining agricultural properties.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU16) / PIR</td>
</tr>
<tr>
<td>LU16</td>
<td>There will be ongoing consultation and communication with managers of agricultural properties to identify any potential impacts on nearby construction workers from farm operations (ie use of pesticides on agricultural properties).</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU17) / PIR</td>
</tr>
</tbody>
</table>

**Utilities and infrastructure**

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<thead>
<tr>
<th>ID</th>
<th>Measure / Requirement</th>
<th>When to implement</th>
<th>Responsibility</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>LU17</td>
<td>Relocation or adjustment of infrastructure will be planned to minimise disruptions and impacts on surrounding properties.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU19) / PIR</td>
</tr>
<tr>
<td>LU18</td>
<td>Communication will be undertaken with nearby communities about the timing and duration of potential disruptions to infrastructure.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU20) / PIR</td>
</tr>
<tr>
<td>ID</td>
<td>Measure / Requirement</td>
<td>When to implement</td>
<td>Responsibility</td>
<td>Reference</td>
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</tr>
<tr>
<td>LU19</td>
<td><strong>Property management</strong>&lt;br&gt; Roads and Maritime’ land that is required for the project will be appropriately maintained. This will be undertaken by regional Roads and Maritime officers or a designated local authority. Roads and Maritime manage the leasing and maintenance of property identified as suitable for tenants.</td>
<td>Operation</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU21)</td>
</tr>
<tr>
<td>LU20</td>
<td><strong>Operational impacts to primary industries</strong>&lt;br&gt; Ongoing consultation will be undertaken with owners of agricultural properties affected by the project – through acquisition, changes to local access or fragmentation of properties – about potential impacts on farming operations and potential measures to manage or mitigate identified impacts.</td>
<td>Operation</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU23)</td>
</tr>
<tr>
<td>LU21</td>
<td><strong>Operational impacts to primary industries</strong>&lt;br&gt; Consultation with Forestry Corporation will be undertaken regarding access to and within State forests where required, in accordance with the Forestry Act 2012.</td>
<td>Operation</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU24)</td>
</tr>
<tr>
<td>LU22</td>
<td><strong>Operational impacts to primary industries</strong>&lt;br&gt; Consultation with Forestry Corporation will be undertaken regarding the relocation of fire trails directly impacted by the project’s construction or operation.</td>
<td>Operation</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU25)</td>
</tr>
<tr>
<td>LU23</td>
<td><strong>Property access</strong>&lt;br&gt; As far as possible, property accesses will be reinstated or new access provided, in consultation with impacted landowners.</td>
<td>Operation</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU27)</td>
</tr>
<tr>
<td>LU24</td>
<td><strong>Property access</strong>&lt;br&gt; Access to national parks and nature reserves will be reinstated in consultation with the relevant department in Office of Environment and Heritage.</td>
<td>Operation</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions (LU28)</td>
</tr>
<tr>
<td>LU25</td>
<td><strong>Mining and petroleum production</strong>&lt;br&gt; Consultation will be undertaken with the relevant State Government agency to consider any future coal seam gas production in the vicinity of the project.</td>
<td>Pre-construction</td>
<td>Project Engineer / Site Engineer</td>
<td>Submissions (LU30)</td>
</tr>
<tr>
<td>LU26</td>
<td><strong>Utilities and infrastructure</strong>&lt;br&gt; Consultation will be undertaken with service and utility providers to verify locations, impacts and any relocation or construction protection work required.</td>
<td>Operation</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions (LU31)</td>
</tr>
<tr>
<td>ID</td>
<td>Measure / Requirement</td>
<td>When to implement</td>
<td>Responsibility</td>
<td>Reference</td>
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<tr>
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</tr>
<tr>
<td>SE1</td>
<td>Consultation will be undertaken with local business owners, industry and tourism operators directly affected by construction and located closest to construction works. The focus will be on the timing, duration and likely impact of construction activities, to identify appropriate measures to manage potential impacts.</td>
<td>Pre-construction and construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (SE1)</td>
</tr>
<tr>
<td>SE2</td>
<td>Consultation will be undertaken with managers of community services and facilities near the proposed construction works, to ensure that potential impacts are appropriately managed.</td>
<td>Pre-construction and construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (SE2)</td>
</tr>
<tr>
<td>SE3</td>
<td>Consultation will be undertaken with residents and local communities closest to construction works about construction activities, including timing, duration and likely impacts.</td>
<td>Pre-construction and construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (SE3)</td>
</tr>
<tr>
<td>SE4</td>
<td>Maintain access to properties near to the project during construction, including, where required, for the movement of farm equipment and livestock between properties, and other affected agribusinesses.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (SE7)</td>
</tr>
<tr>
<td>SE5</td>
<td>Where temporary changes to property access are required during construction, alternative access will be determined in consultation with affected property owners and tenants.</td>
<td>Construction</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (SE8)</td>
</tr>
<tr>
<td>SE6</td>
<td>Undertake consultation with community facilities located adjacent to the project about proposed changes to local access.</td>
<td>Operation</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (SE9)</td>
</tr>
<tr>
<td>SE7</td>
<td>Undertake early and ongoing communication and consultation with emergency services to allow planning for potential changes to response patterns and input into the design development.</td>
<td>Operation</td>
<td>Construction Manager / Environment Manager</td>
<td>Submissions / PIR (SE10)</td>
</tr>
</tbody>
</table>
2 Compliance management

2.1 Roles and responsibilities
The CMC Project Team’s organisational structure and overall roles and responsibilities are outlined in Section 4.2 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Chapter 1 of this Plan.

2.2 Training
Details regarding staff induction and training are outlined in Chapter 5 of the CEMP.

2.3 Monitoring and inspection
Regular monitoring and inspections will be undertaken during construction.
Additional requirements and responsibilities in relation to inspections, in addition to those in Table 1-1, are documented in Section 8.2 of the CEMP.

2.4 Auditing
Audits (both internal and external) will be undertaken to assess the effectiveness of environmental mitigation and management measures, compliance with this sub plan, CoA and other relevant approvals, licenses and guidelines.
Audit requirements are detailed in Section 8.3 of the CEMP.

2.5 Reporting
Reporting requirements and responsibilities are documented in the Sections 8.3, 8.4 and 8.5 of the CEMP.
Appendix A8

Compliance Tracking Program Woolgoolga to Ballina Stage 1
COMPLIANCE TRACKING PROGRAM

Woolgoolga to Ballina – Stage 1

APRIL 2015
Document control

<table>
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<th>Revision</th>
<th>Date</th>
<th>Description</th>
<th>Approval</th>
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<td>0</td>
<td>30/4/15</td>
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<td>2</td>
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### Glossary / Abbreviations

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<thead>
<tr>
<th>ASS</th>
<th>Acid sulfate soils</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMP</td>
<td>Construction environmental management plan</td>
</tr>
<tr>
<td>Compliance audit</td>
<td>Verification of how implementation is proceeding with respect to a construction environmental management plan (CEMP) (which incorporates the relevant approval conditions).</td>
</tr>
<tr>
<td>CoA</td>
<td>Conditions of approval</td>
</tr>
<tr>
<td>DP&amp;E</td>
<td>Department of Planning and Environment</td>
</tr>
<tr>
<td>EA</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>Ecological sustainable development</td>
<td>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).</td>
</tr>
<tr>
<td>EPA</td>
<td>NSW Environment Protection Authority</td>
</tr>
<tr>
<td>ERG</td>
<td>Environmental Review Group – comprising representatives of RMS, Environmental Representative, Project delivery team, regulatory authorities (EPA, DPI – Fisheries Conservation and Aquaculture, NOW) and Councils. The ERG will be maintained for the duration of the Project and will meet regularly and undertake environmental inspections. The role the ERG is to provide proactive advice on environmental management issues and review the environmental performance of the Project.</td>
</tr>
<tr>
<td>EMM</td>
<td>Environmental Management Measures</td>
</tr>
<tr>
<td>EMS</td>
<td>Environmental management system</td>
</tr>
<tr>
<td>Environmental aspect</td>
<td>Defined by AS/NZS ISO 14001:2004 as an element of an organisation’s activities, products or services that can interact with the environment.</td>
</tr>
<tr>
<td>Environmental impact</td>
<td>Defined by AS/NZS ISO 14001:2004 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation’s environmental aspects.</td>
</tr>
<tr>
<td>Environmental incident</td>
<td>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.</td>
</tr>
<tr>
<td>Environmental objective</td>
<td>Defined by AS/NZS ISO 14001:2004 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.</td>
</tr>
<tr>
<td>Environmental policy</td>
<td>Statement by an organisation of its intention and principles for environmental performance.</td>
</tr>
<tr>
<td>Environmental target</td>
<td>Defined by AS/NZS ISO 14001:2004 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 in order to achieve those objectives.</td>
</tr>
<tr>
<td>Environmental Representative</td>
<td>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.</td>
</tr>
<tr>
<td>EP&amp;A Act</td>
<td>Environmental Planning and Assessment Act 1979</td>
</tr>
<tr>
<td>EPL</td>
<td>Environment Protection Licence</td>
</tr>
<tr>
<td>Minister, the Minister for Planning</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Non-compliance</strong></td>
<td>Failure to comply with the requirements of the Project approval or any applicable license, permit or legal requirements.</td>
</tr>
<tr>
<td><strong>Non-conformance</strong></td>
<td>Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation.</td>
</tr>
<tr>
<td><strong>NOW</strong></td>
<td>NSW Office of Water</td>
</tr>
<tr>
<td><strong>OEH</strong></td>
<td>Office of Environment and Heritage</td>
</tr>
<tr>
<td><strong>Project, the</strong></td>
<td>The Woolgoolga to Ballina Project</td>
</tr>
<tr>
<td><strong>RMS</strong></td>
<td>Roads and Maritime Services</td>
</tr>
<tr>
<td><strong>Secretary</strong></td>
<td>Secretary of the NSW Department of Planning and Environment <em>(or delegate)</em></td>
</tr>
<tr>
<td><strong>Stage 1 of the Woolgoolga to Ballina Upgrade</strong></td>
<td>Section 1 – Woolgoolga to Halfway Creek</td>
</tr>
<tr>
<td></td>
<td>Section 2 – Halfway Creek to Glenugie</td>
</tr>
<tr>
<td></td>
<td>Wave 1- Soft soils works at Harwood</td>
</tr>
<tr>
<td></td>
<td>Wave 2- Soft soils works at Whytes Road to Pimlico</td>
</tr>
<tr>
<td></td>
<td>Wave 3- Soft soils works between Tyndale and Iluka Road and at Tuckombil Canal, Woodburn</td>
</tr>
</tbody>
</table>
1 Introduction

1.1 Project description

NSW Roads and Maritime Services is upgrading the Pacific Highway between Woolgoolga and Ballina on the NSW North Coast. This is known as the Woolgoolga to Ballina Pacific Highway upgrade project. An overview of the project is shown in Figure 1-1.

Figure 1-1 Woolgoolga to Ballina Pacific Highway Upgrade

The project would upgrade around 155 kilometres of highway and represents the last priority (known as ‘Priority 3’ in the upgrade program) in achieving a four-lane divided road between
Hexham and the NSW/Queensland Border. The project therefore forms a major part of the overall upgrade program and when constructed, would complete the four-lane divided road program. It would be jointly funded by the NSW and Australian governments.

The Woolgoolga to Ballina project is Australia’s largest regional infrastructure project and will duplicate about 155 kilometres to four-lane divided road. The project starts about six kilometres north of Woolgoolga (north of Coffs Harbour) and ends about six kilometres south of Ballina.

When complete, the project will:

- Reduce overall length from 180 kilometres to about 167 kilometres, saving about 13 kilometres in travel distance
- Allow for a higher posted speed limit of up to 110 km/h
- Reduce travel time from 130 minutes to about 105 minutes, saving 25 minutes
- Reduce crash rates by an expected 27 per cent due to divided carriageways
- Improve travel reliability through better flood immunity, fewer incidents and more readily available alternative routes.

Key features of the upgrade include:

- Duplication of 155 kilometres of the Pacific Highway to a motorway standard (Class M) or arterial road (Class A), with two lanes in each direction and room to add a third lane if required in the future
- Split-level (grade-separated) interchanges at Range Road, Glenugie, Tyndale, Maclean, Yamba / Harwood, Woombah (Iluka Road), Woodburn, Broadwater and Wardell
- Bypasses of South Grafton, Ulmarra, Woodburn, Broadwater and Wardell
- About 40 bridges over rivers, creeks and floodplains, including major bridges crossing the Clarence and Richmond rivers
- Fifty-five underpasses and bridges over and under the highway to maintain access to local roads that crossing the highway
- Access roads to maintain connections to existing local roads and properties
- Structures designed to encourage animals over and under the upgraded highway where it crosses key animal habitat or wildlife corridors
- Rest areas located at about 50 kilometre intervals at Arrawarra, Pine Brush (Tyndale), north of Mororo Road and north of the Richmond River
- A heavy vehicle checking station near Halfway Creek and north of the Richmond River.

The Woolgoolga to Ballina upgrade does not include the completed Devils Pulpit and Glenugie upgrade projects.

Sections of the project are located adjacent to previously approved highway upgrades. As a result, the following approvals will also apply to the relevant sections of the project:

- Sapphire to Woolgoolga Pacific Highway upgrade – NSW Approval (06_0293) 13 January 2009

1.2 Staging

A Staging Report has been prepared and approved in accordance with the requirements of the NSW Condition of Approval A7 which states:

_The Applicant may elect to construct and/or operate the SSI in stages. Where staging is proposed, the Applicant shall submit a Staging Report to the Secretary prior to the commencement of each proposed stage. The Staging Report shall provide details of:_
(a) how the SSI would be staged, including general details of work activities associated with each stage and the general timing of when each stage would commence; and

(b) details of the relevant conditions of approval, which would apply to each stage and how these shall be complied with across and between the stages of the SSI.

Where staging of the SSI is proposed, these conditions of approval are only required to be complied with at the relevant time and to the extent that they are relevant to the specific stage(s).

The project is also approved under the Commonwealth Environment Protection and Biodiversity Act 1999 (012/6394 approval dated 14/08/14).

The Staging Report as required by NSW approval condition A7 must be submitted to the Minister prior to the commencement of each of the proposed stage(s). In accordance with NSW approval condition A7 the Staging Report must outline how the proposal will be staged. The Staging Report must also outline the threatened species and communities, and migratory species impact in each stage.

The Staging Report describes the activities associated with the project stages and how compliance will be address across and between these.

Roads and Maritime proposes to construct the project in a number of stages. Given the nature of the project and range of procurement and delivery options involved, Roads and Maritime will update the staging report progressively as further details are confirmed. Stage 1 of the Woolgoolga to Ballina upgrade includes three construction activities. The general location of these stages is shown in Figure 1-2.

Stage 1:

1). Section 1 – Woolgoolga to Halfway Creek
2). Section 2 – Halfway Creek to Glenugie
3). Soft Soil preload construction undertaken in three waves of construction packaging to suit
   a). Wave 1- Soft soils works at Harwood
   b). Wave 2- Soft soils works at Whytes Road to Pimlico
   c). Wave 3- Soft soils works between Tyndale and lluka Road and at Tuckombil Canal, Woodburn

This Compliance Tracking Program is for Stage 1 of the Woolgoolga to Ballina upgrade.
Figure 1-2 Location of Stage 1 activities
Stage 2 onwards:

Delivery of the remaining sections of the Pacific Highway Upgrade will be tailored to the project, based on the model used to build infrastructure for the London Olympics. The upgrade will be built using an industry partner contract model to harness the best ideas and solutions from the private sector and draw on knowledge from within government.

Current practice would be to deliver the Woolgoolga to Ballina upgrade as four or five separate packages using design and build or build only contracts. Under this new model, a major provider with design, building and management expertise will be engaged to oversee the project in collaboration with Roads and Maritime's Pacific Highway Office, managing multiple contracts for professional services, supply, and building of the highway. The delivery partner model will offer better value for money and drive project efficiencies.

Once the delivery partner has been engaged and the future stages scoped, the Staging Report will be updated to describe the proposed staging of the remaining sections between Woolgoolga and Ballina.

1.3 Purpose

The key objective of this Compliance Tracking Program is to track compliance with the requirements of the Minister’s Conditions of Approval during the design and each stage of construction of the Project.

1.4 Environmental management system overview

The Construction Environmental Management Plan (CEMP) is the primary system to manage and control the environmental aspects of the Project during construction. It also provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled. The strategies defined in the CEMP have been developed with consideration of the Project approval requirement, safeguards and mitigation measures presented in the environmental assessment and approval documents. The CEMP establishes the system for implementation, monitoring and continuous improvement to minimise impacts from the Project on the environment.

This Compliance Tracking Program is separate to the CEMP, but is part of a suite of environmental management documents prepared for the Project.

1.5 Relevant documentation

Documentation relevant to the Compliance Tracking Program includes:

- RMS, Woolgoolga to Ballina. Upgrading the Pacific Highway. Environmental Assessment (December 2012)
- New South Wales Environmental Planning and Assessment Act 1979 (SSI-4963), approval dated 24 June 2014
- Commonwealth Environment Protection and Biodiversity Act 1999 (012/6394), approval dated 14 August 2014
## 2 Program requirements

The Compliance Tracking Program has been prepared as a requirement of CoA D27. The requirements, as stipulated by this CoA, are detailed in Table 2-1.

### Table 2-1 CoA requirements for the Compliance Tracking Program

<table>
<thead>
<tr>
<th>CoA No.</th>
<th>Requirement</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>D27</td>
<td>The Applicant shall prepare and implement a <strong>Compliance Tracking Program</strong>, to track compliance with the requirements of this approval, prior to the commencement of construction and operate from the date of its approval to a minimum of one year following commencement of operation, or as otherwise agreed by the Secretary. The Program shall be prepared for the approval of the Secretary, and include, but not necessarily be limited to:</td>
<td>This document</td>
</tr>
<tr>
<td></td>
<td>(a) provisions for the notification of the Secretary prior to the commencement of construction and prior to the commencement of operation of the SSI (including prior to each stage, where works are being staged);</td>
<td>Section 2.1</td>
</tr>
<tr>
<td></td>
<td>(b) provisions for periodic review of the compliance status of the SSI against the requirements of this approval;</td>
<td>Section 2.2</td>
</tr>
<tr>
<td></td>
<td>(c) provisions for periodic reporting of compliance status to the Secretary, including a Pre-Construction Compliance Report, prior to the commencement of construction, and a Pre-Operation Compliance Report prior to the commencement of operation. These reports may be staged to suit the staged construction/operation of the SSI;</td>
<td>Section 2.3</td>
</tr>
<tr>
<td></td>
<td>(d) a program for independent environmental auditing in accordance with ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing;</td>
<td>Section 2.4</td>
</tr>
<tr>
<td></td>
<td>(e) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents;</td>
<td>Section 2.5</td>
</tr>
<tr>
<td></td>
<td>(f) provisions for reporting environmental incidents to the Secretary and relevant public authorities during construction;</td>
<td>Section 2.6</td>
</tr>
<tr>
<td></td>
<td>(g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management; and</td>
<td>Section 2.7</td>
</tr>
<tr>
<td></td>
<td>(h) provisions for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.</td>
<td>Section 2.8</td>
</tr>
</tbody>
</table>
2.1 Secretary notification

CoA D27 (a) requirement:
“provisions for the notification of the Secretary prior to the commencement of construction and prior to the commencement of operation of the SSI (including prior to each stage, where works are being staged)”

Construction will commence on each stage of the Project according to the Staging Report following approval by the Secretary of the relevant CEMP, associated environmental plans and other relevant documentation required by the approval.

RMS will advise the Secretary in writing prior to the commencement of construction and operation.

2.2 Period compliance review

CoA D27 (b) requirement:
“provisions for periodic review of the compliance status of the SSI against the requirements of this approval”

RMS will review the status of compliance and submit periodic compliance reports to the Secretary as follows:
- Prior to the commencement of construction.
- Six months after the commencement of construction and then at six monthly intervals thereafter.
- Prior to the commencement of operation.

The compliance tracking tables (contained to Appendix A) form an integral part of this periodic review.

These tables establish a format for recording compliance and include:
- Description of the environmental obligation.
- The stage of the project to which it relates.
- Status.
- Responsibility

2.3 Period compliance reporting

CoA D27 (c) requirement:
“provisions for periodic reporting of compliance status to the Secretary, including a Pre-Construction Compliance Report, prior to the commencement of construction, and a Pre-Operation Compliance Report prior to the commencement of operation. These reports may be staged to suit the staged construction/operation of the SSI”

At intervals prescribed in Section 2.2 the status of compliance will be reviewed and reported to the Secretary in the form of a Compliance Tracking Report. Compliance tracking reports will typically include:
- Scope of the activities undertaken during the reporting period.
- Performance of environmental controls that have been implemented.
- Compliance with CoA, revised EMMs as recorded in the compliance tracking tables.
- Non-compliances during the reporting period.
- Detail of all incidents recorded and action taken during the reporting period.
- Outcomes of monitoring undertaken over the reporting period and review of compliance against relevant criteria.
- Significant outcomes of audits and ERG inspections undertaken during the reporting period.
• Detail of substantiated environmental complaints received, responses taken and current status (ie open or closed).

2.4 Independent environmental auditing

CoA D27 (d) requirement:
“a program for independent environmental auditing in accordance with ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing”

RMS will ensure that independent audits are undertaken in accordance with ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing at six monthly intervals throughout construction. The audits will assess compliance against the CoA and EMMs. The initial independent environmental audit will be undertaken within three months of the commencement of construction activities.

2.5 Incident reporting and response

CoA D27 (e) requirement:
“mechanisms for recording environmental incidents during construction and actions taken in response to those incidents”

RMS’s Environmental Incident Classification and Reporting Procedure will be implemented for all environmental incidents for the Project. The full procedure is provided in Appendix A6 of CEMP.


Typically, environmental incidents will be notified verbally immediately and in writing within 1 hour of any incident occurring to the RMS Representative and the Environmental Representative. Incident reports will be provided to RMS Representative and the Environmental Representative within 24 hours of the incident occurring, including lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident. All efforts will be undertaken immediately to avoid and reduce impacts 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.

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

• If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial.
• If actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds $10,000.

The Project team comprising Roads and Maritime and its Delivery Partner will maintain all records relating to environmental incidents. Roads and Maritime Environment Branch will also provide assistance with maintaining records relating to environmental incidents.

2.6 Incident reporting to Secretary

CoA D27 (f) requirement:
“provisions for reporting environmental incidents to the Secretary and relevant public authorities during construction”

The Secretary will be notified of incidents in writing in circumstances where:

• The actual or potential harm to the health or safety of human beings or ecosystems is not trivial.
• The actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds $10,000.
An initial notification to the Secretary will be made verbally within two working days. The written notification will be made within 10 working days.

Where incidents are considered to be minor, ie do not meet the criteria above, they will be reported to the Secretary in accordance with the compliance tracking program at frequencies prescribed in Section 2.2.

### 2.7 Addressing non-compliance

<table>
<thead>
<tr>
<th>CoA D27 (g) requirement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management”</td>
</tr>
</tbody>
</table>

Section 8.4 of the CEMP describes in detail the system for tracking compliance prior to and during construction.

Where a non-compliance has been identified, a corrective/preventative action (or actions) will be implemented.

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

The close-out of required actions will be reviewed during forums including Environmental Representative and ERG inspections, and the Environmental Representative will be actively involved in the review and resolution of non-compliances.

### 2.8 Employee inductions

<table>
<thead>
<tr>
<th>CoA D27 (h) requirement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“provisions for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities”</td>
</tr>
</tbody>
</table>

Section 5.1 of the CEMP describes in detail how all personnel working on the Project are aware of their environmental obligations.

During construction, the Environmental Manager (or delegate) will conduct the environmental component of the site inductions. The environmental component will include, but not limited to, an overview of:

- Relevant details of the CEMP including purpose and objectives.
- Key environmental issues.
- Conditions of environmental licences, permits and approvals.
- Specific environmental management requirements and responsibilities.
- Mitigation measures for the control of environmental issues.
- Incident response and reporting requirements.
- Information relating to the location of environmental constraints.

A record of all environment inductions will be maintained and kept on-site.
Appendix A
Compliance tables
## OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

### STAGING

#### LIMITS OF APPROVAL

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Compliance Tracking - NSW Conditions of Approval</th>
<th>NSW Conditions of Approval</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
</tr>
<tr>
<td>A2</td>
<td>In addition to meeting the specific performance criteria established under this approval, the Applicant shall implement all feasible and reasonable measures to prevent and/or minimise any harm to the environment that may result from the construction or operation of the SSI.</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
</tr>
<tr>
<td>A3</td>
<td>The Applicant shall ensure that all licences, permits and approvals are obtained as required by law and maintained as required throughout the life of the SSI. No condition of this approval removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approvals.</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
</tr>
<tr>
<td>A4</td>
<td>The Applicant shall ensure that any strategy, plan, program or other document required by the conditions of this approval and relevant to each stage (as identified in the Staging Report) is submitted to the Secretary no later than one month prior to the commencement of the relevant stage(s), unless otherwise agreed by the Secretary.</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
</tr>
<tr>
<td>A5</td>
<td>The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.</td>
<td>Pre-construction, Construction and Operation</td>
<td>RMS and Contractor</td>
</tr>
<tr>
<td>A6</td>
<td>In the event of a dispute between the Applicant and a public authority, in relation to an applicable requirement of this approval or relevant matter relating to the SSI, either party may refer the matter to the Secretary for resolution. The Secretary’s determination of any such dispute shall be final and binding on the parties.</td>
<td>Pre-construction, Construction and Operation</td>
<td>RMS and Contractor</td>
</tr>
<tr>
<td>A7</td>
<td>The Applicant shall notify the Secretary and relevant public authorities of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 24 hours of becoming aware of the incident. The Applicant shall provide full written details of the incident to the Secretary within seven days of the date on which the incident occurred.</td>
<td>Pre-construction, Construction and Operation</td>
<td>RMS and Contractor</td>
</tr>
<tr>
<td>A8</td>
<td>The Applicant shall meet the requirements of the Secretary or relevant public authority (as determined by the Secretary) to address the cause or impact of any incident, as it relates to this approval, reported in accordance with condition A12, within such period as the Secretary may require.</td>
<td>Pre-construction, Construction and Operation</td>
<td>RMS and Contractor</td>
</tr>
</tbody>
</table>

### STATUTORY REQUIREMENTS

#### (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this approval; and

- Pacific Highway Upgrade Woolgoolga to Ballina Environmental Impact Statement Volumes 1A, 1B, 2, 3, 4A, 4B, 5, 6A, 6B, 7, 8 and 9, prepared by Roads and Maritime Services, dated December 2012.
- Pacific Highway Upgrade Woolgoolga to Ballina Submission/Preferred Infrastructure Report Main Volume and Appendices, prepared by Roads and Maritime Services, dated December 2012.
- Connectivity structures listed in Woolgoolga to Ballina Alliance Update 20 Feb 2014 Structures Inventory (property Sections 1 and 2) and Woolgoolga to Ovangelie Financial Connectivity Tracking Register, 11/02/2014, prepared by Roads and Maritime Services, dated 14 March 2013.
- Pacific Highway Upgrade Woolgoolga to Ballina Utilities impact native vegetation (D00366_0102_Utilities Clearing Vegetation_v9), prepared by Roads and Maritime Services, dated 21 May 2014.

#### (b) Pacific Highway Upgrade Woolgoolga to Ballina Environmental Impact Statement Volumes 1A, 1B, 2, 3, 4A, 4B, 5, 6A, 6B, 7, 8 and 9, prepared by Roads and Maritime Services, dated December 2012.

#### (c) Ancillary facility sites listed in Woolgoolga to Ballina Pacific Highway Upgrade - Ancillary descriptions and impact assessment, prepared by Roads and Maritime Services, dated 13 December 2013.

#### (d) Connectivity structures listed in Woolgoolga to Ballina Alliance Update 20 Feb 2014 Structures Inventory (property Sections 1 and 2) and Woolgoolga to Ovangelie Financial Connectivity Tracking Register, 11/02/2014, prepared by Roads and Maritime Services, dated 14 March 2013.

#### (e) Utilities impact native vegetation (D00366_0102_Utilities Clearing Vegetation_v9), prepared by Roads and Maritime Services, dated 21 May 2014.

#### (f) Pacific Highway Upgrade Woolgoolga to Ballina Submission/Preferred Infrastructure Report Main Volume and Appendices, prepared by Roads and Maritime Services, dated December 2012.

#### (g) Pacific Highway Upgrade Woolgoolga to Ballina Environmental Impact Statement Volumes 1A, 1B, 2, 3, 4A, 4B, 5, 6A, 6B, 7, 8 and 9, prepared by Roads and Maritime Services, dated December 2012.

#### (h) Connectivity structures listed in Woolgoolga to Ballina Alliance Update 20 Feb 2014 Structures Inventory (property Sections 1 and 2) and Woolgoolga to Ovangelie Financial Connectivity Tracking Register, 11/02/2014, prepared by Roads and Maritime Services, dated 14 March 2013.
<table>
<thead>
<tr>
<th>Part B - Environmental Performance</th>
<th>Requirement</th>
<th>Stage 1 (as defined in the W2S Staging Report)</th>
<th>Stage 2 - Wave 1</th>
<th>Stage 2 - Wave 2</th>
<th>Stage 3 - Wave 3</th>
<th>Other W2S Stages</th>
<th>Timing</th>
<th>Responsibility</th>
<th>Status</th>
<th>Contract Reference</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Pre-construction and Construction RMS and Contractor</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.2</td>
<td>The Applicant shall, where feasible and reasonable, limit high noise impact activities and work to the mid-morning and mid-afternoon periods, except in sparsely populated areas.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.3</td>
<td>Where feasible and reasonable, remnant vegetation shall be retained between the SSI boundary and the SSI footprint.</td>
<td>✓</td>
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<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.4</td>
<td>Construction activities resulting in impulsive or tonal noise emission (such as rock breaking, rock hammering, pile driving) shall only be undertaken when measures have been put in place to:</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.5</td>
<td>(a) process for obtaining the Environmental Representative’s approval for Out of Hours work;</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.6</td>
<td>(b) details of the nature and need for activities to be conducted during the varied construction hours;</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.7</td>
<td>(c) justifies the varied construction hours in accordance with the Interim Construction Noise Guideline (DECC, 2009);</td>
<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.8</td>
<td>(d) provides evidence that consultation with potentially affected receivers and notification of the relevant council has been undertaken, that the issues raised have been addressed and all feasible and reasonable mitigation measures have been put in place; and</td>
<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<td>1.9</td>
<td>(e) provides evidence of consultation with the EPA in the case of unresolved noise complaints); or</td>
<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<td>1.10</td>
<td>The Applicant shall ensure that construction work shall not be conducted during the Oxyayan Pygmy Perch spawning period.</td>
<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.11</td>
<td>Investigations into the location and design of connectivity structures, including but not limited to those identified in the documents listed under conditions A2(c) and A2(e), shall be undertaken during detailed design with the DECC, in consultation with DPI (Fisheries):</td>
<td>✓</td>
<td>✓</td>
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<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>1.12</td>
<td>Subject to conditions B11 and B12, the Applicant shall revise the Connectivity Strategy identified in the documents listed in condition A2(c), based on the outcomes of the Mitigation Framework required by condition D1.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
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<tr>
<td>Category</td>
<td>Part</td>
<td>Requirement</td>
<td>Section 1</td>
<td>Section 2</td>
<td>Soft Soil - Wave 1</td>
<td>Soft Soil - Wave 2</td>
<td>Soft Soil - Wave 3</td>
<td>Other Wave</td>
<td>Timing</td>
<td>Responsibility</td>
<td>Status</td>
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<tr>
<td>Pre-construction and During construction, affected educational institutions shall be consulted and reasonable steps taken to ensure that noise generating construction works in the vicinity of affected buildings are not timetabled during Construction Contractor</td>
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<tr>
<td>Pre-construction RMS</td>
<td>The Applicant shall ensure that the final design of that waterway does not result in water velocities exceeding 0.4 metres per second under normal flow conditions. The Applicant shall determine normal flow conditions to the satisfaction of DPI (Fisheries) through baseline monitoring of known Oxleyan Pygmy Perch habitat waterways.</td>
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<tr>
<td>Pre-construction RMS</td>
<td>Where an Oxleyan Pygmy Perch habitat waterway is realigned or its stream profile is changed, or an in-stream structure is installed in the waterway (both permanent and temporary construction structures), the Applicant is required to ensure that the final design of that waterway does not result in water velocities exceeding 0.4 metres per second under normal flow conditions. The Applicant shall determine normal flow conditions to the satisfaction of DPI (Fisheries) through baseline monitoring of known Oxleyan Pygmy Perch habitat waterways.</td>
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<tr>
<td>Pre-construction RMS</td>
<td>Where a population occurs on either side of the crossing site; and</td>
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<tr>
<td>Pre-construction RMS</td>
<td>Unless otherwise agreed by the Secretary, the following exclusions apply to the application of this condition:</td>
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<tr>
<td>Pre-construction RMS</td>
<td>During construction, affected educational institutions shall be consulted and reasonable steps taken to ensure that noise generating construction works in the vicinity of affected buildings are not timetabled during construction period.</td>
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<tr>
<td>Pre-construction RMS</td>
<td>The Applicant shall ensure that the final design of that waterway does not result in water velocities exceeding 0.4 metres per second under normal flow conditions. The Applicant shall determine normal flow conditions to the satisfaction of DPI (Fisheries) through baseline monitoring of known Oxleyan Pygmy Perch habitat waterways.</td>
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<tr>
<td>Pre-construction RMS</td>
<td>The Applicant shall ensure that the SSI does not increase the afflux of waterways with known Oxleyan Pygmy Perch habitat by more than the relevant flood management objective in the documents referred to in condition 3 of 32.</td>
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<tr>
<td>Pre-construction RMS</td>
<td>Wave 2 Road Construction (Department of Environment and Climate Change, 2018) shall be employed during the construction of the SSI to minimise soil erosion and the discharge of sediment and other pollutants to other water bodies.</td>
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<tr>
<td>Pre-construction RMS</td>
<td>A Site Audit Report to be prepared by the site auditor detailing the outcomes of Phase 2 contamination investigations within these areas. The Site Audit Report shall detail, where relevant, whether the land is suitable (for the intended land use) or can be made suitable through remediation.</td>
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<tr>
<td>Pre-construction RMS</td>
<td>The hydrological and flooding impacts resulting from the SSI are to be assessed during detailed design against the Design Objectives for Flood Management described in Section 2.1 of the SSI Working Paper – Hydrology and Flooding. This shall include assessment against the Flood Management Objective and the Other Impact Limitation Considerations, as well as the other requirements of this section of the EIS. Hydrology and flooding impacts and the likely impact on heritage, biodiversity, traffic etc.) and consider any alternative options. A copy of the investigation shall be submitted to the Secretary prior to the commencement of any bridge approach or embankment works in the vicinity.</td>
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<td>Pre-construction RMS</td>
<td>If for any reason the Ministry of Transport, services or other structures on the Section 1 (Northern) alignment, to the greatest extent practicable; or</td>
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<td>Pre-construction RMS</td>
<td>The Applicant shall provide a copy of the written agreement to the Secretary and the EPA, including details of the consultation undertaken (with clear identification of proposed blasting limits and potential property impacts) prior to commencing blasting at the increased limits.</td>
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<tr>
<td>Pre-construction RMS</td>
<td>The Applicant shall ensure that the SSI does not increase the afflux of waterways with known Oxleyan Pygmy Perch habitat by more than the relevant flood management objective in the documents referred to in condition 3.</td>
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<td>Pre-construction RMS</td>
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<tr>
<td>Pre-construction RMS and Contractor</td>
<td>The Applicant shall ensure that the SSI does not increase the afflux of waterways with known Oxleyan Pygmy Perch habitat by more than the relevant flood management objective in the documents referred to in condition 3 of 32.</td>
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<td>The Applicant shall ensure that the final design of that waterway does not result in water velocities exceeding 0.4 metres per second under normal flow conditions. The Applicant shall determine normal flow conditions to the satisfaction of DPI (Fisheries) through baseline monitoring of known Oxleyan Pygmy Perch habitat waterways.</td>
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<td>Pre-construction RMS</td>
<td>The Applicant shall ensure that the SSI does not increase the afflux of waterways with known Oxleyan Pygmy Perch habitat by more than the relevant flood management objective in the documents referred to in condition 3 of 32.</td>
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Section 1

The SSI shall be designed with the objective of minimising adverse changes to existing access arrangements and services for other transport modes and, where feasible and reasonable, facilitate an improved level of

The Applicant shall not destroy, modify or otherwise physically affect Aboriginal sites WWC5, WWC7, WWC26, WWC92, WWC115, WWC139, Tyndale 1, Scarred/engraved Tree (section 7), C3/2/2, Saw Pit Creek / New

Unencumbered access to private property shall be maintained during construction unless otherwise agreed with the landowner in advance. A landowner’s access that is physically affected by the SSI shall be reinstated to

The Applicant shall, in consultation with relevant landowners, construct the SSI in a manner that minimises intrusion and disruption to agricultural operations/activities in surrounding properties (e.g. stock access, access

Timing Responsibility

Pre-construction and Construction Contractor

Pre-construction

Pre-construction RMS

Pre-construction

Pre-construction RMS and Contractor

Pre-construction RMS

Pre-construction RMS

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Section 1
The Applicant shall ensure that material extracted from the borrow sites established for the SSI, is only used for the construction of the SSI subject to this approval, and no other sections of the Pacific Highway or other

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## COMPLIANCE TRACKING - NSW CONDITIONS OF APPROVAL

**Woolgoolga to Ballina SSI-4963**

**PART C - Community Information and Reporting**

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<td>(a) information on the current implementation status of the SSI.</td>
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<td>(b) a copy of the documents listed in condition A2 and any documentation</td>
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<td>supporting modifications to this approval that may be granted from time to time;</td>
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<td>(c) a copy of each current environmental approval, licence or permit required and obtained in relation to the SSI.</td>
<td>✓</td>
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### Community Information, Consultation and Involvement

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<td>D1</td>
<td>(a)</td>
<td>The Applicant shall develop a framework for tracking mitigation measures for threatened species. This Framework shall be developed by a suitably qualified and experienced ecologist in consultation with OR (Fisheries), OEH and DoE, and submitted to the satisfaction of the Secretary prior to commencement of detailed design of the relevant stage, unless otherwise agreed by OR or DoE. The Framework shall detail the process for tracking the biodiversity impact and progress of each action under this approval, including: (i) a description of the methodology of all proposed pre-construction species and habitat surveys, including surveys undertaken in the 2013-2014 spring and summer seasons and as otherwise required under the project agreement; and (ii) relevance of results to recommendations relevant to W2B and Commonwealth draft environmental management and guidelines. The framework shall provide for a summary description in condition D1(iii) of the summary of potential avoidance, mitigation, and offset measures for all species for which the proposed level of impact or mitigation required differs from that assessed in the documents listed in condition A2, including the identification of activities that would cause the same or an improved biodiversity outcome. The framework shall provide for the inclusion of any additional information required by the Secretary.</td>
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<td>D1</td>
<td>(b)</td>
<td>The Applicant shall develop a Biodiversity Offset Strategy to outline how the ecological values lost as a result of the SSI will be offset in perpetuity. The Strategy shall be developed from the draft Connectivity Strategy in the documents listed in condition A2. The Strategy shall be submitted to, and approved by, the Secretary prior to the commencement of construction work that would result in the disturbance of the relevant existing ecological communities, threatened species, or their habitat, unless otherwise agreed by OEH. The Strategy shall: (i) incorporate the outcomes of the Mitigation Framework required under condition D1; (ii) demonstrate the effectiveness of the connectivity structure (including avoidance of fencing) in terms of offering a route for the safe and effective passage of fauna; (iii) include a description of the methodology of all species and habitat surveys, including surveys undertaken in the 2013-2014 spring and summer seasons and as otherwise required under the project agreement; and (iv) ensure that the Strategy is up-to-date and is amended to provide for a summary description of the summary of potential avoidance, mitigation, and offset measures for all species for which the proposed level of impact or mitigation required differs from that assessed in the documents listed in condition A2, including the identification of activities that would cause the same or an improved biodiversity outcome.</td>
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<td>The Applicant shall demonstrate how public authority comments on the Strategy have been addressed.</td>
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<td>D1</td>
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<td>The Applicant shall demonstrate how the Strategy has been updated to reflect any changes to the location and/or design of the connectivity structure.</td>
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<td>D4</td>
<td>the development and implementation of compensation works that would result in the disturbance of the relevant existing ecological communities, threatened species, and their habitat or vehicles against the Secretary, the Applicant shall submit for the approval of the Secretary, the offset sites for the species listed under condition D1. The Plan should be prepared by a suitably qualified and experienced ecologist and details the number and type of offset sites to be installed, which shall be justified based on the number and type of hollows removed (based on an analysis of the survey data). The Plan shall detail the density of hollows in the area to be cleared and adjacent areas, and the availability of adjacent food resources. The Plan also provides a detailed list of maintenance procedures for the offset sites including managing responsibilities, timing, and duration.</td>
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<tr>
<td>D5</td>
<td>The Applicant shall prepare and implement a Nest Box Plan to provide replacement hollows for displaced fauna. The Plan should be prepared in consultation with the OEH and to the satisfaction of the Secretary. The Plan shall be prepared by a suitably qualified and experienced ecologist and includes the number of offset sites, including offset sites for hollows and food resources. The Plan shall also include the density of hollows in the area to be cleared and adjacent areas, and the availability of adjacent food resources. The Plan also provides a detailed list of maintenance procedures for the offset sites including managing responsibilities, timing, and duration.</td>
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<tr>
<td>D6</td>
<td>Wave 1 is the implementation of condition D4. Prior to clearing the vegetation in the area where the offset sites are proposed, the Applicant shall submit for the approval of the Secretary, the offset sites for the species listed under condition D1. The Plan should be prepared by a suitably qualified and experienced ecologist and includes the number of offset sites, including offset sites for hollows and food resources. The Plan shall also include the density of hollows in the area to be cleared and adjacent areas, and the availability of adjacent food resources. The Plan also provides a detailed list of maintenance procedures for the offset sites including managing responsibilities, timing, and duration.</td>
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<tr>
<td>D8</td>
<td>The Applicant shall prepare and implement a Nest Box Plan to provide replacement hollows for displaced fauna. The Plan should be prepared in consultation with the OEH and to the satisfaction of the Secretary. The Plan shall be prepared by a suitably qualified and experienced ecologist and includes the number of offset sites, including offset sites for hollows and food resources. The Plan shall also include the density of hollows in the area to be cleared and adjacent areas, and the availability of adjacent food resources. The Plan also provides a detailed list of maintenance procedures for the offset sites including managing responsibilities, timing, and duration.</td>
<td>✗</td>
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<tr>
<td>D9</td>
<td>The Applicant shall prepare and implement a Nest Box Plan to provide replacement hollows for displaced fauna. The Plan should be prepared in consultation with the OEH and to the satisfaction of the Secretary. The Plan shall be prepared by a suitably qualified and experienced ecologist and includes the number of offset sites, including offset sites for hollows and food resources. The Plan shall also include the density of hollows in the area to be cleared and adjacent areas, and the availability of adjacent food resources. The Plan also provides a detailed list of maintenance procedures for the offset sites including managing responsibilities, timing, and duration.</td>
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</table>

**Section 1:** The Biodiversity Threatened Species Management Plans and the Biodiversity Translocation Strategy are required under condition D8, prior to the commencement of construction work that would result in the disturbance of threatened species for which translocation is proposed. The Strategy shall be prepared by a suitably qualified and experienced ecologist and includes the number of offset sites, including offset sites for hollows and food resources. The Plan shall also include the density of hollows in the area to be cleared and adjacent areas, and the availability of adjacent food resources. The Plan also provides a detailed list of maintenance procedures for the offset sites including managing responsibilities, timing, and duration.

**Section 2:** The Biodiversity Threatened Species Management Plans and the Biodiversity Translocation Strategy are required under condition D8, prior to the commencement of construction work that would result in the disturbance of threatened species for which translocation is proposed. The Strategy shall be prepared by a suitably qualified and experienced ecologist and includes the number of offset sites, including offset sites for hollows and food resources. The Plan shall also include the density of hollows in the area to be cleared and adjacent areas, and the availability of adjacent food resources. The Plan also provides a detailed list of maintenance procedures for the offset sites including managing responsibilities, timing, and duration.

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**Wave 2:** The Biodiversity Threatened Species Management Plans and the Biodiversity Translocation Strategy are required under condition D8, prior to the commencement of construction work that would result in the disturbance of threatened species for which translocation is proposed. The Strategy shall be prepared by a suitably qualified and experienced ecologist and includes the number of offset sites, including offset sites for hollows and food resources. The Plan shall also include the density of hollows in the area to be cleared and adjacent areas, and the availability of adjacent food resources. The Plan also provides a detailed list of maintenance procedures for the offset sites including managing responsibilities, timing, and duration.
### Section 1

**Timing**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Section 1 (MMS)</th>
<th>Section 2 (MMS)</th>
<th>Soft Site - Wave 1</th>
<th>Soft Site - Wave 2</th>
<th>Soft Site - Wave 3</th>
<th>Other Work Stages</th>
<th>Timing</th>
<th>Responsibility</th>
<th>Status</th>
<th>Contract Reference</th>
<th>Comment</th>
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<td>RMS and Contractor</td>
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### Section 2

**Soft Soils - Wave 3**

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<th>Requirement</th>
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### Section 3

**Adjustments to Operational Noise Policy**

The Applicant shall ensure all documents relevant to the凉燥/Bagotville Koala population (including the approved Koala Management Plan) shall be submitted and approved by the Secretary prior to the commencement of the relevant stages of the SSI. The approved Koala Management Plan shall be submitted and approved by the Secretary prior to commencement of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 4

**Feasible and Reasonable Noise Mitigation Measures**

(a) confirm the operational noise predictions of the SSI based on detailed design. This operational noise assessment shall be based on an appropriately calibrated noise model (which has incorporated the baseline population of the Coolgardie/Bagotville population, consider the results of the survey undertaken in the koala habitat and population assessment

### Section 5

**Soft Site - Wave 1**

- The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 6

**Soft Site - Wave 2**

- The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 7

**Soft Site - Wave 3**

- The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 8

**Other Work Stages**

- The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 9

**Adjustments to Operational Noise Policy**

The Applicant shall ensure all documents relevant to the凉燥/Bagotville Koala population (including the approved Koala Management Plan) shall be submitted and approved by the Secretary prior to the commencement of the relevant stages of the SSI. The approved Koala Management Plan shall be submitted and approved by the Secretary prior to commencement of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 10

**Soft Site - Wave 1**

- The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 11

**Soft Site - Wave 2**

- The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 12

**Soft Site - Wave 3**

- The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 13

**Other Work Stages**

- The Koala Management Plan shall be submitted and approved by the Secretary prior to the commencement of construction of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.

### Section 14

**Adjustments to Operational Noise Policy**

The Applicant shall ensure all documents relevant to the凉燥/Bagotville Koala population (including the approved Koala Management Plan) shall be submitted and approved by the Secretary prior to the commencement of the relevant stages of the SSI. The approved Koala Management Plan shall be submitted and approved by the Secretary prior to commencement of the relevant stages of the SSI, and implemented prior to commencement of the relevant stages of the SSI, unless otherwise agreed by the Secretary.
The Applicant shall prepare and implement a Water Quality Monitoring Program, to monitor the construction and operation impacts of the SSI on surface and groundwater quality and resources and waterways, prior to construction. The Program shall be prepared in consultation with the DOE, EPA, DPI (Fisheries), NSW, Dail and Rous Water (in relation to the Woodburn borefields), to the satisfaction of the Secretary, and shall include but not be limited to:

- Identification of surface and groundwater quality monitoring locations (including watercourses, waterbodies and SEQPs in wetlands) which are representative of the potential impact areas from the SSI.
- Monitoring of water quality and condition impact on water bodies (including groundwater quality at relevant catchments) against any changes to water quality (where access issues or changed sampling regimes are required by the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2005 (Australian and New Zealand Environmental Conservation Council, 2005) or relevant baseline data).
- Pre-construction, Construction and Operation Responsibility Status Contract Reference Comment

Note:

- Expense of the Applicant.

Measures undertaken to restore or reinstate roads affected by the SSI shall be undertaken in a timely manner, in accordance with the reasonable requirements of the relevant council, and at the full expense of the Applicant.

The Road Dilapidation Report shall be submitted to the relevant council for review prior to the commencement of haulage.

The report may be submitted in stages to suit the staged construction of the SSI.

The report shall assess the current condition of the road and describe mechanisms to restore any damage that may result due to its use by traffic and transport related to the construction of the SSI. The report will be prepared by a suitably qualified expert and be based on detailed surveys (e.g. four lanes and associated assessment of potentially affected properties in the Churchill, Clarence and Richmond river floodplains. The Report shall:

- Identify the properties in those areas likely to have an increased waterbody impact and detail the predicted impact. The types of impacts to be considered include all those examined in the GIS including, but not limited to, changes in flood levels and velocities, alluviation, reduction in flood evaporation access or capacity, impacts on infrastructure, impacts on stormwater, and impacts on the environment.
- Pre-construction

The Applicant shall prepare and implement an Urban Design and Landscape Plan prior to the commencement of permanent built works and/or landscaping, unless otherwise agreed by the Secretary. The Plan shall be prepared in accordance with the Roads and Maritime Services urban design and visual guidelines, the design principles and standards based on identified design principles and standards based on local environmental values, heritage values and visual amenity guidelines, and to the satisfaction of the Secretary. A copy of each schedule of flood mitigation measures shall be provided to the Department of Planning and Environment and the relevant council prior to the implementation/construction of the mitigation measures on the property.

The report shall be submitted to Department of Planning and Environment; OEH; EPA, DPI (Fisheries), NSW, Dail and Rous Water (in relation to the Woodburn borefields).
The Applicant shall prepare and implement an Ancillary Facilities Management Plan to detail the management of ancillary facilities associated with the SSI. The Plan shall be prepared in consultation with the Department of Environment and Climate Change, NSW and other relevant authorities, and shall include, but not be limited to:

- a description of the ancillary facility (including a site layout plan), its components and details of the existing environment and use of the vicinity of the site;
- details of the activities to be carried out at the facility including the hours of operation, staging of operation and specific periods of construction;
- the nature and extent of the facility and its accessibility (both vehicular and pedestrian);
- details of the light and heavy construction-vehicle movements to and from each facility, including site access and routes to be used during the establishment and operation of the facility, and an assessment of the potential environmental impacts on the local road networks and access tracks;
- a summary of the potential environmental impacts associated with the operation of the facility and the operation of any ancillary facilities;
- a description of how the management and mitigation measures set out in the documents listed in condition A2 will be implemented on the site, and if not, justification for such decisions particularly on those sites assessed as having a high risk of flood impacts;
- a description of the monitoring and management procedures specific to the facility that would be implemented to minimise environmental and amenity impacts or, where this is not possible, feasible and reasonable measures to offset these impacts;
- a description of how the management and mitigation measures set out in the documents listed in condition A2 will be implemented on the site, and if not, justification for such decisions particularly on those sites assessed as having a high risk of flood impacts;
- a description of the light and heavy construction-vehicle movements to and from each facility, including site access and routes to be used during the establishment and operation of the facility, and an assessment of the potential environmental impacts on the local road networks and access tracks;
- a summary of the potential environmental impacts associated with the operation of the facility and the operation of any ancillary facilities;
- a description of how the management and mitigation measures set out in the documents listed in condition A2 will be implemented on the site, and if not, justification for such decisions particularly on those sites assessed as having a high risk of flood impacts;
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The Environment Representative(s) shall:

- (a) be consulted in responding to the community concerning the environmental performance of the SSI where the resolution of points of conflict between the Applicant and the community is required;
- (b) be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct the relevant authority to cease immediately all or any necessary operations; and
- (c) be consulted in responding to the community concerning the environmental performance of the SSI where the resolution of points of conflict between the Applicant and the community is required.

The Plan may be submitted in stages to suit the staged construction program of the SSI.
Section 1

Timing
Responsibility
Status
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Comment

D25 (d)

1. Identification of construction traffic routes and construction traffic volumes (including heavy vehicle/spoil haulage) on these routes;
2. Include, but not necessarily be limited to:
   - Protection and conservation of non-Aboriginal cultural heritage;
   - Details of monitoring and reporting requirements for impacts on heritage items;
3. Identification of heritage items directly and indirectly affected by the SSI;
4. In relation to non-Aboriginal heritage:
   - Procedures for ongoing Aboriginal consultation and involvement for the duration of the SSI;
   - Identification, protection and conservation of Aboriginal cultural heritage;
   - Determination of appropriate mitigation measures including when works can re-commence by a suitably qualified archaeologist in consultation with Department of Planning and Environment, OEH and Aboriginal Parties;
5. In relation to Aboriginal heritage:
   - Identification, protection and conservation of Aboriginal cultural heritage sites within the SSI boundary;
   - Procedures for the periodic review and update of the Construction Environmental Management Plan and Plans required under condition D25, as necessary (including where minor changes can be approved by the Environmental Representative);
6. As part of the Construction Environmental Management Plan for the SSI, the applicant shall produce and implement:
   - A Construction Noise and Vibration Plan to detail how construction noise and vibration impacts will be minimised and managed. The Plan shall be developed in consultation with the EPA and shall be consistent with the guidelines contained in the Interim Construction Noise Guidelines (DECC, 2009) and include, but not necessarily be limited to:
     - Identification of sensitive receivers and relevant construction noise and vibration goals applicable to the SSI stipulated in this approval;
     - Details of construction activities and an indicative schedule for construction works; including the identification of key noise and/or vibration generating construction activities (based on representative noise sources and their impact on noise sensitive receivers, particularly residential areas);
     - Identification of baseline and measurable measures proposed to be implemented to minimise and manage construction noise and vibration impacts (including construction traffic noise impacts);
     - A description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how the results of monitoring would be recorded and reported, and, if any exceedance is detected, how any non-compliance would be rectified;
   - An out-of-hours work (OOHW) protocol for the assessment, management and approval of works outside of standard construction hours as defined in condition B15, including a risk assessment where monitoring would take place, how the results of this monitoring would be recorded and reported, and, if any exceedance is detected, how any non-compliance would be rectified;
   - An Oxleyan Pygmy Perch habitat waterway management framework to detail the measures and construction methods that will be employed to avoid direct discharge of construction water to known Oxleyan Pygmy Perch habitat waterways;
   - Management measures for the handling, treatment and management of contaminated materials;
   - Measures to monitor and manage waste generated during construction including but not necessarily limited to: general procedures for waste classification, handling, reuse and disposal; use of secondary waste material in construction wherever feasible and reasonable; procedures or dealing with green waste including timber and mulch from clearing activities; and measures for reducing demand on water resources (including potential for reuse of treated water from sediment control basins).
7. As part of the Construction Environmental Management Plan for the SSI, the applicant shall produce and implement:
   - A Groundwater and Soil Salinity report should geotechnical investigations determine the presence, extent and severity of soil salinity within the SSI boundary. The report shall detail the outcomes of hydrogeological investigations and identify and mitigate impacts to groundwater resources;
### Section 2: Soft Soils - Wave 2

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Section 1 (RMS)</th>
<th>Section 2 (RMS)</th>
<th>Soft Soil - Wave 1</th>
<th>Soft Soil - Wave 2</th>
<th>Soft Soil - Other Waves</th>
<th>Other Wave Stages</th>
<th>Timing</th>
<th>Responsibility</th>
<th>Status</th>
<th>Contract Reference</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Applicant shall prepare and implement a Compliance Tracking Program, to track compliance with the requirements of this approval. To this end, the Program shall be prepared prior to the commencement of construction and prior to the commencement of operation of the SSI (including prior to each stage, where works are being staged). The Program shall include, but not necessarily be limited to:</td>
<td>✓</td>
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<td>✓</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
<td>Pre-construction and Construction</td>
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<tr>
<td>(a) provisions for periodic review of the compliance status of the SSI against the requirements of this approval;</td>
<td>✓</td>
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<td>RMS and Contractor</td>
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<tr>
<td>(b) provisions for periodic review of operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy 2011;</td>
<td>✓</td>
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<td>Operation</td>
<td>RMS</td>
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<tr>
<td>(c) methodologies, location and frequency of noise monitoring undertaken, including monitoring sites at which SSI noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receptors;</td>
<td>✓</td>
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<td>(d) methodology for dealing with any non-compliance identified during environmental auditing, review of compliance or incident management;</td>
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<tr>
<td>The Applicant shall undertake operational noise monitoring, to compare actual noise performance of the SSI against noise performance predicted in the review of noise mitigation measures required by condition D11, within 12 months of commencement of operation of the SSI or as otherwise agreed by the Secretary. The Program shall include, but not necessarily be limited to:</td>
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<td>Pre-construction and Construction</td>
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<td>(a) rolling noise monitoring to assess compliance with the operational noise limits predicted in the review of operational noise mitigation measures required under condition D11 and documents listed in Appendix 1C;</td>
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<tr>
<td>(b) a review of the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy 2011;</td>
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<td>RMS</td>
<td>Operation</td>
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</table>
## SPECIFIC ENVIRONMENTAL CONDITIONS - ARRAWARRA REST AREA

### 1.10 The potential future service centre does not form part of this approval and shall be subject to a separate approval process.

### 2.38 During the detailed design phase of the rest area, consideration shall be given to the installation of a rainwater tank(s) and any associated plumbing works to flush amenities.

### 2.39 Prior to the operation of the Arrawarra Rest Area, the proponent shall incorporate the rest area into the existing environmental management systems.

### 2.40 The Biodiversity Offset and Mitigation Package as required by condition 2.13 shall be updated to include vegetation cleared as a result of the construction of the Arrawarra Rest Area.

### SPECIFIC ENVIRONMENTAL CONDITIONS - WAVE 2B STAGING

### 2.20 The Proponent shall ensure that lighting installed as part of the rest area is mounted, screened, and directed in such a manner as to minimize light spillage and glare to surrounding land users. The lighting shall be the minimum level of luminance necessary, and generally in accordance with the latest version of AS 2283 – 1997: Central of the Obscuring Effects of Outdoor Lighting.

### 2.29 Prior to the entry of the Arrawarra Rest Area, the proponent shall incorporate the rest area into the existing environmental management systems.

### 2.47 The Blackberry Offset and Infilling Planages as required by condition 2.12 shall be updated to include vegetation cleared as a result of the construction of the Arrawarra Rest Area.

### SPECIFIC ENVIRONMENTAL CONDITIONS - ARRAWARRA REST AREA

### 1.10 The potential future service centre does not form part of this approval and shall be subject to a separate approval process.

### 2.38 During the detailed design phase of the rest area, consideration shall be given to the installation of a rainwater tank(s) and any associated plumbing works to flush amenities.

### 2.39 Prior to the operation of the Arrawarra Rest Area, the proponent shall incorporate the rest area into the existing environmental management systems.

### 2.40 The Biodiversity Offset and Mitigation Package as required by condition 2.13 shall be updated to include vegetation cleared as a result of the construction of the Arrawarra Rest Area.

### SPECIFIC ENVIRONMENTAL CONDITIONS - WAVE 2B STAGING

### 2.20 The Proponent shall ensure that lighting installed as part of the rest area is mounted, screened, and directed in such a manner as to minimize light spillage and glare to surrounding land users. The lighting shall be the minimum level of luminance necessary, and generally in accordance with the latest version of AS 2283 – 1997: Central of the Obscuring Effects of Outdoor Lighting.

### 2.29 Prior to the entry of the Arrawarra Rest Area, the proponent shall incorporate the rest area into the existing environmental management systems.

### 2.47 The Blackberry Offset and Infilling Planages as required by condition 2.12 shall be updated to include vegetation cleared as a result of the construction of the Arrawarra Rest Area.
**STAGING OF THE ACTION**

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**APPENDIX A - INTRATRIBUTION OF IMPACTS**

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2. In order to minimise impacts to the Grant-Banded Frog, the approval holder must undertake the action in accordance with the requirements of NSW approval condition B43.
3. In order to ensure the long-term viability of the Ballina Koala population, the approval holder must engage a suitably qualified expert to undertake population viability modelling of the Ballina Koala population over a time period of no less than 50 years, taking into account the impacts resulting from the road upgrade in Section 10. This modelling should consider the current predicted rate of any proposed reduction or enhancement in the population.

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<td>If the approval holder wishes to carry out any activity otherwise than in accordance with Frameworks, Strategies, Plans, Report or Package required by conditions 7, 8, 10, 11, 12, 14, 15, 16 and 17, the approval holder must submit to the Department for the Minister's written approval a revised version of those Frameworks, Strategies, Plans, Report or Package. The varied activity shall not commence until the Minister has approved the revised plan or agreement in writing. The Minister will not approve a revised plan or agreement, unless the revised plan or agreement would result in an equivalent or improved environmental outcome. If the Minister approves the revised plan or agreement that plan or agreement must be implemented in place of the plan or agreement originally approved.</td>
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<td>If the Minister believes that it is necessary or convenient for the better protection of listed threatened species or communities to do so, the Minister may request that the approval holder submit for the Minister approval, or make revisions to any Frameworks, Strategies, Plans, Package, or Program specified in the conditions and submit the revised Frameworks, Strategies, Plans, Package, or Program for the Minister's written approval. The approval holder must comply with any such request. The approved or revised approved Frameworks, Strategies, Plans, Package, or Program must be implemented. Unless the Minister has approved the revised management plans, then the approval holder must continue to implement the management plans originally approved, as specified in the conditions.</td>
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<td>If, at any time after 5 years from the date of this approval, the approval holder has not substantially commenced the action, then the approval holder must not substantially commence the action without the written agreement of the Minister.</td>
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<td>The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the Frameworks, Strategies, Plans, or Package required by the approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be published through the general media.</td>
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COMPLIANCE TRACKING - MITIGATION MEASURES
Woolgoolga to Ballina SSI-4963

Mitigation Category

Mitigation Measure

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For the E22 (13-1-0189) site:
- Salvage excavation would be undertaken in 50 mm spits to sterile base deposits. Any sediment from the site to 1 m from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas. For Site 11 (13-1-0189):
- Salvage excavation would be undertaken in 50 mm spits to sterile base deposits. Any sediment from the site to 1 m from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas. For Site 4 (04-04-0132):
- Salvage excavation would be undertaken in 50 mm spits to sterile base deposits. Any sediment from the site to 1.5 m depth from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas. For Site 12 (04-4-0176):
- The location would be visually protected during the construction and operation of the road with culturally sensitive plantings or by existing vegetation. An arborist would be consulted to develop an ongoing management strategy to ensure the preservation and health of the tree. For the MST3 (04-4-0131) site:
- The Gumi scarred tree would be removed and the trunk would be relocated to an area agreed to with the registered stakeholder groups and Roads and Maritime Services – an arborist would be consulted to guide the process. An arborist would be consulted to develop an ongoing management strategy to ensure the preservation and health of the tree.

For Site 1 (04-4-0179):
- Any sediment to 1.5 m depth from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas. Further mechanical excavation would be undertaken in order to reach and record the depth of the archaeological deposit. Salvage excavation would be undertaken in 50 mm spits to sterile base deposits. Any sediment from the site to 1.5 m depth from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas. For Site 2 (04-4-0178):
- Salvage excavation would be undertaken in 50 mm spits to sterile base deposits. Any sediment from the site to 1 m depth from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas. Further mechanical excavation would be undertaken in order to reach and record the depth of the archaeological deposit. Salvage excavation would be undertaken in 50 mm spits to sterile base deposits. Any sediment from the site to 1 m depth from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas. For Site 3 (04-4-0175):
- Further mechanical excavation would be undertaken in order to reach and record the depth of the archaeological deposit. Salvage excavation would be undertaken in 50 mm spits to sterile base deposits. Any sediment from the site to 1.5 m depth from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas. Further mechanical excavation would be undertaken in order to reach and record the depth of the archaeological deposit. Salvage excavation would be undertaken in 50 mm spits to sterile base deposits. Any sediment from the site to 1 m depth from the site that is proposed to be used outside the boundary of the site would be sieved to remove any cultural material to ensure new sites are not recorded in relocation areas.
An arborist would be consulted to develop an ongoing management strategy to ensure the preservation and health of the tree.

Prior to construction a 15 m exclusion zone would be established around the scarred trees and maintained until construction activities have ceased. The exclusion zone would be fenced using wire mesh and chain wire mesh and star pickets. 'Do Not Enter' signage would be attached to the fencing. An arborist would be consulted to develop an ongoing management strategy to ensure the preservation and health of the tree.

To maintain connectivity, access would be provided across the project area, from the end of Richmond Road, Ptx Tree Road, or Fischer Street to Broadwater National Park during construction and operation, in consultation with the traditional owners.

Pedestrian access across the project would be provided if reasonable and feasible within the existing local road network, to maintain the connectivity of this corridor of movement.

To gather further information on the broader landscape, it is recommended that a geomorphological assessment within the extent of Place K be undertaken, including the geomorphological setting of the archaeological sites within this landscape, and how the landscape has formed and changed over the last 50 000 years. This would take into account both the cultural and scientific significance of the place.

A report would be prepared by a geomorphologist in conjunction with an archaeologist/anthropologist.

An education package would be prepared to pass information associated with this area onto future generations. This would include at a minimum a printed document detailing the story of the occupation of this area by the emu family. Further research and interviews would be undertaken for this purpose. Where possible, oral recordings and/or video footage would also be compiled into the package.

Progressive rehabilitation of disturbed areas as soon as practicable.

Covering or spraying water on stockpiles of soil or other potential dust generating materials, particularly during dry or windy conditions.

Surface water runoff from the construction site or from the highway pavement during operation of the project would be prevented from directly entering into Place E.

A measurable and targeted monitoring program would be developed to assess the effectiveness and success of the proposed biodiversity mitigation and management measures. The monitoring program would be prepared based on the outline in Appendix B of the Working paper – Biodiversity and in consultation with relevant state and Commonwealth agencies. This program would be finalised following project approval to ensure that relevant data is collected during construction.

Monitoring and evaluation will include the following measures:

- Monitoring and collating data on flora and fauna species, populations and habitat
- Monitoring and collating data on vegetation growth and vegetation structure
- Monitoring and collating data on environmental conditions
- Monitoring and collating data on project outcomes
- Monitoring and collating data on project activities

Monitoring will be conducted by the proponent and its consultants, as well as by the responsible authorities. Monitoring data will be collated and reported to relevant authorities on a regular basis.

Aim to place arboreal crossing structures at grade level, where average tree heights exceed 20 metres, and/or taller trees would be naturally positioned close to the road edge.

Pillar Valley Corridors of Movement:

To place “trunk” and “backbone” vegetation corridors, a clearing protocol, translocation trial, seed collection, storage and propagation to use in revegetation of disturbed habitats, would be developed by the proponent and its consultants.

A clearing protocol, translocation trial, seed collection, storage and propagation to use in revegetation of disturbed habitats.

- A measurable and targeted monitoring program would be developed to assess the effectiveness and success of the proposed biodiversity mitigation and management measures. The monitoring program would be prepared based on the outline in Appendix B of the Working paper – Biodiversity and in consultation with relevant state and Commonwealth agencies. This program would be finalised following project approval to ensure that relevant data is collected during construction.

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- Monitoring will be conducted by the proponent and its consultants, as well as by the responsible authorities. Monitoring data will be collated and reported to relevant authorities on a regular basis.
Studies and surveys to be conducted prior to construction include:

- Habitat and spatial selection for threatened fish species (with a focus on the Pink Underwing Moth, and Olyean Pink Pygmy Perch and their habitat). A management plan for threatened species Olyean Pink Pygmy Perch would be prepared and include:
  - Identification of preferred habitat to construct fish passages and revegetation of suitable habitat near the project. A management plan for threatened fish species Oxleyan Pygmy Perch would be prepared and include:
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  - Identification of priority areas to construct fish passes and revegetation of suitable habitat near the project. A management plan for threatened fish species Oxleyan Pygmy Perch would be prepared and include:
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  - Identification of preferred habitat to construct fish passages and revegetation of suitable habitat near the project. A management plan for threatened fish species Oxleyan Pygmy Perch would be prepared and include:
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  - Identification of prefer...
### Section 1: Biocorridor Connectivity

- **Construction Contractor**

#### Biocorridor

- Temporary crossings would be further investigated during detailed design including, location, type of structure, duration of need and rehabilitation process.

- General temporary access track mitigation measures have been provided below:
  - Installation and subsequent decommissioning of temporary crossings would be completed outside of October Pygmy Perch spawning seasons (October to March).
  - Temporary crossings would be constructed from clean fill using pile or box culvert cells to carry flows.
  - All temporary works (eg crossings, flow diversion barriers) would be removed as soon as practicable and in a way that does not promote future channel erosion.
  - The preferred temporary structure for crossing waterways would be consistent with Ethtridge (2002) where the use of bridges in the preferred structure for Class 1 (major fish habitat waterway).

- **Construction Contractor**

### Section 2: Wildlife Protection

- Fish that become stranded due to temporary access crossings or construction of temporary or permanent creek diversions must be captured and translocated following the DNR Fisheries Guidelines – A Guide to Fish Handling and Fish Translocation.

- Habitat features would be protected during construction, and will be monitored post-construction.

- Challenging streams with large numbers of fish or aquatic fauna such as turtle nests, would be left alone, if feasible, and where possible, harvested post-construction.

- Veterinary assistance by an experienced ecologist to identify the location and extent of important habitats in the construction footprint to be safeguarded for native wildlife, such as bushland, forest and trees with hollows and nearby water bodies.

- Nest boxes would be installed as per RMS Biodiversity Guidelines (RTA, 2011a) and a nest box strategy developed as part of the CEMP, detailing:
  - Fenced exclusion zones would be identified to restrict access into contaminated areas.
  - Testing may be required to confirm the presence of pathogens on site.
  - If pathogens are identified on site:
    - Restrict vehicles to designated tracks, trails and parking areas.
    - Construction works would be programmed to move from uninfected areas to any known infected areas.
    - The risk of spreading pathogens and the mitigation measures required on site should be regularly communicated to staff and contractors during inductions and toolbox talks.
    - Mechanical weed control methods such as slashing or mowing, as well as a range of herbicides to avoid the development of herbicide resistance.
    - Sensitive environmental areas within or adjacent to the site include:
      - Preparing a mulch tannin management plan for the project where tannins are likely to be generated.
      - Avoiding the spread of any weeds or pathogens that may be in the soil when relocating woody debris and bushrock from stockpiles.

- Void ditches and bushfire would be invesistigated on site for habitat improvement where possible and would involve detailed on-site assessment before and after the project.

- **Construction Contractor**

### Section 3: Contingency Planning

- **Construction Contractor**

#### Biocorridor

- Pre-constructionalbums by an experienced ecologist to identify the location and extent of important habitats in the construction footprint to be safeguarded for native wildlife, such as bushland, forest and trees with hollows and nearby water bodies.

- Habitat features would be protected during construction, and will be monitored post-construction.

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    - Mechanical weed control methods such as slashing or mowing, as well as a range of herbicides to avoid the development of herbicide resistance.
    - Sensitive environmental areas within or adjacent to the site include:
      - Preparing a mulch tannin management plan for the project where tannins are likely to be generated.
      - Avoiding the spread of any weeds or pathogens that may be in the soil when relocating woody debris and bushrock from stockpiles.

- Void ditches and bushfire would be invesistigated on site for habitat improvement where possible and would involve detailed on-site assessment before and after the project.

- **Construction Contractor**

### Section 4: Contingency Planning

- **Construction Contractor**

#### Biocorridor

- Pre-constructionalbums by an experienced ecologist to identify the location and extent of important habitats in the construction footprint to be safeguarded for native wildlife, such as bushland, forest and trees with hollows and nearby water bodies.

- Habitat features would be protected during construction, and will be monitored post-construction.

- Challenging streams with large numbers of fish or aquatic fauna such as turtle nests, would be left alone, if feasible, and where possible, harvested post-construction.

- Veterinary assistance by an experienced ecologist to identify the location and extent of important habitats in the construction footprint to be safeguarded for native wildlife, such as bushland, forest and trees with hollows and nearby water bodies.

- Nest boxes would be installed as per RMS Biodiversity Guidelines (RTA, 2011a) and a nest box strategy developed as part of the CEMP, detailing:
  - Fenced exclusion zones would be identified to restrict access into contaminated areas.
  - Testing may be required to confirm the presence of pathogens on site.
  - If pathogens are identified on site:
    - Restrict vehicles to designated tracks, trails and parking areas.
    - Construction works would be programmed to move from uninfected areas to any known infected areas.
    - Mechanical weed control methods such as slashing or mowing, as well as a range of herbicides to avoid the development of herbicide resistance.
    - Sensitive environmental areas within or adjacent to the site include:
      - Preparing a mulch tannin management plan for the project where tannins are likely to be generated.
      - Avoiding the spread of any weeds or pathogens that may be in the soil when relocating woody debris and bushrock from stockpiles.
B62 Biodiversity Ancillary facilities would be sensitively located to avoid removal of any Threatened Ecological Community.

B61 Biodiversity Batch plants would be located outside well away from Oxleyan Pygmy Perch habitat where sediment erosion would not runoff into waterways (due to the risk of high alkaline runoff).

B57 Biodiversity If not reasonable and feasible, to irrigate land to completely re-use water from sedimentation basins during construction in Oxleyan Pygmy Perch habitat, as a last resort, water could be discharged to waterways after appropriate treatment to remove sediment and nutrients.

B56 Biodiversity Chemicals and fuels would be appropriately stored and bunded, away from waterways and drainage lines.

B50 Biodiversity Appropriate plant species would be incorporated into the rehabilitation of disturbed aquatic habitats and drains as a result of construction, in regions of suitable Oxleyan Pygmy Perch habitat.

B47 Biodiversity A vegetation clearing strategy and a revegetation management strategy would be developed and implemented to minimise instream and riparian weed invasion.

B46 Biodiversity Any instream woody debris removed during construction would be replaced at the completion of the works within the same waterways from which it was removed.

Mitigation

Vibration Adequate stemming would be provided and exposed detonating cord would be eliminated (by covering with at least 300 millimetres of quarry dust or road base).

Vibration A minimum of 24 hours’ notice would be provided to all residences located within 500 metres of any blast, including an indication of blasting times and a contact name and telephone number.

Vibration Appropriately sized equipment would be selected in order to minimise vibration emissions, where required.

Vibration Regular noise monitoring would be undertaken during normal business hours at a representative receiver location. Machinery would not be turned on prior to the work hours outlined in this EIS. This would include daily maintenance activities and/or ‘warming up’ of engines.

Vibration All noise complaints received would be dealt with promptly. Construction methods may need to be altered to reduce noise impacts at the affected locations.

Vibration Equipment/plant within ancillary facilities would be located as far as possible from receivers.

Vibration Haulage routes would be located as far away as possible from residential receivers, where this is reasonable and feasible.

Vibration A building condition survey would be undertaken for all buildings located within 200 metres of the proposed blasting area prior to the start of blasting. The proponent would be responsible for rectifying any damage occurring from the blasting, with the cost to be borne by the proponent.

Vibration Where the blast management plan has identified potential impacts on sensitive receivers, these hours would be subject to change.

Vibration Where piling, hydraulic hammering or dynamic compaction is proposed within 50 metres of any heritage structure or potentially structurally unsound service, a building condition survey would be conducted and preliminary vibration monitoring undertaken by a qualified contractor.

Vibration A follow-up survey would be conducted in response to any vibration complaints.

Vibration Monitoring of vibration and acceleration would be undertaken in order to minimise vibration emissions, where required.

Vibration A blast management plan would be prepared prior to the start of blasting activities.

Vibration Where sensitive receivers are located close to the blast site, a series of tests would be undertaken at a reduced rate to determine site-specific blast response characteristics, in order to define allowable blast rates to secure the adjacent property.

Vibration Noise monitoring would be undertaken at locations where substantial exceedances of noise criteria are predicted.

Vibration Pre-construction RMS and Construction Contractor

Vibration Noise monitoring would be undertaken at a representative receiver location.

Vibration The selection of plant and equipment would be based on noise emission levels. This equipment would be operated and maintained so that noise emissions are minimised.

Vibration Surface clearances or dynamic computations proposed within a radius of any heritage structure or potentially structurally unsound service, a building condition survey would be conducted and preliminary vibration monitoring undertaken by a qualified contractor.

Vibration Surface clearances or dynamic computations proposed within a radius of any heritage structure or potentially structurally unsound service, a building condition survey would be conducted and preliminary vibration monitoring undertaken by a qualified contractor.

Vibration Where blasting would be conducted in close proximity to waterbodies, careful consideration would be given to the potential for increased turbidity during the construction period.

Vibration Where blasting would be conducted in close proximity to waterbodies, a series of tests would be undertaken at a reduced rate to determine site-specific blast response characteristics, in order to define allowable blast rates to secure the adjacent property.

Vibration The maximum instantaneous charge (MIC) would be reduced to the lowest possible level by the use of delay, reduced diameter holes, and/ or disc loading.

Vibration Adequate stemming would be provided and exposed detonating cord would be eliminated (by covering with at least 300 millimetres of quarry dust or road base).

Pre-construction RMS and Construction Contractor

Pre-construction RMS and Construction Contractor
GHG07 Other Issues RMS would investigate the use of LED lighting in place of incandescent lamps as part of the project's detailed design, and use them where practicable to reduce electrical energy consumption. Any energy-efficient

GHG05 Other Issues The feasibility of using biofuels (biodiesel, ethanol, or blends such as E10 or B80) would be investigated by the contractor, taking into consideration the capacity of plant and equipment to use these fuels.

GHG03 Other Issues Reuse of excavated road materials would be maximised as far as possible where they are cost, quality and performance competitive to reduce use of materials (with embedded energy).

GHG02 Other Issues Flyash content within concrete would be specified where feasible. Contractors would be required to propose recycled content construction materials where they are cost, quality and performance competitive.

General

CNV29 Noise and flooding. The need for design modifications to address changes in flood behaviour as a result of climate change would be assessed periodically throughout the life of the project.

CNV28 Noise and flooding. All works within waterways would be constructed and managed in accordance with relevant NSW Office of Water guidelines.

CNV27 Noise and flooding. Waterway diversions would be designed in a manner that the diversion route is further to the greatest extent possible the characteristics of the waterway that is being diverted. Characteristics include flow regime, flow velocities, water depth, vegetation and habitat for aquatic fauna.

CNV26 Noise and flooding. The design of these structures would need to consider the predicted changes to watercourses and floodplain velocities from the existing case due to the project. Structure design would include reviewing the capacity of drainage systems to handle increased flow and sediment yields.

CNV25 Noise and flooding. Flume diversions would be designed and constructed in consultation with the relevant drainage unions and impacted landowners and in consideration of the potential diversions detailed in the Working Paper – Cane Drain Management.

CNV24 Noise and flooding. The design of temporary fencing at culvert and bridge crossings would consider the potential for blockage and be designed and operated in a manner that does not result in impacts on flooding.

CNV23 Noise and flooding. The design of drainage structures for rising ground water would be designed and constructed in consultation with the relevant drainage unions and impacted landowners and in consideration of the potential diversions detailed in the Working Paper – Cane Drain Management.

CNV22 Noise and flooding. Flume diversions would be designed to mimic to the greatest extent possible the characteristics of the waterway that is being diverted. Characteristics include flow regime, flow velocities, water depth, vegetation and habitat for aquatic fauna.

CNV21 Noise and flooding. Works would be planned to minimise fuel use.

CNV20 Noise and flooding. The design of drainage structures for rising ground water would be designed and constructed in consultation with the relevant drainage unions and impacted landowners and in consideration of the potential diversions detailed in the Working Paper – Cane Drain Management.

CNV19 Noise and flooding. The need for design modifications to address changes in flood behaviour as a result of climate change would be assessed periodically throughout the life of the project.

CNV18 Noise and flooding. All works within waterways would be constructed and managed in accordance with relevant NSW Office of Water guidelines.

CNV17 Noise and flooding. Temporary infrastructure (which are not fixed) associated with the construction of bridges and bridge piers in following waterways (but not be limited to) the diversion of rainfall runoff back into the farm dam through drainage routes (subject to land acquisition agreements and environmental assessment).

CNV16 Noise and flooding. Any temporary infrastructure (which are not fixed) associated with the construction of bridges and bridge piers in following waterways (but not be limited to) the diversion of rainfall runoff back into the farm dam through drainage routes (subject to land acquisition agreements and environmental assessment). Work would be planned to minimise fuel use.

CNV15 Noise and flooding. The design of drainage structures for rising ground water would be designed and constructed in consultation with the relevant drainage unions and impacted landowners and in consideration of the potential diversions detailed in the Working Paper – Cane Drain Management.

CNV14 Noise and flooding. Works would be planned to minimise fuel use.

CNV13 Noise and flooding. All works within waterways would be constructed and managed in accordance with relevant NSW Office of Water guidelines.

CNV12 Noise and flooding. Temporary infrastructure (which are not fixed) associated with the construction of bridges and bridge piers in following waterways (but not be limited to) the diversion of rainfall runoff back into the farm dam through drainage routes (subject to land acquisition agreements and environmental assessment). Work would be planned to minimise fuel use.

CNV11 Noise and flooding. The design of drainage structures for rising ground water would be designed and constructed in consultation with the relevant drainage unions and impacted landowners and in consideration of the potential diversions detailed in the Working Paper – Cane Drain Management.

CNV10 Noise and flooding. Works would be planned to minimise fuel use.

CNV9 Noise and flooding. All works within waterways would be constructed and managed in accordance with relevant NSW Office of Water guidelines.

CNV8 Noise and flooding. Temporary infrastructure (which are not fixed) associated with the construction of bridges and bridge piers in following waterways (but not be limited to) the diversion of rainfall runoff back into the farm dam through drainage routes (subject to land acquisition agreements and environmental assessment). Work would be planned to minimise fuel use.

CNV7 Noise and flooding. The design of drainage structures for rising ground water would be designed and constructed in consultation with the relevant drainage unions and impacted landowners and in consideration of the potential diversions detailed in the Working Paper – Cane Drain Management.

CNV6 Noise and flooding. Works would be planned to minimise fuel use.

CNV5 Noise and flooding. All works within waterways would be constructed and managed in accordance with relevant NSW Office of Water guidelines.

CNV4 Noise and flooding. Temporary infrastructure (which are not fixed) associated with the construction of bridges and bridge piers in following waterways (but not be limited to) the diversion of rainfall runoff back into the farm dam through drainage routes (subject to land acquisition agreements and environmental assessment). Work would be planned to minimise fuel use.

CNV3 Noise and flooding. The design of drainage structures for rising ground water would be designed and constructed in consultation with the relevant drainage unions and impacted landowners and in consideration of the potential diversions detailed in the Working Paper – Cane Drain Management.

CNV2 Noise and flooding. Works would be planned to minimise fuel use.

CNV1 Noise and flooding. All works within waterways would be constructed and managed in accordance with relevant NSW Office of Water guidelines.

Flood modelling for the Clarence, ntl Richardson and lower Richmond rivers would be updated with survey data (as released by the NSW government in mid 2012).

The bathymetry data on which the Clarence River flood model is based would be updated to reflect the current status of bathymetry at the relevant river crossing locations.

Flood modelling. Flood modelling. SWS would investigate the use of LED lighting in place of incandescent lamps as part of the project's detailed design, and use them where practicable to reduce electrical energy consumption. Any energy-efficient alternatives would have to meet lighting standards for major roads.

Feedback would be collected to help determine the final adopted working hours for the project, with community consultation continuing throughout the project.

Control blasting times would be determined in consideration of site specific conditions and in consultation with affected residents and would take place, where possible, when impacts are likely to be the least intrusive. A site specific schedule would be developed to accommodate residents and workplaces where possible.

Soft soils - Stages - Timing - Responsibility - Status - Reference / Comment

Pre-construction RMS

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Pre-construction RMS
A photographic condition survey would be undertaken of the current condition of the heritage items with any damage to the item from construction to be repaired once construction is complete.

Where appropriate, and before construction commences, any loose or unstable components of the heritage item would be secured to minimise vibration impacts and remain secured until the conclusion of construction. Any methods to secure the heritage item would be reversible and not cause damage to the item.

The Petticoat Lane tram tracks section would have a protective covering placed over them, (eg a geo textile fabric and heavy duty metal sheeting or similar) to minimise impacts from construction in the area. The covering would be secured before construction and would remain in place until the end of construction.

A more detailed SOHI would be prepared when the specific architectural noise treatments for the residence are identified.

A photographic condition survey would be undertaken of the current condition of the heritage items with any damage to the item from construction to be repaired once construction is complete.

Pre-construction Contractor

Pre-construction RMS and Contractor

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Pre-construction RMS and Contractor
All historical heritage remains are discovered in the New Italy Village Area during construction, management measure H11 would be applied.

An archaeological recording would be made of the buttery/creamery, the dairy and its surrounds in accordance with the Heritage Branch guidelines How To Prepare Archival Records Of Heritage Items (NSW Heritage Office, 1998) prior to demolition.

A more detailed SOHI would be prepared when the specific architectural noise treatments for the homestead are identified.

An archival photographic recording would be made of the main residence and the drainage system and its surrounds in accordance with the Heritage Branch guidelines How To Prepare Archival Records Of Heritage Items (NSW Heritage Office, 1998) prior to demolition.

A remnant land strategy to minimise land use severance and sterilisation, and a mitigation strategy for final land uses would be developed in consultation with the Cane industry, Coffs Harbour City, Clarence Valley, Richmond Valley and Ballina Councils.

A remnant land strategy to minimise land use severance and sterilisation, and a mitigation strategy for final land uses would be developed in consultation with the Cane industry, Coffs Harbour City, Clarence Valley, Richmond Valley and Ballina Councils.

An archival photographic recording would be made of the south of the quarry (to salvage any artefacts relating to of the impact area of the site situated to the south of the quarry) would be undertaken under the supervision of an appropriately qualified and experienced historical archaeologist. Salvage excavation would be undertaken in accordance with the Heritage Branch guidelines including an appropriate research design and methodology in order to realise the research potential of this area of the site.

Echoing excavation was to be undertaken before the construction of the area to be cleared. The area to be cleared would be clearly identified on sitew ith a five metres from the heritage items) prior to demolition.

An archival photographic recording would be made of the brick-lined well in accordance with the Heritage Branch guidelines How To Prepare Archival Records Of Heritage Items (NSW Heritage Office, 1998) prior to demolition.

A more detailed SOHI would be prepared when the specific architectural noise treatments for the homestead are identified.

Stabilisation of the brick-lined well. This assessment may result in additional mitigation measures for the structure including, but not limited to: Construction of temporary or permanent supports or enclosing within the brick-lined wall. Stabilisation of the brick-lined wall (in accordance with standards for masonry structures) would be undertaken in accordance with the Heritage Branch guidelines How To Prepare Archival Records Of Heritage Items (NSW Heritage Office, 1998) prior to demolition.

To protect the heritage item from construction activities, the boundary of the reserve would be clearly identified on site/construction plans as an area of exclusion, and temporary barrier fencing would be constructed in accordance with the National Parks and Wildlife Act 1974. Acquisition of land owned by Local Aboriginal Land Councils would be in accordance with the provisions of the Aboriginal Land Rights Act 1983. Where required, undertake acquisition of State forests in accordance with the Forestry Act 1916. Revocation of land dedicated or reserved as national parks or nature reserves would be in accordance with the National Parks and Wildlife Act 1974. Acquisition of land owned by Local Aboriginal Land Councils would be in accordance with the provisions of the Aboriginal Land Rights Act 1983.

To protect the heritage item from construction activities, the boundary of the reserve would be clearly identified on site/construction plans as an area of exclusion, and temporary barrier fencing would be constructed in accordance with the National Parks and Wildlife Act 1974. Acquisition of land owned by Local Aboriginal Land Councils would be in accordance with the provisions of the Aboriginal Land Rights Act 1983. Where required, undertake acquisition of State forests in accordance with the Forestry Act 1916. Revocation of land dedicated or reserved as national parks or nature reserves would be in accordance with the National Parks and Wildlife Act 1974. Acquisition of land owned by Local Aboriginal Land Councils would be in accordance with the provisions of the Aboriginal Land Rights Act 1983.

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To protect the heritage item from construction activities, the boundary of the reserve would be clearly identified on site/construction plans as an area of exclusion, and temporary barrier fencing would be constructed in accordance with the National Parks and Wildlife Act 1974. Acquisition of land owned by Local Aboriginal Land Councils would be in accordance with the provisions of the Aboriginal Land Rights Act 1983. Where required, undertake acquisition of State forests in accordance with the Forestry Act 1916. Revocation of land dedicated or reserved as national parks or nature reserves would be in accordance with the National Parks and Wildlife Act 1974. Acquisition of land owned by Local Aboriginal Land Councils would be in accordance with the provisions of the Aboriginal Land Rights Act 1983.

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Undertake consultation with the Harwood Island Public School and other community facilities located adjacent to the project about proposed changes to local access.

Ensure RMS land that is required for the project is appropriately maintained. This would be undertaken by regional RMS officers or a designated local authority. RMS would manage the leasing and maintenance of property.

Ensure that excavation works near Lot1066 CP61639 are carefully managed in consultation with Richmond Valley Council to minimise potential impacts on any unknown heritage items including potential burials.

Undertake ongoing consultation with various agricultural properties affected by the project—through acquisition, changes to access or fragmentation of properties—about potential impacts on farming operations and potential measures to manage or mitigate identified impacts.

Consult with Forestry NSW regarding access to and within State forests where required, in accordance with the Forestry Act 1915.

Consult with Forestry NSW about the relocation of the trails directly impacted by the project's construction or operation.

Seek alternative land use options, particularly where there are ecological and/or landscape opportunities.

Identify suitable locations for relocated canoe pads and restore affected canoe ramps where possible in consultation with canoe-grown and affected property owners.

As far as possible, retain or provide new property accesses to replace those that are lost or modified, in consultation with impacted landowners.

As far as possible, reinstate or provide new property accesses to replace those that are lost or modified, in consultation with impacted landowners.

Undertake ongoing consultation and communication with managers of community services and facilities near the proposed construction works, to ensure that potential impacts are appropriately managed.

Undertake ongoing consultation with local hereditary owners and residents without formal consultation closest to construction works about construction activities, including timing, duration and likely impacts. This would be undertaken by regional RMS officers or a designated local authority. RMS would manage the leasing and maintenance of property.

Undertake ongoing consultation with service providers to verify locations and specific impacts on infrastructure and utilities.

Undertake ongoing consultation with service providers to verify locations and specific impacts on infrastructure and utilities.

Understand that the noise monitoring would complements the public meeting strategy to complete the public notification process of the project against predicted noise performance. The report would include, but not necessarily be limited to:

- Noise monitoring to assess compliance with the operational noise levels predicted
- A review of the operational noise levels in terms of 'what, where, when and why' (methadology, location and frequency of noise monitoring undertaken).
- Relevance of noise monitoring to the project
- Any requested recalibration of the noise model
- An assessment of the performance and effectiveness of applied noise mitigation measures
- Any additional feasible and reasonable measures required.

Understand that the pre-construction requirements identified in this report will be developed in consultation with Clarence Valley Council and relevant heritage agencies and other local stakeholders.

Undertake consultation with the New Italy community about proposed access changes for the New Italy Museum, including potential impacts and recommended mitigation measures. In particular, access into Swan Head Road.

Appropriate access arrangements to and from Gulmarrad, including the provision of a highway overbridge at McIntyres Lane would be considered at the detailed design stage in consultation with Clarence Valley Council.

Undertake consultation with the Harwood Island Public School and other community facilities located adjacent to the project about proposed changes to local access.

Undertake consultation with Herolds Bay residents and local businesses about construction activities along Herolds Bay Road. This would be undertaken by regional RMS officers or a designated local authority. RMS would manage the leasing and maintenance of property.

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### Mitigation Measures - Ground Water & Water Quality

#### Section 1

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Management Measure</th>
<th>Section 1</th>
<th>Section 2</th>
<th>Soft Soils W1</th>
<th>Soft Soils W3</th>
<th>Soft Soils W4</th>
<th>Other W2 Documents</th>
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#### Section 2

**Soft Soils**

- Wave 1
- Other W2

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**Soft Soils**

- Wave 2

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**Soft Soils**

- Wave 3

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**Soft Soils**

- Other W2

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### Additional Information

- The storage, handling and use of the chemicals and fuels would be in accordance with the Work Health and Safety Act 2000 and Workcover's Storage and Handling of Dangerous Goods Code of Practice.
- A hazardous materials buildings assessment would be carried out before the demolition of any structures or buildings to identify the issues of concern and the management requirements. This is required under the NSW Building Code 2007 and associated adverse impacts.
- Where required, a remedial action plan or appropriate environmental management plan would be prepared to remove and/or manage the contamination risks in accordance with NSW Office of Environment and Heritage guidelines.
- The maintenance of established stockpile sites would be in accordance with RMS Stockpile Management Guidelines (RMS, 2011a).
- Sedimentation basins and water quality ponds would be sized and located in accordance with the principles identified in the Water Quality – Water quality.
- Topsoil would be stockpiled separately and inspected for noxious weed seedlings at six monthly intervals and controlled with herbicide as required.
- Exposed areas would be progressively rehabilitated. Methods would include permanent revegetation, or temporary protection with spray mixing or cover crops.
- If the Stage 2 Detailed Site Investigation recommends further action, a Stage 3 Remedial Action Plan would be produced, detailing the remediation goals, environmental safeguards, and any necessary approval and permit requirements.
Soils, Sediments, Ground Water & Water Quality

Where excavation is to be carried out in areas anticipated to contain acid sulfate soils, works would proceed according to the acid sulfate soils management plan. Specific controls to be implemented would include:

- Stockpiling excavated acid sulfate soils separately in a lined, bunded and covered area
- Neutralising acid sulfate soils for reuse (where appropriate) by using additives such as lime.
- Disposal of acid sulfate soils where necessary in accordance with the relevant guidelines set out in DECC (2008b).

- Acid sulfate soils are disturbed, any acid produced would be neutralised and acid waste disposal site would be provided in accordance with the applicable guidelines.

Soils, Sediments, Ground Water & Water Quality

Where possible, stockpiles, vehicle washdown, batch plants, refuelling and chemical storage sites would be located in areas where the groundwater table is located greater than five metres from the surface.

- If the above local controls are not implemented, and where required, treating onsite runoff with a construction or compound-specific sedimentation basin, which would be monitored for parameters such as dissolved oxygen and nutrients.

- Areas would be lined if they are to be located over a shallow groundwater source less than two metres deep.

- Locating chemical or other hazardous material storage areas away from areas of known near-surface groundwater supplies, in areas where the water table is more than five metres below the surface, otherwise the areas are to be lined if they are to be located over a shallow groundwater source less than two metres deep.

- Paving areas that would be exposed for extended periods, such as car parks and main access roads, where feasible. Providing bunded storage facilities for chemicals; these bunded areas would be lined with clay where located on land where groundwater is within two metres of the ground surface.

- Availability of effective spill kits at all construction sites.

- Use of appropriately bunded areas for refuelling and washdown
- Use of appropriately bunded storage facilities for chemicals and fuels

- Water from sedimentation basins would be used for construction purposes, such as dust suppression.

- Flow discharge points would be designed with erosion controls to slow the flow velocities.

- Bunded areas for refuelling and washdown
- Bunded storage facilities for chemicals and fuels

- Sedimentation basins would be inspected at regular intervals and following significant rainfall events to assess available water storage capacity, water quality, structural integrity and debris levels.

- Where appropriate and required, construction phase sedimentation basins would be designed so they could be retained and used as permanent operational water quality ponds.

- The design and construction of works within riparian corridors and within the minimum required distance from waterways would be undertaken in accordance with NSW Office of Water guidelines for working within riparian corridors.

- When designing and implementing specific measures and procedures for works within waterways, consideration would be given to the need to maintain fish passage.

- Water from sedimentation basins would be used for construction purposes, such as dust suppression.

- Where it is identified that a temporary sedimentation basin or permanent water quality pond is located in an area of acid sulfate soil, the basin sizing would be reviewed to reduce basin depth to avoid excavation into the acid sulfate soil layer. The minimum allowable depth would be in accordance with the Blue Book, with the volume of the basin maintained. Alternatively, where not feasible, clay capping of the basin would be undertaken.

- Placing excavated acid sulfate soils separately in a lined, bunded and covered area
- Neutralising acid sulfate soils for reuse (where appropriate) by using additives such as lime.
- Disposal of acid sulfate soils where necessary in accordance with the relevant guidelines set out in DECC (2008b).

- Use of appropriately bunded areas for refuelling and washdown
- Use of appropriately bunded storage facilities for chemicals and fuels

- Water from sedimentation basins would be used for construction purposes, such as dust suppression.

- Flow discharge points would be designed with erosion controls to slow the flow velocities.

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- Bunded storage facilities for chemicals and fuels

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- Bunded storage facilities for chemicals and fuels

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<th>Mitigation No.</th>
<th>Category</th>
<th>Management Measure</th>
<th>Section 1 (RTMC)</th>
<th>Section 2 (26G)</th>
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<td>Management of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<td>Development of detailed site specific erosion sediment control plans for borrow sources covering construction and rehabilitation of the site (considering the needs for any adjacent aquatic habitats).</td>
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<td>Consultation with Department of Defence regarding the potential for unexploded ordnance to be encountered within the area of the Evans Head aerial bombing ranges.</td>
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<td>Further assessment involving geotechnical boronies, monitoring boronies and water quality testing at cutting sites would be undertaken at deep cutting sites to confirm that impacts would be limited to minor effects on local groundwater reserves.</td>
<td>☑</td>
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<td>Consultation will be undertaken with Rous Water to co-ordinate mitigation actions including the definition of appropriate buffer zones between the project and bores.</td>
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<td>Further assessment on site including geotechnical boronies, monitoring boronies and water quality testing at cutting sites would be undertaken at deep cutting sites to confirm that impacts would be limited to minor effects on local groundwater reserves.</td>
<td>☑</td>
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<td>All permanent water quality basins would incorporate measures to contain accidental fuel and chemical spills resulting from vehicle accidents on the highway. Basins would be designed to accommodate a spill volume of up to 45,000 litres.</td>
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<td>Pre-construction and Contractor</td>
<td>RWS</td>
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<tr>
<td>SSW66</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>For water quality treatment in floodplains and other locations with minimal changes in gradient, grassed swales would provide sufficient treatment to meet the water quality treatment targets.</td>
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<td>Construction</td>
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<tr>
<td>SSW65</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>In addition to water quality basins and grassed swales, rock check dams would be used to provide additional impact mitigation, including mitigation of flow concentration and scour erosion. The sizes and locations of rock check dams would be determined during detailed design.</td>
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<td>Construction</td>
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<tr>
<td>SSW63</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<td>☑</td>
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<td>Construction</td>
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<tr>
<td>SSW62</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Engineering measures that transfer the sewage water downstream. Standard practice would be to collect the sewage from the cut face in the drainage system for the highway, which would be diverted into water quality basins before being released back into the creek or natural drainage system at some point downstream.</td>
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<td>Construction and Contractor</td>
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<tr>
<td>SSW59</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>The monitoring of type B cuttings and major embankments would commence before construction to identify the need to implement any mitigation measures.</td>
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<td>Pre-construction and Contractor</td>
<td>RWS</td>
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<tr>
<td>SSW58</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Water quality parameters would be in line with DIW guidelines (Directorate of Infrastructure and Water).</td>
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<td></td>
<td>Pre-construction and Contractor</td>
<td>RWS</td>
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<tr>
<td>SSW57</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Where practical, sites used for stockpiling, washdown, batch plants, refuddling and chemical storage would be located in areas where the water table is more than five metres below the surface. If this is not possible, sites used for stockpiling, washdown, batch plants, refuddling and chemical storage would be located in areas where the water table is more than five metres below the surface. If this is not possible, sites used for stockpiling, washdown, batch plants, refuddling and chemical storage would be located in areas where the water table is more than five metres below the surface.</td>
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<td>Construction</td>
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<tr>
<td>SSW56</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<td>Construction</td>
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<tr>
<td>SSW55</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of type B cuttings and major embankments would commence before construction to identify the need to implement any mitigation measures.</td>
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<td>Pre-construction and Contractor</td>
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<tr>
<td>SSW54</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<tr>
<td>SSW53</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<tr>
<td>SSW52</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<tr>
<td>SSW51</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<td>SSW50</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<tr>
<td>SSW49</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<td>Construction</td>
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<tr>
<td>SSW48</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<td>Construction</td>
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<tr>
<td>SSW47</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
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<td>Construction</td>
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<tr>
<td>SSW46</td>
<td>Soft, Sedimentary Ground Water &amp; Water Quality</td>
<td>Mitigation of borrow source issue (particularly Long Hill) would be in line with Volume 2 of the Blue Book which covers water management of mines and quarries.</td>
<td>☑</td>
<td>☑</td>
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<td></td>
<td>Construction</td>
<td>Contractor</td>
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</tbody>
</table>

*W2HC*
## Traffic and Transport

- **Traffic and Transport**
  - The location of access to the service station for northbound traffic at Lemon Tree Road, Halfway Creek would be reviewed at the detailed design stage.
- **Traffic and Transport**
  - The interchange arrangement at Range Road would be reviewed to refine local access to and from the highway.
- **Traffic and Transport**
  - Access arrangements between the interchange at Maclean and Townsend via Jubilee Street would be reviewed taking into consideration the current heavy vehicle movements to the industrial estate at Townsend.
- **Traffic and Transport**
  - The interchange arrangement at Range Road would be reviewed to refine local access to and from the highway.
- **Traffic and Transport**
  - The need for the overbridge and the arrangement of local access at Chatsworth Road would be reviewed at the detailed design stage depending on specific staging and delivery of the highway.
- **Traffic and Transport**
  - The need for a full interchange at Yamba Road would be investigated should traffic growth warrant it in the future.
- **Traffic and Transport**
  - Where maritime traffic access to the Clarence and Richmond rivers is affected during construction of bridge crossings, appropriate signage would be provided indicating alternative means of access and the timing of relevant property owner for acquisition of the property in accordance with the provisions of the Land Acquisition (Just Terms Compensation) Act 1991.
- **Traffic and Transport**
  - Where access to State forest land is affected during construction, a new access route would be provided in consultation with the Department of Primary Industries (Forests NSW).

## Landscape

- **Landscape**
  - Measures to mitigate visual impacts on particular residences would be implemented, as identified in Table 11-42 and Working Paper – Urban Design, Landscape Character and Visual Impact. If any further viewpoints were identified during detailed design that would have a moderate–high or high impact, screen planting would also be considered.
- **Landscape**
  - Place marking and cultural plantings would be designed in accordance with the design principles identified in Working Paper – Urban Design, Landscape Character and Visual Impact (Section 4.6.3) and the urban design and landscape strategy.
- **Landscape**
  - The need for a full interchange at Yamba Road would be investigated should traffic growth warrant it in the future.
- **Landscape**
  - The need for the overbridge and the arrangement of local access at Chatsworth Road would be reviewed at the detailed design stage depending on specific staging and delivery of the highway.
- **Landscape**
  - The need for a full interchange at Yamba Road would be investigated should traffic growth warrant it in the future.
- **Landscape**
  - The need for the overbridge and the arrangement of local access at Chatsworth Road would be reviewed at the detailed design stage depending on specific staging and delivery of the highway.
- **Landscape**
  - The need for a full interchange at Yamba Road would be investigated should traffic growth warrant it in the future.
- **Landscape**
  - The need for the overbridge and the arrangement of local access at Chatsworth Road would be reviewed at the detailed design stage depending on specific staging and delivery of the highway.
- **Landscape**
  - The need and delivery strategy for the heavy vehicle checking station at the new area in Section 10 north of Richmond River would be reviewed.

### Table 1

<table>
<thead>
<tr>
<th>Mitigation No.</th>
<th>Category</th>
<th>Management Measure</th>
<th>Section 1 (W2HC)</th>
<th>Section 2 (W2HC)</th>
<th>Soft Soils Wave 1</th>
<th>Soft Soils Wave 2</th>
<th>Soft Soils Wave 3</th>
<th>Other RMS Stages</th>
<th>Tiers</th>
<th>Responsibility</th>
<th>Status</th>
<th>Reference</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>T101</td>
<td>Traffic and Transport</td>
<td>Construction traffic management plan would be prepared and implemented for each site. They would include:</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Construction Contractor</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
<td>RMS and Contractor</td>
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<tr>
<td>T102</td>
<td>Traffic and Transport</td>
<td>The location of access to the service station for northbound traffic at Lemon Tree Road, Halfway Creek would be reviewed at the detailed design stage. The strategy would seek to maintain the existing level of traffic within the project boundary and limit the need to have material taken through the town of Wardell.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Construction Contractor</td>
<td>Pre-construction and Construction</td>
<td>RMS and Contractor</td>
<td>RMS and Contractor</td>
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<tr>
<td>T103</td>
<td>Traffic and Transport</td>
<td>The interchange arrangement at Range Road would be reviewed to refine local access to and from the highway.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Construction Contractor</td>
<td>Pre-construction RMS</td>
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<tr>
<td>T104</td>
<td>Traffic and Transport</td>
<td>The need for a full interchange at Yamba Road would be investigated should traffic growth warrant it in the future.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Construction Contractor</td>
<td>Pre-construction RMS</td>
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<tr>
<td>T105</td>
<td>Traffic and Transport</td>
<td>Where any legal access is permanently affected, alternative access to an equivalent standard to and from a public road would be provided where a property has no other legal means of access and where such transport links would provide a more feasible and practical option. Where alternative access arrangements are not feasible or practical and a property is left with no access to a public road, negotiations would be undertaken with the relevant property owner for acquisition of the property in accordance with the provisions of the Land Acquisition (Just Terms Compensation) Act 1991.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Construction Contractor</td>
<td>Pre-construction RMS</td>
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<tr>
<td>T106</td>
<td>Traffic and Transport</td>
<td>Where any legal access is permanently affected, alternative access to an equivalent standard to and from a public road would be provided where a property has no other legal means of access and where such transport links would provide a more feasible and practical option. Where alternative access arrangements are not feasible or practical and a property is left with no access to a public road, negotiations would be undertaken with the relevant property owner for acquisition of the property in accordance with the provisions of the Land Acquisition (Just Terms Compensation) Act 1991.</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>Construction Contractor</td>
<td>Pre-construction RMS</td>
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<tr>
<td>T107</td>
<td>Traffic and Transport</td>
<td>Where maritime traffic access to the Clarence and Richmond rivers is affected during construction of bridge crossings, appropriate signage would be provided indicating alternative means of access and the timing of relevant property owner for acquisition of the property in accordance with the provisions of the Land Acquisition (Just Terms Compensation) Act 1991.</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>Construction Contractor</td>
<td>Pre-construction RMS</td>
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<tr>
<td>T108</td>
<td>Traffic and Transport</td>
<td>Where changes in access affect four Aboriginal communities, temporary alternatives would be provided in conjunction with bus operators and affected schools to maintain access during construction.</td>
<td>✓</td>
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<td>Construction Contractor</td>
<td>Pre-construction RMS</td>
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<td>Reference</td>
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<tr>
<td>WM20 Other Issues</td>
<td>Collection and removal of roadside litter would be undertaken in accordance with the RMS Environmental Management System.</td>
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<tr>
<td>WM19 Other Issues</td>
<td>All operational waste would be managed in accordance with the RMS waste management procedures and Environmental Management System.</td>
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<tr>
<td>WM18 Other Issues</td>
<td>Appropriate waste and recycling facilities would be provided at rest areas and heavy vehicle checking stations.</td>
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<tr>
<td>WM17 Other Issues</td>
<td>Regular visual inspections would be conducted to ensure that work sites are kept tidy and to identify opportunities for reuse and recycling.</td>
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<tr>
<td>WM16 Other Issues</td>
<td>At site compounds, on-site recycling facilities would be provided for recycling paper, plastic, glass and other re-useable materials. Liquid waste such as paints and solvents would be disposed of in accordance with the Protection of the Environment Operations (Waste) Regulation 2005. Where possible, this material would be reused within the road corridor.</td>
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<tr>
<td>WM15 Other Issues</td>
<td>Where feasible, the contractor would be required to re-use materials. This could include, but is not limited to, concrete formwork or surplus concrete pours.</td>
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<tr>
<td>WM14 Other Issues</td>
<td>The use of recycled products in construction works would be investigated.</td>
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<td>WM12 Other Issues</td>
<td>Proposed sustainable material sources practices (such as use of recycled materials or wastewater) were to be identified in accordance with the construction Soil and Water Management Plan. Water captured in excavations will be required to be either: • Managed in accordance with the construction Soil and Water Management Plan • Excavated Public Road Material Exemption (EPA, 2012) • Excavated Natural Material Exemption (EPA, 2008).</td>
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<td>WM11 Other Issues</td>
<td>Where possible, materials would be brought in back to back to minimize the amount of package required. Sources of material that have sustainable package design, recyclable and reusable packaging would be favored and use of material sourced at low cost when effective.</td>
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<td>WM10 Other Issues</td>
<td>Waste material generated on-site will be dealt with in accordance with the Protection of the Environment Operations Act 1997 and Waste Classification Guidelines Part 1: Classifying Waste (DECCW, 2009).</td>
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<tr>
<td>WM09 Other Issues</td>
<td>Waste minimisation and management measures would be developed based on the principles in the Waste Avoidance and Resource Recovery Act 2001, the NSW Government’s Waste Reduction and Purchasing Policy, and waste exemptions including: • Excavated Natural Material Exemption (EPA, 2008). • Excavated Public Road Material Exemption (EPA, 2012). • Managed in accordance with the protection of the environment operations act 2001, the NSW government’s waste reduction and purchasing policy, and waste exemptions including: • Excavated Natural Material Exemption (EPA, 2008).</td>
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<tr>
<td>WM08 Other Issues</td>
<td>Waste material generated on-site will be dealt with in accordance with the Protection of the Environment Operations Act 1997 and Waste Classification Guidelines Part 1: Classifying Waste (DECCW, 2009).</td>
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<tr>
<td>WM07 Other Issues</td>
<td>Where possible, materials would be brought in back to back to minimize the amount of package required. Sources of material that have sustainable package design, recyclable and reusable packaging would be favored and use of material sourced at low cost when effective.</td>
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<tr>
<td>WM06 Other Issues</td>
<td>Waste minimisation and management measures would be developed based on the principles in the Waste Avoidance and Resource Recovery Act 2001, the NSW Government’s Waste Reduction and Purchasing Policy, and waste exemptions including: • Excavated Natural Material Exemption (EPA, 2008). • Excavated Public Road Material Exemption (EPA, 2012). • Managed in accordance with the protection of the environment operations act 2001, the NSW government’s waste reduction and purchasing policy, and waste exemptions including: • Excavated Natural Material Exemption (EPA, 2008).</td>
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<td>WM05 Other Issues</td>
<td>Waste material generated on-site will be dealt with in accordance with the Protection of the Environment Operations Act 1997 and Waste Classification Guidelines Part 1: Classifying Waste (DECCW, 2009).</td>
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<td>WM04 Other Issues</td>
<td>Where possible, materials would be brought in back to back to minimize the amount of package required. Sources of material that have sustainable package design, recyclable and reusable packaging would be favored and use of material sourced at low cost when effective.</td>
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<td>WM03 Other Issues</td>
<td>Waste material generated on-site will be dealt with in accordance with the Protection of the Environment Operations Act 1997 and Waste Classification Guidelines Part 1: Classifying Waste (DECCW, 2009).</td>
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<td>WM02 Other Issues</td>
<td>Where possible, materials would be brought in back to back to minimize the amount of package required. Sources of material that have sustainable package design, recyclable and reusable packaging would be favored and use of material sourced at low cost when effective.</td>
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<td>WM01 Other Issues</td>
<td>Waste material generated on-site will be dealt with in accordance with the Protection of the Environment Operations Act 1997 and Waste Classification Guidelines Part 1: Classifying Waste (DECCW, 2009).</td>
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Timing
Pre-construction
Construction
Operation
Pre-construction and Construction
Pre-construction, Construction and Operation
Construction and Operation

Responsibility
Contractor
RMS
RMS and Contractor

Status
Open
Closed