McConnell Dowell - OHL Joint Venture

CLIENT: ROADS AND MARITIME SERVICES

PROJECT: PACIFIC HIGHWAY UPGRADE - KUNDABUNG TO KEMPSEY

LOCATION: KUNDABUNG TO KEMPSEY, NSW

PROJECT NO.: 2606

Quality Management System

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

QMS number 025–Y001–2602

Revision History

Rev	Date	Details	By	Approved
A	03/06/14	Draft for Review by RMS and Project ER	J.Crawford	T.Jackson
B	30/06/14	RMS and Project ER Comments Incorporated	J.Crawford	T.Jackson
C	22/07/14	Additional RMS Comments Incorporated	J.Crawford	T.Jackson
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1	06/03/15	Administrative Changes	L. Watson	J. Hamilton

 Based on MMS Template MMS # 025-J002-100 Rev2 06Jan2012

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CONTENTS

GLOSSARY / ABBREVIATIONS

Term	Definition
ASS	Acid sulfate soils
CEMP	Construction environmental management plan
CEP	Construction Execution Procedure
Compliance audit	Verification of how implementation is proceeding with respect to a construction environmental management plan (CEMP) (which incorporates the relevant approval conditions)
Contractor	McConnell Dowell OHL Joint Venture (JV)
CoA	Condition(s) of approval. The Project Approval for the Pacific Highway Upgrade – Oxley Highway to Kempsey (MP 07_0090), approved by the Minister for Planning and Infrastructure on 8 February 2012, and all subsequent modifications
Director-General	Director-General of the NSW Department of Planning and Infrastructure (or delegate)
DIPNR	Department of Infrastructure Planning and Natural Resources, superseded by the Department of Planning and Infrastructure and Department of Planning and Environment thereafter
DoE	Commonwealth Department of Environment
DPE	NSW Department of Planning and Environment
DPI	Department of Primary Industries
DP&I	Department of Planning and Infrastructure, superseded by Department of Planning and Environment
EA	Environmental Assessment
Ecological sustainable development	Using, conserving and enhancing the community's resources so that the ecological processes on which life depends are maintained and the total quality of life now and in the future, can be increased (Council of Australian Governments, 1992)
EIRMP	Environmental and Incident Response Management Plan
EP&A	Environmental Planning and Assessment
EPA	NSW Environment Protection Authority
EPL	Environmental Protection License
ERG	Environmental Review Group comprising representatives of Roads and Maritime , Environmental Representative, Project delivery team, regulatory authorities (EPA, DPI Fishing and

Term	Definition
	Aquaculture, NOW) and councils (Port Macquarie Hastings Council, Kempsey Shire Council). 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.
EMS	Environmental management system
Environmental aspect	Defined by AS/NZS ISO 14001:2004 as an element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Defined by AS/NZS ISO 14001:2004 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Environmental incident	An unexpected event that has, or has the potential to, cause harm to the environment and requires some action to minimise the impact or restore the environment.
Environmental objective	Defined by AS/NZS ISO 14001:2004 as an overall environmental goal, consistent with the environmental policy that an organisation sets itself to achieve.
Environmental policy	Statement by an organisation of its intention and principles for environmental performance.
Environmental target	Defined by AS/NZS ISO 14001:2004 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.
Environmental Representative	The independent Environmental Representative engaged by Roads and Maritime as required by Condition of Approval B29 for the duration of construction of Works. 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.
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPL	Environment Protection Licence
ESCP	Erosion and Sediment Control Plan
EWMS	Environmental Work Method Statement
HSE	Health, Safety and Environment
JSEA / SWMS	Job Safety and Environment Analyses / Safe Work Method

Term	Definition
	Statement
JV, the	The McConnell Dowell OHL Joint Venture
K2K	The Kundabung to Kempsey project
Minor amendment	Change that is editorial in nature (e.g. staff and agency or authority name changes) and those changes that do not increase the magnitude of impacts on the environment when considered cumulatively or individually. As well as those that do not compromise the ability of the Project to meet approval or legislative requirements.
Minister, the	Minister for Planning and Infrastructure
MMS	McConnell Dowell Management System
Non-compliance	Failure to comply with the requirements of the Oxley Highway to Kempsey 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	Office of Environment and Heritage
PEP	Project Execution Plan
PESCP	Progressive Erosion and Sediment Control Plan
POEO Act	Protection of the Environment Operations Act 1997
Project, the	The Kundabung to Kempsey Pacific Highway Upgrade project
Principal, the	Roads and Maritime Services
QMS	Quality Management System
Regulatory Authority	Any environmental service, authority, agency, department, office, etc. This includes, but is not limited to, the Environment Protection Authority (EPA), Department of Primary Industries (Fishing and Aquiculture), Office of Environment and Heritage (OEH), Department of Planning and Environment (DPE) and the Department of the Environment.
Roads and Maritime	Roads and Maritime Services
SoC	Statement of commitments. The revised Statement of Commitments contained within Table 4-1 of “Upgrading the Pacific Highway – Oxley to Kempsey – Environmental Assessment Submissions Report”.

Term	Definition
SEWPaC	Commonwealth Department of Environment, Water, Population and Community (now Department of Environment)

1.0 INTRODUCTION

1.1 BACKGROUND

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

In December 2006, the Oxley Highway to Kempsey Pacific Highway Upgrade project was declared by the then Minister for Planning to be a project to which Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act) applies. The order was amended by the then Minister for Planning on 3 December 2012 and gazetted on 10 December 2012. An Environmental Assessment was prepared and placed on public exhibition for 30 days between September and October 2010. Following consideration of submissions made during the exhibition period, the submissions report, including changes to the proposal following consideration of submissions, was submitted to the then Minister for Planning seeking approval. Approval of the Oxley Highway to Kempsey Pacific Highway Upgrade project was granted on 8 February 2012, subject to a number of Conditions of Approval (CoA). On 20 November 2012, a modification of the CoA was issued under Section 75W of the EP&A Act regarding the inclusion of an assessment process for minor ancillary facilities.

Furthermore, the Oxley Highway to Kempsey Pacific Highway Upgrade project was referred to the (then) Commonwealth Department of Sustainability, Environment, Water, Population and Communities (SEWPaC). On 21 September 2012, DSEWPC determined that the Oxley Highway to Kempsey Project was a controlled action under section 75 and 87 of the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act). The Oxley Highway to Kempsey Project was approved by the Department of the Environment (DoE, formerly SEWPaC) under section 130(1) and 133 of the EPBC Act on 24 January 2014. Additional measures required to meet the EPBC conditions of approval have been included in the specifications and these mitigation measures are to be included in this CEMP. This includes the submission of the CEMP and associated construction management sub-plans to the DoE for their review and approval.

Due to the Project's length and funding models available, the Oxley Highway to Kempsey Pacific Highway Upgrade Project will be essentially delivered in two main sections – from the Oxley Highway to Kundabung (approximately 24 kilometres) and from Kundabung to Kempsey (approximately 14 kilometres). The delivery of these two sections will be undertaken in four stages (refer to Section 2.2).

This Construction Environmental Management Plan (CEMP) addresses the construction phase of the Kundabung to Kempsey Pacific Highway Upgrade, hereafter referred to as 'the Project' or 'K2K'. K2K is being delivered for Roads and Maritime by the McConnell Dowell OHL Joint Venture, hereafter referred to as 'the JV'. This Plan has been adapted for the Project from the Oxley Highway to Kempsey CEMP.

1.2 PURPOSE OF THIS CEMP

This Construction Environmental Management Plan (CEMP) and sub plans have been prepared to comply with the Minister for Planning and Infrastructure's Conditions of Approval for the K2K project. A detailed description of the Project is provided in Chapter 2.

This CEMP has been tailored by the JV to suit the K2K stage of the Oxley Highway to Kempsey Pacific Highway Upgrade project.

The CEMP has been developed and adopted 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 purpose of this CEMP is to provide a structured approach to the management of environmental issues during construction of K2K. 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 ensures the requirements of Roads and Maritime and the Minister's conditions of approval (see Appendix A1 and Compliance Tracking Program) are met.

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 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 Condition of Approval (CoA) B30. The requirements of this condition and where they are met in this CEMP are shown in Table 1-1. A full list of CoAs is included in Appendix A1.

Table 1-1 CoA requirements for CEMP

CoA no.	Requirement	Reference
B30	The Proponent shall prepare and (following approval) implement a Construction Environmental Management Plan for the project. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the relevant agencies and in accordance with the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004). The Plan shall include, but not necessarily be limited to:	This plan
B30 (a)	A description of activities to be undertaken during construction of the project or stages of construction, as relevant.	Chapter 2
B30 (b)	Statutory and other obligations that the Proponent is required to fulfil during construction including approvals, consultations and agreements required from agencies and key legislation and policies. Evidence of consultation with relevant agencies shall be included identifying how issues raised by these agencies have been addressed in the Plan.	Compliance Tracking Program, Appendix A1, Section 1.2, Section 1.3
B30 (c)	A description of the roles and responsibilities for relevant employees involved in the construction of the project including relevant training and induction provisions for ensuring that employees, including contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of approval.	Section 4.2, Section 4.3, Chapter 5
B30 (d)	Identification of ancillary facility site locations, including an assessment against the location criteria outlined in condition C28.	Section 2.4, Appendix A4
B30 (e)	An environmental risk analysis to identify the key environmental	Section 3.4,

CoA no.	Requirement		Reference
	performance issues associated with the construction phase and details of how environmental performance would be monitored and managed 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 project and/ or concurrent construction works with adjacent Pacific Highway Upgrade projects, as relevant). In particular, the following environmental performance issues shall be addressed in the Plan:		Section4.1.1, Appendix A2
	(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.	Appendix B6
	(ii)	Measures to minimise hydrology impacts, including measures to stabilise bed and bank structures as required.	Appendix B4
	(iii)	Measures to monitor and manage impacts associated with the construction and operation of ancillary facilities.	Section 2.4
	(iv)	Measures for the handling, treatment and management of contaminated materials.	Appendix B7
	(v)	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 for dealing with green waste including timber and mulch from clearing activities; and measures for reducing demand on water resources (including the potential for reuse of treated water from sediment control basins).	Appendix B7
	(vi)	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 and a stockpile management protocol detailing locational criteria that would guide the placement of stockpiles and management measures that would be implemented to avoid/ minimise amenity impacts to surrounding residents and environmental risks (including to surrounding water courses). Stockpile sites that affect heritage, threatened species, populations or endangered ecological communities require the approval of the Director General, in consultation with the EPA.	Appendix B7
	(vii)	Measures to monitor and manage hazard and risks including emergency management.	Appendix A7
	(viii)	The issues identified in condition B31.	Appendix B1, Appendix B2, Appendix B3, Appendix B4, Appendix B5
B30 (f)	Details of community involvement and complaints handling procedures during construction, consistent with the requirements of conditions B25 to B28.		Section 6.3.2
B30 (g)	Details of compliance and incident management consistent with the requirements of condition B24.		Chapter 7
B30 (h)	Procedures for the periodic review and update of the Construction Environmental Management Plan and sub-plans required under condition B31, as necessary (including where minor changes can be		Chapter 9

CoA no.	Requirement	Reference
	approved by the Environmental Representative).	
B30	The Plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of construction, or within such period otherwise agreed by the Director-General. Construction works shall not commence until written approval has been received from the Director-General.	Section 1.6

This CEMP is the overarching document in the environmental management system for K2K 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 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 sub plans. Those consulted include:

- Environmental Protection Authority (EPA).
- Department of Primary Industries (Fishing and Aquaculture).
- NSW Office of Water (NOW).
- Office of Environment and Heritage (OEH).
- Port Macquarie-Hastings Council.
- Kempsey Shire 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.

Reports / plans that are required to be submitted to, or to form part of a submission to, the Director General for Planning and Environment and/ or regulatory Authority, must be prepared and developed to a standard determined by the Principal required for submission to the Director General Planning and Environment and/ or regulatory Authority. The time period for the review of the reports/plan shall be:

- Principal (Roads and Maritime) and Project Environmental Representative – ten (10) working days per submission / re-submission.
- Any Regulatory Authority – (excluding the DoE) fifteen (15) working days per submission / re-submission.
- Commonwealth Department of the Environment (DoE) – twenty (20) working days per submission / re-submission.
- NSW Department of Planning and Environment (DPE) – twenty (20) working days per submission / resubmission.

The above review time periods are not concurrent and are separate and distinct from each other.

Reports/ plans to be submitted to the DoE and DPE will reference the relevant Conditions of Approval, as referred to in the Specifications, where applicable.

1.4 CERTIFICATION AND APPROVAL

The Project and Environmental Manager must approve this CEMP prior to submission to the DPE and DoE. Submission to DPE and DoE is required no later than one month prior to commencement of construction or as otherwise agreed.

The CEMP must be approved by the Director-General of DPE prior to the commencement of construction.

The sub-plans prepared under CoA B31 also require approval by the Director-General 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 Chapters 9 and 10.

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 Advisors 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 Director-General for DPE for approval.

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

2.0 PROJECT DESCRIPTION

2.1 GENERAL FEATURES

Figure 2-1 provides an overview of the overall Oxley Highway to Kempsey upgrade, with the K2K project (this CEMP) highlighted in yellow. The location of the Project is north of Port Macquarie, NSW.

The K2K Project involves the construction of a section of carriageway on the Pacific Highway in NSW from chainage 24040 to chainage 37840, known as HW10 Pacific Highway Upgrade - Kundabung to Kempsey. K2K involves the construction of a length of approximately 13.7km kilometres of two lane dual carriageway on the Pacific Highway, plus 6 km of local roads, including all associated earthworks. The southbound pavement comprises 13.7 km of rigid pavement (Concrete), while the northbound pavement comprises 7.8 km of new rigid pavement (Concrete) plus 5.9 km of flexible pavement.

On completion of the works, the new alignment of the Pacific Highway will include a four-lane dual carriageway (two lanes in each direction) and the existing Pacific Highway from chainage 33000 to 36500 will be left as a secondary distribution road.

The works also involve the construction of the twin bridges over Smith Creek (Pacific Highway - Chainage 28200), the twin bridges over Pipers Creek (Pacific Highway - Chainage 30650), the bridge on Kundabung Road (Over Pacific Highway - Chainage 29250) and the northbound bridge over Stumpy Creek (Pacific Highway - Chainage 37720).

2.2 STAGING

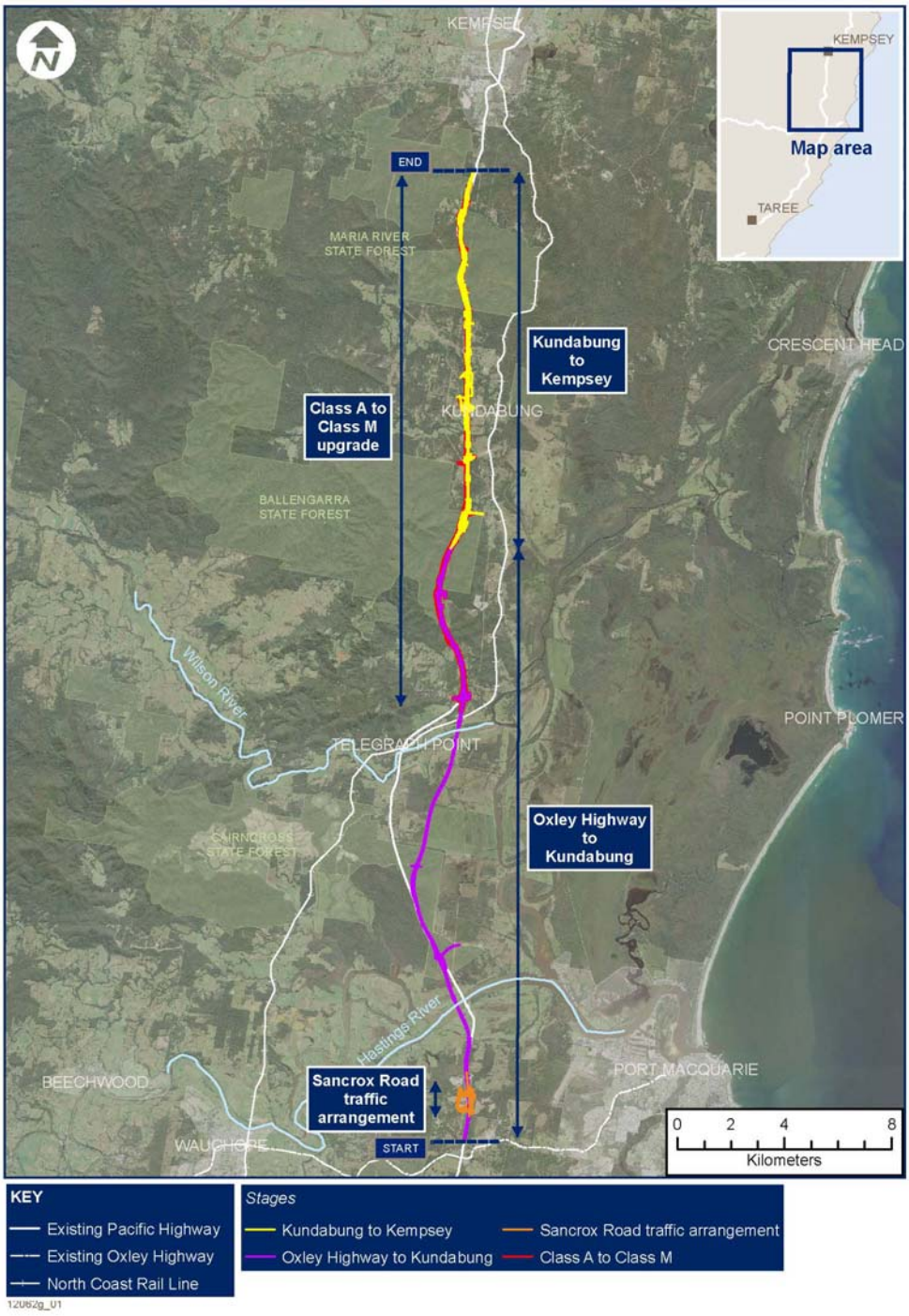
As indicated in Section 1.1, the overall Oxley Highway to Kempsey Project is proposed to be delivered in four stages. The stages are listed in their corresponding chronological order of likely construction commencement. Due to funding, it is likely that the first three stages may all be under construction at the same time. The stages are:

- Sancrox Road traffic arrangement.
- Kundabung to Kempsey.
- Oxley Highway to Kundabung.
- Class A to Class M.

Figure 2-1 provides an overview of the proposed stages.

In accordance with the requirements of CoA A7, details of the staging, including construction activities and submission of corresponding environmental plans, strategies and protocols, are documented in the Oxley Highway to Kempsey Staging Report (November2013). The Staging Report will be updated, or advice provided that no changes to staging are proposed, and submitted to the Director-General prior to the commencement of each stage, identifying any changes to the proposed staging or applicable CoA.

Figure 2-1 Overview of Oxley Highway to Kempsey Upgrade (the K2K project is highlighted in yellow)



2.3 CONSTRUCTION ACTIVITIES AND SEQUENCE

Typically, the following sequences of activities are anticipated for all project work areas:

- Site establishment – installing boundary fencing, construction facilities and environmental controls then 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 fill 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.

2.4 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 batching plants.
- Equipment and material storage.
- Concrete casting yards.

With reference to CoA C28, establishment of ancillary site facilities will not be undertaken without the approval of Roads and Maritime and is subject to approval of the CEMP by the DPE, or subsequent approval of the DPE (where required by CoA C28).

With reference to CoA C28, all proposed compound sites, material storage areas, batch plants and other ancillary facilities are identified in Appendix A4. Stockpile locations are identified in the

Stockpile Management Protocol (QMS # 025-E005-2602). An environmental assessment will be undertaken of all ancillary facility sites (except stockpiles) in order to ensure compliance with the environmental protection requirements outlined in Section 3.7.2 and assessment criteria in Appendix A4.

Ancillary sites that meet the assessment criteria shall be approved in consultation with RMS. Ancillary sites that do not meet the assessment criteria shall be submitted to RMS to be submitted to the Director-General for separate approval.

No ancillary site shall be established until it has been approved in accordance with CoA C28.

3.0 PLANNING

3.1 PROJECT ENVIRONMENTAL OBLIGATIONS

All construction personnel working on K2K 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.
- 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

A register of legal and other requirements for K2K 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. 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.

The JV will comply with all legal and other requirements outlined Appendix A1 and aims to employ best practice environmental management procedures for the construction of the Project.

The **Compliance with Legal and Other Requirements** (QMS # **000-D004-000**) procedure which is part of the JV Project Execution Plan (PEP) outlines how the JV identifies, maintains and evaluates compliance with legal and other related requirements that are applicable to delivery of the Project. This legislation is identified and recorded in **Review Record ENV Legal** (QMS # **025-005-2602**), and updated to the register in Appendix A1.

All relevant legislation requirements are identified and recorded at the commencement of the Project and included within the development of the PEP and specific management plans. Legislation and compliance are reviewed by management on at least a 6 monthly basis.

3.3 APPROVALS, PERMITS AND LICENSING

A number of approvals, permits and licenses have and/or will be obtained for the Project. Appendix A1 contains a register of all relevant environmental approvals, permits and licenses. The register will be maintained by the Environmental Manager and will be reviewed 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 Environmental Assessment 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.
- Environmental protection licences (EPL) under the Protection of the Environment Operations Act 1997 (POEO Act) 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 K2K 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 the JV to obtain, renew or comply with such necessary licences, permits or approvals except as provided under Section 75U of the EP&A Act.

The Project Approval and revised Statement of Commitments (SoC) are contained in the Compliance Tracking Program and provide a reference to where each requirement is addressed by this CEMP or other Project documentation. A checklist of compliance with Roads and Maritime specification G36 is included as Appendix A1.

The JV will adhere to any conditions identified within environmental licences, permits and approvals and will revise this CEMP to reflect these.

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/aspects, 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.

Risk assessments for the Project are based on AS/NZS 4360:1999, the Australian standard for risk assessments.

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. This document has been used to develop a HSE Risk Register; further information about the Project HSE Risk Register is included in Section 4.1.1 'Hazard and Risk Identification'.

3.5 ENVIRONMENTAL POLICY

The **Environmental Policy** (QMS # **010-B003-2602**) describes the JV's commitment to continual improvement in environmental performance and compliance with applicable legal requirements.

The Policy makes the following key commitments:

- Continuous Improvement;

- Prevention of Pollution;
- Compliance with Legal and Other Requirements;
- Sustainable Development.

The environmental policy is displayed on the K2K website and at the site office, and communicated to staff and other interested parties via inductions and ongoing awareness programs.

A copy of the environmental policy is provided in Appendix A3.

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 sub-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 below.

Table 3-1 Environmental Objectives and Targets

Objective	Target	Measurement Tool
Construction of the Project in accordance with environmental approvals.	Full compliance with statutory approvals.	Audits, construction compliance reporting and management review.
Compliance with all legal requirements.	No regulatory infringements (PINs or prosecutions). No formal regulatory warning.	Audits, construction compliance reporting and management review.
Implement a rigorous and comprehensive EMS that meets the requirements of AS/NZS ISO 14001.	Address non-conformances and corrective actions within specific timeframes.	Audits and management reviews.
Engage with the effected and broader community, minimise complaints and respond to any complaints within a suitable timeframe.	Disseminate regular Project updates and other information through the Project website and other tools identified in the Community Engagement Strategy. Record and response to complaints within the time frame specified in the Community Engagement Strategy.	Review complaints register, construction compliance report and audits.
Continuously improve environmental performance.	Develop and maintain a program of ongoing environmental training. Capture lessons learnt from environmental incidents to minimise repeat issues. Encourage and reward innovation and effort throughout the works force.	Construction compliance report and management review.

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 Services 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 Advisor will then undertake an additional environmental assessment and consistency review in consultation with the Roads and Maritime Environmental Services Manager, Pacific Highway to determine if a Project modification may be required.

Should the consistency review determine that a Project modification maybe required i.e. the impacts are of a nature and scale that it is not considered consistent with the Project Approval, the Environmental Representative will be informed immediately and modification application under Section 75W of the EP&A Act prepared submitted to the Director-General DPE for determination.

The General Manager, Pacific Highway will approve all refinements that are deemed consistent with the Project Approval.

Any modification to the NSW Department of Planning and Environment approval, must remain consistent with the Federal Department of the Environment approval, unless a modification to this approval is also sought.

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 or testing laboratory”. Stockpiles are not included under this definition and are discussed in Section 3.7.3.

The location of the main site compound and ancillary facilities are nominated in Appendix A4. As per Section 2.4, no ancillary site shall be established until it has been approved in accordance with CoA C28.

Circumstances 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 C28 will be undertaken. The criteria require that ancillary facilities:

a) Be located more than 50 metres from a waterway.

b) Have ready access to the road network or direct access to the construction corridor.

c) Be located in areas of low ecological significance and require minimal clearing of native vegetation (not beyond that already required by the Project).

d) Be located on relatively level land.

e) Be separated from the nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant).

f) Not unreasonably affect the land use of adjacent properties.

g) Be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented.

h) Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.

i) Be located in areas of low heritage conservation significance (including identified Aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the Project.

Note: For the purposes of criterion a), a “waterway” is defined as:

- Any Class 1 or Class 2 fish habitat waterways (as described in the NSW Fisheries guidelines).
- Any permanent or ephemeral drainage line with direct drainage to State Environmental Planning Policy No 14 Coastal Wetlands.
- Waters that are used for the purposes of human consumption.
- Waters that have a known Maundia triglochinoides population.

Where this criterion is unable to be met for any proposed ancillary facility, an assessment demonstrating how adverse impacts from construction or operation of the facility can be mitigated and managed to an acceptable standard will be undertaken and provided to the Director-General for approval.

Notwithstanding the above, CoA C29 facilitates the establishment of minor ancillary facilities (eg lunch sheds, office sheds and portable toilet facilities) that do not comply with the criteria detailed in CoA C28. However, for CoA C29 to be applicable, the minor ancillary facilities are subject to the following criteria:

a) are located within an active construction zone within the approved project footprint; and

b) have been assessed by the Environmental Representative to have:

   i. minimal amenity impacts to surrounding residences, with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and

   ii. minimal environmental impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the Project; and

c) have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in a Construction Environmental Management Plan for the Project.

3.7.3 Stockpile locality assessment

Stockpiles are not defined as an ancillary facility according to the definitions provided in the Project Approval. During construction, a number of temporary stockpiles will be required. Stockpile sites may be required to store material including, but not limited to:

- Excavated materials to be used in fill embankments and other design features.
- ASS subject to treatment prior to reuse.
- Excavated material unsuitable for reuse in the formation.
- Excess concrete, pavement, rock and other material stockpiled for either future use in the Project or prior to removal from site.
- Topsoil, mulch, excess timber for landscaping and revegetation works.

Where these stockpiles are proposed, the locating criteria contained in the Stockpile Management Protocol (Refer to Appendix I of the SWMP) will be considered and stockpile sites located accordingly.

The protocol also includes standard mitigation measures that will be implemented to minimise or avoid impacts on the environment.

Where a stockpile site has the potential to affect a heritage site, threatened species, populations or endangered ecological communities, an assessment demonstrating how adverse impacts from construction or operation of the stockpile site can be mitigated and managed to an acceptable standard will be undertaken in consultation with EPA and provided to the Director-General for approval.

4.0 IMPLEMENTATION AND OPERATION

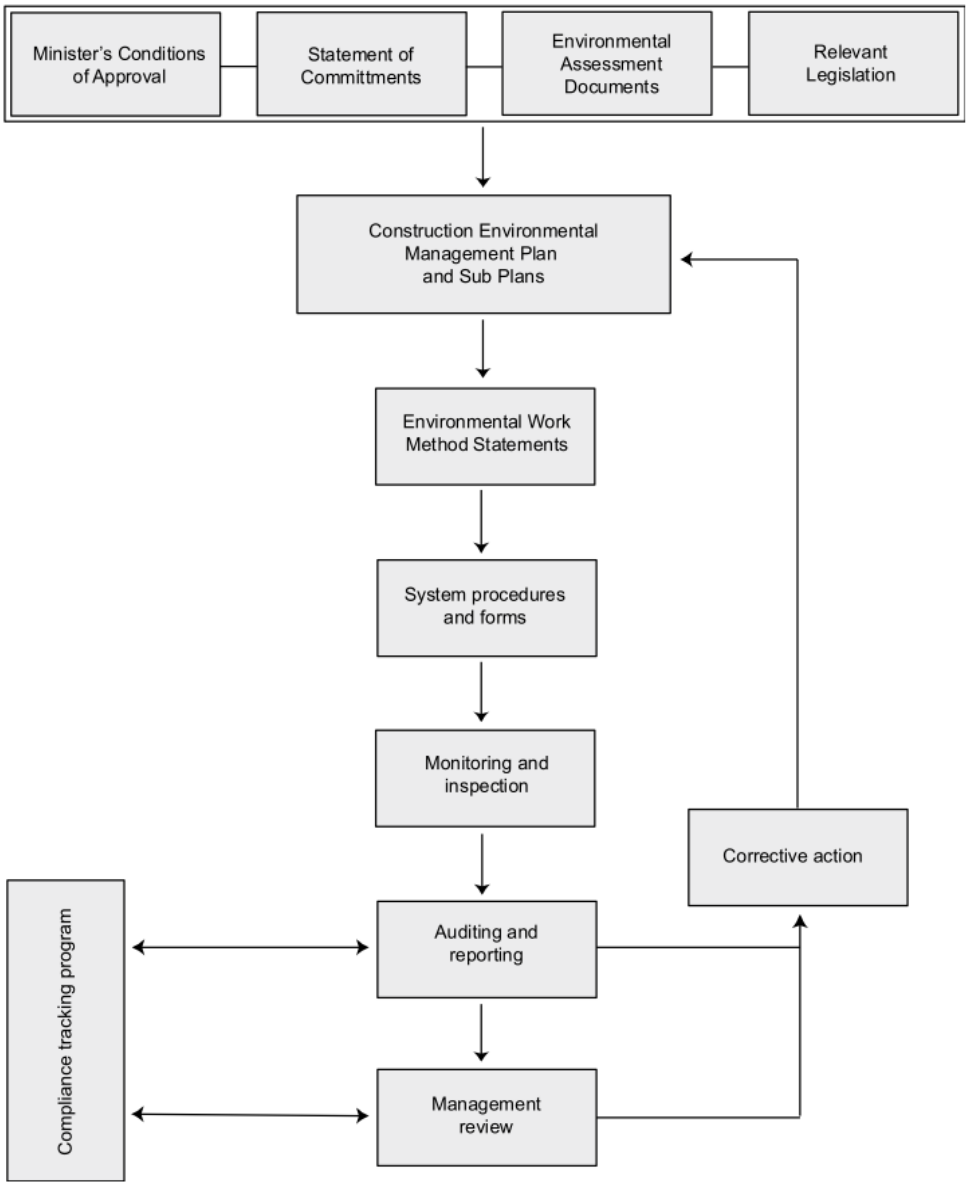
This CEMP is the overarching management plan for a suite of environmental management documents. It provides a structured and systematic approach to environmental management.

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 below.

Figure 4-1 Environmental Management System structure



4.1 ENVIRONMENTAL MANAGEMENT SYSTEM DOCUMENTATION

The JV operates an ISO 14001 accredited Environmental Management System (EMS) that forms part of the integrated McConnell Dowell Management System (MMS). The MMS provides the framework for managers to implement specified corporate standards and practices in a consistent manner. It defines the application of work practices, processes, and systems for engineering, acquisition of materials, equipment and services, construction, and other services related to tendering and project execution.

4.1.1 Hazard and Risk Identification

During Project execution, the principal objectives of risk management are to develop and monitor the implementation and effectiveness of risk treatments and to identify and evaluate changes in the risk profile of the Project.

A HSE risk assessment process has been initiated in compliance with the requirements of **HSE Risk Assessment** (QMS # **020-E008-2602**). The approach to risk assessment is based on the Standard **AS/NZS ISO 31000:2009 – Risk Management Principles and guidelines** and covers all aspects of the Project including normal and abnormal operations or activities and any potential emergency situations.

A number of residual risks associated with the project are likely as remaining moderate or high after the implementation of control measures. These risks may include:

- 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 cultural heritage features.
- 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 agencies permit conditions.
- 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.

A **Project HSE Risk Register** (QMS # **020-E008-2602**) of all identified risks has been developed and will be maintained as a live document on the Project site**.** The risk register will be continually revised during the Project duration as additional information arises.

4.1.2 Construction Environmental Management Plan

This **Construction Environment Management Plan** (QMS # **025-Y001-2602**) forms part of the overarching Project Execution Plan (PEP) for the delivery of the Project. 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.

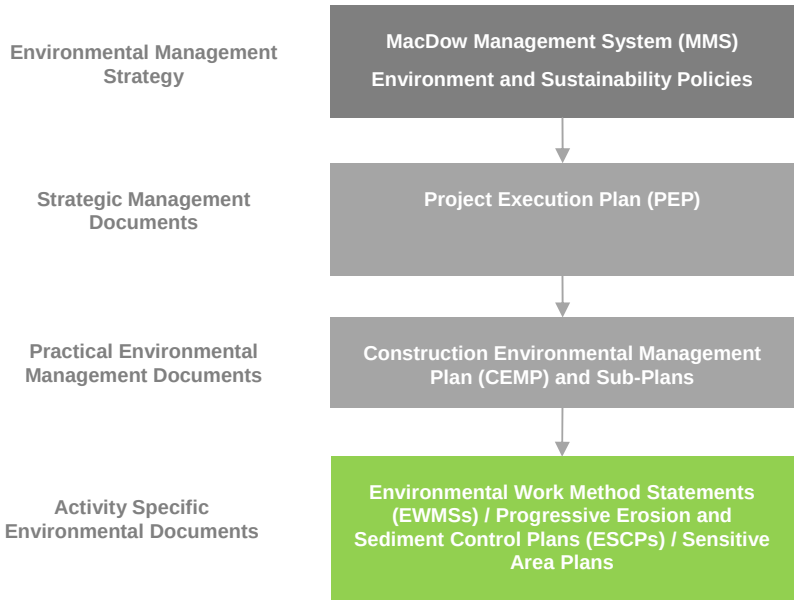
This CEMP is consistent with:

- The Guideline for the preparation of Environmental Management Plans (DIPNR, 2004).
- AS/NZS ISO14001: 2004, 'Environmental Management Systems – requirements with guidance for use'.
- Roads and Maritime QA Specification G36.

The CEMP and sub-plans required under CoA B31 will be provided to the Director-General for approval.

The approach to environmental management activities developed for the Project is shown graphically in Figure 4-2 with each level of management control described in the following sections.

Figure 4-2: Environmental Management Approach



4.1.3 Environmental management sub plans and strategies

A series of environmental management sub-plans support the CEMP. These documents are prepared to identify requirements and processes applicable to specific impacts or aspects of the Project. They address requirements of the CoA, Statement of Commitments (SoC) and other measures identified in the environment assessment documentation.

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

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

Table 4-1 Environmental management sub-plans and strategies

Sub-Plan	Document Number	Approval Body
Air Quality Management Sub-Plan	QMS# 025-Y002-2602	Roads and Maritime approval
Construction Flora and Fauna Management Sub-Plan	QMS# 025-Y003-2602	DPE, DoE approval
Construction Heritage Management Sub-Plan	QMS# 025-Y006-2602	DPE approval
Construction Noise and Vibration Management Sub-Plan	QMS# 025-Y007-2602	DPE approval
Construction Soil and Water Quality Management Sub-Plan	QMS# 025-Y008-2602	DPE approval
Construction Traffic Management Sub-Plan	QMS# 600-Y006-2602	DPE approval
Waste and Energy Management Sub-Plan	QMS# 025-Y009-2602	Roads and Maritime approval

Clearing and Grubbing Plans

A series of preliminary Clearing and Grubbing Plans have been prepared. These plans are based on the provided Clearing Extents Plan set in combination with the Environmental Assessment and show both clearing requirements and environmentally sensitive areas. Industry specialists in Vegetation Communities and Endangered Ecological Communities will be engaged to assist in preparation of the final Clearing and Grubbing Plans. These will be submitted to Roads and Maritime for approval in advance of the works.

Earthworks Plan

An Earthworks Plan has been developed to guide the management of earthworks during the Project, addressing the requirements detailed in the Roads and Maritime QA specification R44-Earthworks, version for Highway N.10, Pacific Highway Upgrade, Oxley Highway to Kempsey, Kundabung to Kempsey Ed 4/Rev 1, and any conditions specific to carrying out earthworks on the Project contained in the tender documents. The Environment Team will work closely with the Construction Team in the implementation of the Earthworks Plan to ensure that any risks are identified and managed appropriately.

4.1.4 Environmental Work Method Statements (EWMSs)

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

EWMS will be further developed and 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. Each EWMS that requires consultation prior to approval must be forwarded to the appropriate regulatory agency authority, the Environmental Manager (EM) and the Principal for review at least ten (10) working days prior to commencement of work.

EWMS for activities likely to be considered high risk include:

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

Additional activities may be added the above list following a risk review. EWMS will form part of the Construction Execution Procedures (CEPs) that are developed and implemented for each major scope of work, defining the methodology, management strategies, responsibilities, resource requirements, testing and recording requirements, contractual and legal requirements and the identification of separate work packages or stages. The CEPs will be prepared by the Construction Team in consultation with the Environmental Management Team. The Environmental Management Team will have to approve each CEP prepared prior to work to ensure that all necessary environmental controls are implemented for the activity being completed.

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 is maintained in Appendix A5.

4.1.5 Progressive Erosion and Sediment Control Plans (PESCPs)

Progressive Erosion and Sediment Control Plans (PESCPs) 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. PESCPs will be developed and implemented across the Project where there is a risk of erosion and sediment loss.

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

PESCPs will be developed by environment staff in consultation with the superintendent, site engineers, supervisors, foremen 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 PESCPs in the first instance. Minor changes thereafter will be approved by environment staff in consultation with the Environmental Manager, as required.

The site will be subject to numerous PESCPs that will be progressively updated to replicate the various changes throughout the stages of works. PESCPs will be developed for all work areas prior to commencing activities.

4.1.6 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 series of map-based sheets that extend the length of the Project. Sensitive area maps include information pertaining, but not limited, to:

- Flora features, including endangered ecological communities.
- Non-Aboriginal heritage sites.
- Aboriginal heritage sites.
- Local waterways.
- National Parks/Nature Reserves.

The sensitive area plans are presented in Appendix A6. They are a working element of the CEMP and will be revised throughout construction to reflect true ground conditions and the most up-to-date information available on sensitive sites. Sensitive area plans will be used in conjunction with EWMS to help identify key risk areas and to promote ongoing communication to construction personnel during the Project. Note, Aboriginal heritage items have not been shown on these maps due to the confidential nature of their locations, however the working plans for construction will need to manage the secure identification of these locations.

The sensitive area plans will be used as part of the Construction Execution Procedure (CEP) process to provide the Construction Team with as much information as possible to ensure that all key environmental sites and locations are identified as part of the CEP being produced.

Sensitive area plans will be updated by the JV as required.

4.1.7 Construction Execution Plans

Construction Execution Plans (CEP) are developed and implemented for each major part of the scope of work, defining the methodology, management strategies, responsibilities, resource requirements, testing and recording requirements, contractual and legal requirements and the identification of separate work packages or stages. Safety and environmental risks are also anticipated and associated controls are recommended. Documentation, such as Job Safety Environment Analysis's / Safe Work Method Statement (JSEAs / SWMS), EWMSs, ESCPs and Sensitive Area Plans are referenced, where applicable.

CEPs are developed by the Project Team in advance of work commencing, providing a technical explanation of the requirements for each major work activity. The Plans are developed in consultation with the Environmental Management Team to ensure that any required environmental or sustainability controls are embedded into the processes adopted. Personnel involved in the specific activity covered by the CEP are inducted into the requirements by the Site Supervisor to ensure they understand their responsibility to comply with its requirements and to implement any required controls. All CEPs require review and approval by the Environmental Management Team prior to work commencing on the Project.

4.1.8 Job Safety and Environmental Analysis / Safe Work Method Statement (JSEA / SWMS)

JSEAs / SWMS (QMS # **020-F001-2602)** are a tool used to determine environmental risk associated with tasks prior to commencing a component of work. Each task is reduced to individual steps and the potential hazard associated with each step identified. Risk mitigation steps are attributed to each hazard, thus providing a detailed plan for installation of control measures.

The main strength of JSEAs / SWMS prepared on the job is their ability to focus on unique risks at a particular point in time — for example, current conditions, resources, experience of workers and impact with other jobs or people. JSEAs / SWMS prepared on the job are best carried out close in time and location to the execution of the associated works. It is acceptable to use a pre-existing generic JSEA / SWMS as a basis to commence the process but it is essential that current circumstances such as site conditions, level of experience of the crew, prevailing weather conditions, etc are incorporated into the job specific JSEA / SWMS.

A Summary of all hazard identification processes is to be maintained on **JSEA /SWMS Register** (QMS # **020-F003-2602**).

4.1.9 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.

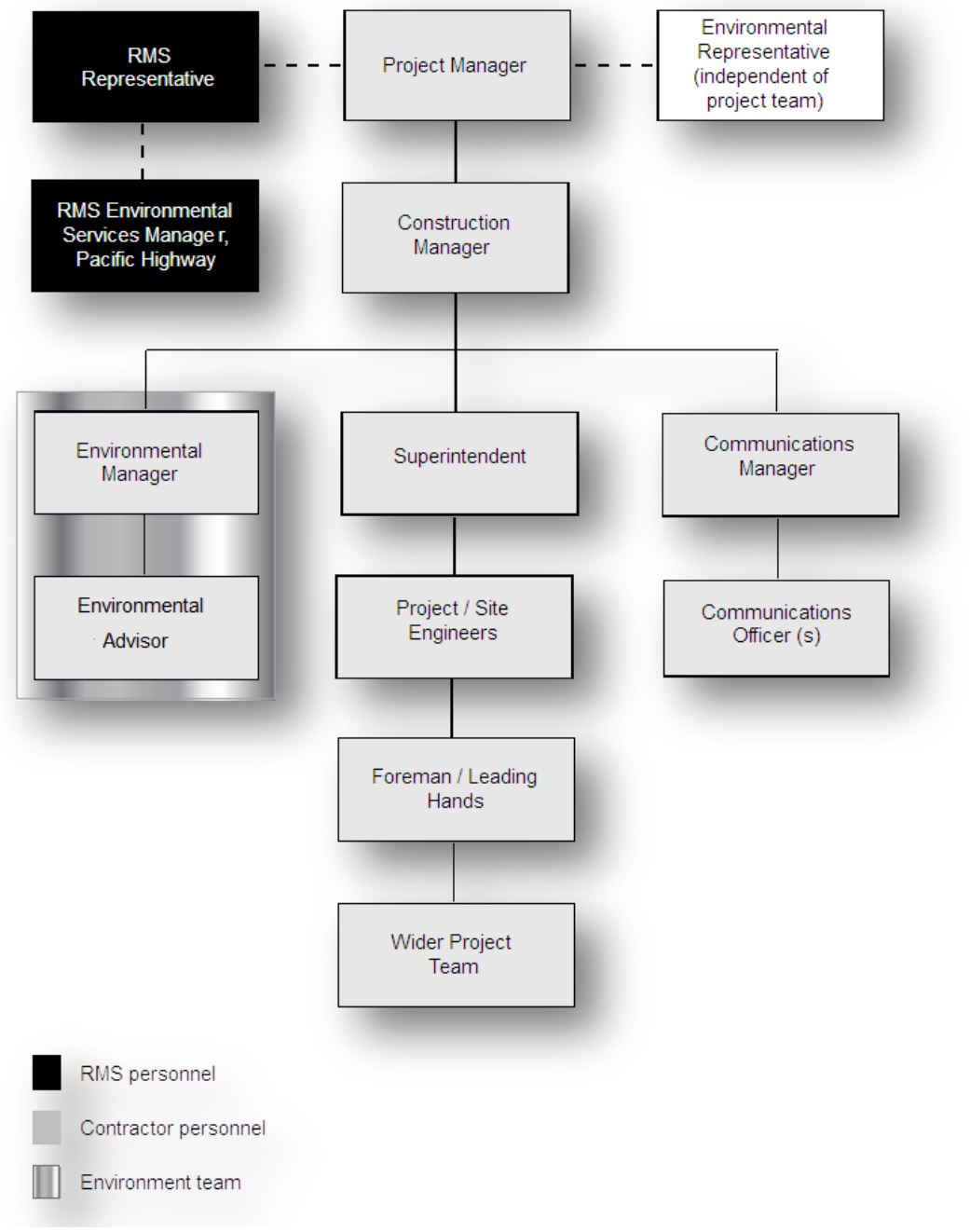
Project specific procedures will be developed in accordance with the requirements for the Project. Where applicable, existing contractor procedures and work instructions will be applied or amended for use on the Project.

A register of relevant environmental procedures and forms is maintained in Appendix A5.

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 4-3.

Figure 4-3 Environmental Management Structure



4.2.1 Environmental Representative

The responsibilities of the Environmental Representative are defined in CoA B29, including:

- Be the principal point of advice in relation to the environmental performance of the Project.
- 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 community is required.
- Monitor the implementation of all environmental management plans and monitoring programs required under this approval.
- Monitor the outcome of all environmental management plans and advise the Proponent upon the achievement of all Project environmental outcomes.
- Have responsibility for considering and advising the Proponent on matters specified in the conditions of this approval, and all other licences and approvals related to the environmental performance and impacts of the Project.
- Ensure that environmental auditing is undertaken in accordance with the requirements of condition B24 and the Project Environmental Management System(s).
- Be given the authority to approve/reject minor amendments to the Construction Environment Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environment Management Plan required under condition B30 (see Section 1.6).
- 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 that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.

4.2.2 Roads and Maritime Environmental Services Manager, Pacific Highway

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

- Review any environmental management plans and related documents prepared for the Project.
- Review minor Project refinements that are consistent with the Project environmental assessment and approval documentation and recommend they be approved to the 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) the following:

- 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 Director-General of DPE.

4.2.4 Project Manager

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

- Ensure all works comply with relevant regulatory and Project requirements.
- Ensure the requirements of this CEMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements.
- Endorse and support the 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 this CEMP.
- Ensure that all personnel receive appropriate induction training, including details of the environmental and community requirements.
- Ensure that complaints are investigated to ensure effective resolution (Refer to Section 6.3.2)
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

4.2.5 Construction Manager

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

- Plan construction works in a manner that avoids or minimises impact to environment.
- Ensure the requirements of this CEMP are fully implemented.
- Ensure construction personnel manage construction works in accordance with statutory and approval requirements.
- 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, 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 JV Superintendent include (but are not limited to) the following:

- Communicate with all personnel and sub-contractors regarding compliance with the CEMP and site-specific environmental issues.
- Ensure all site workers attend an environmental induction prior to the commencement of works.
- Co-ordinate the implementation of the CEMP.
- Co-ordinate the implementation and maintenance of pollution control measures.

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

4.2.7 Environmental Manager

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

- Overall responsibility for the implementation of environmental matters on the Project.
- Development, implementation, monitoring and updating of the CEMP and sub plans in accordance with ISO14001.
- Report to Project Manager and other senior managers on the performance and implementation of the CEMP.
- Ensure management reviews of the CEMP are 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.
- 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 PESCP.
- 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 Advisor

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

- Assist in preparing the CEMP (including any future revisions) in accordance with all relevant requirements.
- Develop PESCP in consultation with the Superintendent, Site Engineers, Foreman/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 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 Community Relations Manager

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

- Ensure that all community consultation activities are carried out.
- 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 JV Site/Project engineers include (but are not limited to) the following:

- Provide input into the preparation of environmental planning documents as required.

- Ensure that instructions are issued and adequate information provided to employees that relate to environmental risks on-site.
- Ensure that the works are carried out in accordance with the requirements of the CEMP and supporting documentation, including the implementation of all environmental controls.
- Identify any environmental risks.
- Identify resource needs for implementation of CEMP requirements and related documents.
- Ensure that complaints are investigated to ensure effective resolution.
- Take action in the event of an emergency and allocate the required resources to minimise the environmental impact.
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent and Environmental Manager.

4.2.11 Foreman/Supervisor

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

- Undertake any environmental duties as defined by the superintendent or Project/site engineer.
- Control field works and implement/maintain effective environmental controls.
- Where required, undertake environmental risk assessment of works prior to commencement.
- Ensure site activities comply with 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 Wider Project Team (including Subcontractors)

Comply with the relevant requirements of the CEMP, or other environmental management guidance as instructed by a member of the Project's management.

- Participate in the mandatory Project/site induction program.
- Report any environmental incidents to the Foreman/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 subcontractor 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:http://www.rms.nsw.gov.au/roadprojects/projects/pac_hwy/port_macquaire_coffs_harbour/oxley_hey_to_kempsey/index.html

5.0 COMPLETENCE, TRAINING AND AWARENESS

5.1 OVERVIEW

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

The environmental competency and experience requirements for all JV staff positions are contained in the relevant Position Descriptions.

All personnel will receive training of a type and level of detail that is appropriate for the environmental aspects of their routine and emergency work assignments. As a minimum, all personnel are required to satisfactorily complete the Project Induction Training. Other mechanisms of communicating environmental controls are through environmental awareness training, the JSEAs / SWMS, Tool Box Talks and Pre-Start Meetings, all of which are described below.

Training needs are assessed on a job-by-job, and position-by-position basis, as outlined in the **Enterprise Training Plan** (QMS # **030-Y008-2602**)and the **Project Training Matrix** which contains site specific environmental and safety training requirements.

5.2 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. The induction is developed as part of **Site Induction** (QMS # **030-J006-2602**).

Short-term visitors to site will undertake an abbreviated induction, in the form of **Visitor's Induction** (QMS # **030-J006-2602**). Delivery drivers 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.

5.3 TOOL BOX TALKS, TRAINING AND AWARENESS

Toolbox Talks (QMS # **020-F006-2602**) will be one method of raising awareness and educating personnel on issues related to all aspects of construction including environmental issues. The toolbox talks are used to ensure environmental awareness continues throughout construction.

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

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

- Erosion and sedimentation control.
- 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.

Toolbox attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the record maintained(**Toolbox Meeting Record of Attendance** (QMS # **020-F007-2602**).

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.

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, foremen and others with a responsibility for managing specific work locations or activities. This documentation will be used to inform the broader workforce through either daily pre-starts meeting or provision in worker crib sheds/break facilities.

The Environmental Representative will review and approve the training program and monitor implementation.

5.4 PRE-START MEETINGS

Daily Pre-Starts (QMS # **020-F021-2602**) are 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/Supervisor 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 Supervisor(s) 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.

6.0 COMMUNICATION

6.1 INTERNAL COMMUNICATION

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

The Environment 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 5.0.

6.2 EXTERNAL AND GOVERNMENT AUTHORITY CONSULTATION

The Environment Manager will be the main point of contact regarding specific environmental issues. The Environment Manager has the responsibility to report on the ongoing environmental performance of the Project to Roads and Maritime, the Environmental Representative and the 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, or where applicable.

6.3 STAKEHOLDER AND COMMUNITY COMMUNICATION

6.3.1 Community Communications Strategy

A **Community Communications Strategy** (QMS # **030-Y010-2602**) has been developed to provide an approach to stakeholder and community communications in accordance with the requirements of CoA B28. The strategy identifies opportunities for providing information and consulting with the community and stakeholders during the construction phase of the Project. The plan defines:

- The engagement of community 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 Community Communications Strategy will be submitted to the DPE for approval prior to the commencement of construction.

6.3.2 Complaints and Enquiries Procedure

A Complaints and Enquiries Procedure, consistent with AS 4269: Complaints Handling, has been developed for the Project, in accordance with the requirements of CoA B27. This procedure forms part of the Community Communications Strategy (Section 6.3.1).

All community inquiries and complaints related to the construction activities will be referred to the 24-hour community information line (1800 154 724). A postal address (McConnell Dowell Constructors, 7/799 Pacific Highway, Chatswood NSW 2067) and email address (k2k.info@macdow.com.au)has been provided for receipt of complaints and enquiries. The telephone number, the postal address and the email address was published in newspapers circulating in the local area 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 is included in a Complaints and Enquiries Register, as guided by the Community Communications Strategy (Section 6.3.1). The information contained within the register will be made available to the Director-General on request.

Attempts will be made to resolve all complaints in accordance with the Community Communications 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 Environment 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.

7.0 INCIDENTS AND EMERGENCIES

7.1 INCIDENT MANAGEMENT

In the event of an environmental incident, Roads and Maritime's Environmental Incident Classification and Reporting Procedure will be implemented. The full procedure is provided in Appendix A7. Incidents will be recorded on Roads and Maritime Environmental Incident Report Form 624.

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 (eg. 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.
- Death or injury to fauna as a result of clearing.
- 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 agencies permit conditions.
- 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 B24, 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 Director General during construction and operation.
- Procedures for rectifying any non-compliance identified during review of incident management.

7.2 NOTIFICATION PROCEDURE

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 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 close 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 POEO Act. The following will also be notified in accordance with Part 5.7 of the POEO Act:

- the Ministry of Health
- the WorkCover Authority
- Fire and Rescue ; and
- the Kempsey Shire Council.

The circumstances where this will take place include:

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

Where the incident involves an Aboriginal site, relevant Registered Aboriginal Parties will be notified and their input sought in closing out the incident. For all major incidents notification must be given immediately, i.e. promptly and without delay after the person becomes aware of the incident.

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

8.0 INSPECTIONS, MONITORING AND AUDITING

8.1 ENVIRONMENTAL INSPECTIONS

8.1.1 Summary

Environmental inspection requirements are summarised in Table 8-1. These are then discussed in greater detail in Sections 8.1.2, 8.1.3 and 8.1.4.

Table 8-1 Summary of Environmental Inspection Requirements

Inspection	Timing	Reporting Requirement	Responsibility
Weekly Environmental Inspection	Weekly during normal construction hours	**Site Inspection Environmental Checklist – Weekly** (QMS # **025-F002-2602**)	Environmental Manager and/or Advisor
During and Post-Rainfall Inspection	• Daily during periods of rainfall greater than 10mm • Within 24 Hours of the cessation of all rainfall events causing run off (events exceeding 10mm). • As required by the Environmental Protection License	**Sediment Basin Checklist (QMS# 025- F032 – 2602).**	Environmental Manager and/or Advisor
Environmental Representative, Roads and Maritime and ERG Inspections	Weekly or fortnightly, as construction activities dictate	**RMS Site Inspection Form Number 870 (Principal Site Inspections)**	Environmental Representative, Roads and Maritime and ERG

8.1.2 Weekly and Post Rainfall Site Inspections

The Environmental Manager and/or Environmental Advisors will undertake weekly and post rainfall inspections of the work sites to evaluate the effectiveness of environmental controls. The Environmental Advisors 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.

8.1.3 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.

8.1.4 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 Foreman/Supervisor will undertake the inspections.

8.2 ENVIRONMENTAL MONITORING

Monitoring will be undertaken to validate the impacts predicted for the Project, to measure the effectiveness of environmental controls and implementation of this CEMP, and to address approval requirements. The monitoring requirements for required aspects are included in the relevant environmental management sub-plans and summarised in Table 8-2 and Table 8-3. Table 8-2 Summary of Environmental Monitoring Required by Project Approval

CoA	Description	Relevant Sub-Plan	Reporting Requirements
B10 and B31(b)	Ecological monitoring for construction related impacts	Construction Flora and Fauna Management Sub-Plan (Client's CEMP, Appendix B2)	Annual reporting of results to the Director-General, EPA and DPI (Fishing and Aquaculture).
B16, B17, and B31 (d)	Water Quality Monitoring Program	Construction Soil and Water Management Sub-Plan (Client's CEMP, Appendix B4)	Reporting of results to DP&I, EPA, DPI (Fishing and Aquaculture) and NOW.
B20 (i)	Monitoring procedures for the built elements and landscaping (including weed control)	Urban Design and Landscaping Plan	Refer to UDLP
B29 (c) and B29 (d)	Monitoring of implementation and outcomes of EMPs and monitoring programs by Environmental Representative	NA	Report to Roads and Maritime
B30 (e) (i)	Monitoring of dust emissions	Construction Air Quality Management Sub- Plan (Client's CEMP, Appendix B6)	Refer to Sub-Plan
B30 (e) (iii)	Construction and operation of ancillary facilities	Construction Soil and Water Management Sub-Plan (Client's CEMP, Appendix B4) Construction Air Quality	Refer to Sub-Plans

CoA	Description	Relevant Sub-Plan	Reporting Requirements
		Management Sub- Plan (Client's CEMP, Appendix B6)	
B30(e) (v)	Monitoring of construction waste	Construction Waste and Energy Management Sub-Plan (Client's CEMP, Appendix B7)	Refer to Sub-Plan
B30 (e) (vi)	Monitoring the impacts of spoil and fill	Construction Soil and Water Management Sub-Plan (Client's CEMP, Appendix B4)	Refer to Sub-Plan
B30(e) (vii)	Monitoring of construction hazard and risks	Roads and Maritime Environmental Incident Classification and Reporting (Client's CEMP, Appendix A7)	Refer to Client's CEMP, Appendix A7
B31 (a)(vi)	Monitoring of the Construction Traffic Management Plan	Construction Traffic Management Sub-Plan (Client's CEMP, Appendix B1)	Refer to Sub-Plan
B31 (b) (ix)	Monitoring of Construction Flora and Fauna Management Plan	Construction Flora and Fauna Management Plan (Client's CEMP, Appendix B2)	Refer to Sub-Plan
B31(c) (vii)	Construction noise and vibration monitoring	Construction Noise and Vibration Management Sub-Plan (Client's CEMP, Appendix B3)	Refer to Sub-Plan
C16	Monitoring/reporting measures to protect Aboriginal cultural heritage sites	Construction Heritage Management Sub-Plan (Client's CEMP, Appendix B5)	Refer to Sub-Plan

Table 8-3 Summary of environmental monitoring required by EPBC Act Approval

Condition	Description	Relevant Sub-Plan	Reporting Requirements
4 and 8	Ecological monitoring for construction related impacts	Construction Flora and Fauna Management Sub-Plan (Appendix B2)	Annual Reporting of results to the Minister (DoE)

For each monitoring requirement, a procedure will be developed to 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.

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

- An analysis of the results by the Environmental Manager in more detail with a view of determining possible causes for the non-conformance.
- A site inspection by the Environmental Manager or delegate.
- Advising relevant personnel of the problem.
- Identifying and agreeing on actions to resolve or mitigate the non-conformance.
- Implementing actions to rectify or mitigate the non-conformance.

A non-conformance Environmental Incident Report (Form 624) and/or Environmental Improvement Report may be issued by the Environment Manager in response to the non-conformance problem if it is found to be construction related. Refer to Section 8.6.1 for requirements for written response time for non-conformities. The timing for any improvement will be agreed between the relevant Engineer/Superintendent and Environment 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 the manufacturer's specifications and appropriate records kept.

8.3 AUDITING AND REPORTING

Table 8-4 presents auditing requirements applicable to the Project. Audits will be guided by the **Project Audit Program** (QMS # **010-Y004-2602**).

Table 8-4 Audit Requirements

No.	Audit	Requirement	Timing	Responsibility	Recipient
1	Internal audit	Verify compliance with approval and legal requirements, Roads and Maritime specifications and construction documentation.	The first audit within three months of the commencement of construction and then at three Monthly intervals thereafter. The final submitted within five working days of contract completion date.	Environmental Manager	Project Manager, Roads and Maritime and Environmental Representative
2	External independent audit	Verify compliance with approval and legal requirements, Roads and Maritime specifications, construction documentation and any other commitments.	Six monthly	Environmental Manager	Project Manager, Roads and Maritime and Environmental Representative
3	External independent audit	Verify compliance with the DoE EPBC Act Conditions of approval.	Upon request	Environmental Manager	Minister for the Environment

8.3.1 Contractor audits

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

- This CEMP and Sub-Plans.
- Approval requirements (CoA, SoC).
- Any relevant legal and other requirements (e.g. licenses, permits, regulations, Roads and Maritime contract documentation).
- Internal audits will identify any non-conformances and develop preventative and correction actions in response.
- 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.

Copies of all environmental internal audits undertaken by the JV internally or via an external party will be provided to the Principal and Environmental Representative within five (5) working days of receipt.

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.

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 B24, include:

- Provisions for the notification of the Director General of the commencement of works 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).
- Provisions for periodic review of Project compliance with the requirements of this approval, Statement of Commitments and documents listed under condition A1.
- Provisions for periodic reporting of compliance status against the requirements of this approval, Statement of Commitments and documents listed under condition A1 to the Director General including at least one month prior to the commencement of construction and operation of the Project and at other intervals during the construction and operation, as identified in the Program.
- A program for independent environmental auditing in accordance with ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing.
- Mechanisms for reporting and recording incidents and actions taken in response to those incidents.
- Provisions for reporting environmental incidents to the Director General during construction and operation.
- Procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management.

The Compliance Tracking Program describes how the requirements of CoA B24 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 and SoC have been addressed. A summary of the required compliance reporting, as required by CoA B24, is provided in Table 8-5.

Table 8-5 Compliance Reporting

No.	Report	Requirement	Timing	Responsibility	Recipient
1	Compliance Tracking Program CoA B24 (a)	Describes how the requirements of CoA B24 will be met and sets out a program and frequency for compliance reporting and independent auditing.	Prior to construction	Roads and Maritime	DPE
2	Compliance Reporting CoA B24 (c)	Report on compliance and performance against approval requirements. The compliance reporting required under the Compliance Tracking Program will record how the CoA and SoC have been addressed.	Prior to construction, six months following commencement of construction and then at yearly intervals thereafter. Prior to commencement of operation.	Roads and Maritime	DPE and ER

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 various Project Approvals. Table 8-5 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 8-6 will be amended to reflect these changes.

Table 8-6 Reporting Requirements

No.	Report	Requirement	Timing	Responsibility	Recipient
1	Compliance Reporting – DoE EPBC Act condition of approval 8	Reporting on compliance with each condition of approval, including implementation of the Biodiversity Offset Manageemnt Plan, Flora and Fauna Management Plans and Ecological Monitoring Plan.	Within three months of every 12 month anniversary of the commencement of action	Environmental Manager	DoE
2	Monthly environmental report	For incorporation in Project Monthly Reports including environmental statistics (i.e. incidents, regulatory action, complaints on environmental issues), regulatory and authority considerations, monitoring program performance and key environmental issues.	Monthly	Environmental Manager	Roads and Maritime
3	EPL monthly report	Details of all non-compliances with conditions of EPL, measures taken to prevent recurrence, and details of discharges from sediment basins where water quality results exceed EPL conditions.	Within 10 working days of the end of each calendar month.	Environmental Manager	EPA

No.	Report	Requirement	Timing	Responsibility	Recipient
4	EPL annual returns	Report on compliance with EPL.	Within 60 days of the anniversary of the EPL.	Environmental Manager	EPA
5	ER inspection report	Report of site environmental performance following routine inspections.	As per frequency of inspection.	Environmental Representative	Roads and Maritime
6	Environmental risk assessment	Conducted for each construction stage, project changes and significant issues.	Prior to construction during development of CEMP and as required thereafter.	Environmental Manager, Construction Manager	Roads and Maritime
7	Monitoring results	Report on monitoring data recorded and potential exceedances against criteria.	As required	Environmental Manager, Environmental Advisor(s)	Roads and Maritime
8	Roads and Maritime and/or EPA environmental inspection reports	Response to matters raised in Roads and Maritime and/or EPA site inspections.	As required. Typically every two weeks for Roads and Maritime inspection reports and monthly for EPA inspection reports.	Environmental Manager, Environmental Advisor(s)	Roads and Maritime /EPA

8.6 NON-CONFORMITY, CORRECTIVE AND PREVENTATIVE ACTIONS

8.6.1 Non-Conformance

Any member of the Project team may raise a non-conformance or improvement opportunity. This process ensures continual improvement of the JV's environmental performance and ensures any adverse environmental impact is minimised, mitigated and managed.

Non-conformance for this CEMP is defined as a failure to:

- Comply with relevant environmental legislation or applicable licence, approval or permit;
- Comply with the intent or objectives of the CEMP;
- Comply with the requirements of activity-specific work instructions.

All non-confomrances or improvement opportunities will be captured using an Envoironmenatl Improvement Report (QMS#025-F004-2602). These forms are rasied by the member of the project team who witness the non-conformance/improvement opportunity. Corrective and Proposed preventative actions are also recorded and reviewed by the Environmental Manager prior to issuing to employee / sub-contractor involved. A register of all Environmental Improvement Reports is kept by the Environmental Manager to ensure timely close out of corrective actions.The Environmental Representative and Roads and Maritime Representative or public authority may also raise a non-conformance or improvement opportunity using the same process.

Non-conforming activities may be stopped, if necessary, by the Environment Manager, Environment Advisor 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 Management Plan.

All nonconformities including environmental issues identified during surveillance, monitoring, inspections and audits must be closed out and signed off within the timeframe agreed with the Principal, the Project Environmental Representative, and relevant Authorities. Written responses to non-conformities identified must be provided to:

- the Principal, the Project Environmental Representative and relevant regulatory Authorities within 5 working days; except
- non-conformities identified in audits where a response must be provided within 7 working days.

All monitoring data is to be assessed against agreed criteria and where the criteria are exceeded, immediate action to reduce or remove the cause of exceeding the criteria must be undertaken.

Noncompliance with any of the conditions of this approval must be reported to the Department of Environment within 2 business days of becoming aware of the non-compliance.

8.6.2 Corrective and Preventative Actions

For each non-conformance identified, a corrective/preventative action (or actions) must be implemented. In addition, any environmental management improvement opportunities can be initiated because 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 recorded and managed via the Project Commitments Register, or other suitable designated database. Details entered will 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.

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

9.0 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 Environment Manager and includes relevant Project team members and stakeholders. The Environment Team also meet at 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 Environment 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 ERG issues.
- 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. Investigation of incidents may identify a range of corrective and preventative actions that may or may not include a review of control measures outlined within the CEMP. Notwithstanding, the need to conduct a CEMP review will be assessed on a case-by-case basis to capture learnings from incidents, where these are relevant to the CEMP.

As outlined in Section 1.6, the Environmental Representative can approve minor changes to the CEMP. Section 1.6 outlines what is determined to be minor. Where these changes are not minor, or as deemed necessary by the Environmental Representative, these changes would be forwarded to the Director-General for approval.

10.0 DOCUMENTATION

10.1 ENVIRONMENTAL RECORDS

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

- All monitoring, inspection and compliance reports/records.
- Correspondence with public authorities.
- Induction and training records.
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action.

- Community engagement information.
- Minutes of CEMP and construction environmental management system review meetings and evidence of any action taken.

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

10.2 DOCUMENT CONTROL

The JV, 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.

The JV 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.

APPENDIX A1 – LEGAL AND OTHER REQUIREMENTS

Table 1: Legal Register

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
General				
Environmental Planning and Assessment Act, 1979	All	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.	S75W	Yes
Water				
Water Management Act 2000 With the exception of controlled activity approvals, the *Water Management Act 2000* (WM Act) only applies in relation to those water sources covered by operational water sharing plans – these areas cover most of the State's major regulated river systems.	Water access and use.	Do not take water from a water source (a lake, river or estuary or place where water occurs naturally on or below the surface of the ground, and includes coastal waters) without an access licence. Do not use of water on land (unless supplied by a water utility, irrigation corporation etc or in accordance with basic landholder rights) without a water use approval.	S56 S60A S89 S91A	No

* Note that pursuant to Schedule 6A of the *Environmental Planning and Assessment Act 1979*, the project is a transitional Part 3A project. The provisions of Part 3A therefore continue to apply.

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
Water Management Act 2000	Water management works	Do not construct/use a water supply work, drainage work or flood work without the appropriate approval.	S90 S91B S91C S91D	No
Water Management Act 2000	Waterfront land.	Do not deposit material, excavate, or remove material within a watercourse bank, shore or bed, or on land 40 metres inland, or interfere with the likely flow of water to such a body, without a controlled activity approval.	S91	No Public authorities are exempt from the need to obtain a controlled activity approval. Water Management (General) Regulation 2011 (cl.38)
Water Act 1912 Note that this Act is being progressively repealed by the *Water Management Act 2000* (WM Act). With the exception of controlled activity approvals, the WM Act only applies in relation to those water	Surface water	Obtain a licence or permit for construction or use of 'work' for purposes including the taking and using of water	S21B	Yes
	Groundwater	Obtain a licence where interference with groundwater is likely to occur.	S112 S121A	S112 does not apply to the Crown. RMS is therefore not required to obtain a licence under

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
sources covered by operational water sharing plans – these areas cover most of the State's major regulated river systems.				this provision.
	Floodplains	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.	S180	An exemption in relation to roads potentially applies – see clause 4 of the Water (Part 8-General) Regulation 1995.
Protection of the Environment Operations Act 1997	Water pollution	Do not cause water pollution (other than to a sewer), except in accordance with the conditions of any EPA licence.	S120 S122	Yes
Noise				
Protection of the Environment Operations Act 1997	Plant maintenance and operation	Do not operate plant if it emits noise caused by poor maintenance or operation.	S139	Yes
Protection of the Environment Operations Act 1997	Materials management	Do not cause noise by failing to properly and efficiently deal with materials.	S140	Yes
Protection of the Environment Operations (Noise Control) Regulation 2008	Marine vessels – offensive noise and noise control equipment	As owner or captain, do not allow a vessel to be used on navigable waters so as to emit offensive noise. Do not use a vessel on navigable waters if its noise control equipment is defective.	cl. 30-31 cl. 32	NA

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
Contaminated material				
Protection of the Environment Operations Act 1997	Land pollution	Do not cause or permit land pollution other than under authority of a licence or regulation. (However it is not a land pollution offence to place virgin excavated natural material or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the EPA as an unlicensed landfill and which is operated in accordance with the regulations.)	S142A – S142E	Yes
Contaminated Land Management Act 1997	Reporting contamination	Notify the EPA if contaminants exceed thresholds contained in guidelines or the regulations where contamination has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water. Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land. Contamination meets other criteria that may be prescribed by the regulations.	S60	Yes
Biodiversity				
Noxious Weeds Act 1993	Weed control	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.	S13 S16 S30	Yes
National Parks and Wildlife	Native fauna	Do not harm any animal that is of a threatened species population or ecological community, or its habitat except in	Part 8A	Yes

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
Act 1974		accordance with a planning approval.		
		Do not harm critical habitat except as in accordance with a planning approval.	S98	Yes
		Do not harm native fauna (other than listed unprotected fauna) except in accordance with a planning approval or licence.	S120, S127, 132C	Yes
Native Vegetation Act 2003	Flora and native vegetation conservation	Only clear native vegetation in accordance with a planning approval or property vegetation plan.	S12	Yes
National Parks and Wildlife Act 1974	Flora and native vegetation conservation	Do not pick protected native plants without a licence.	S117 S131	Yes
Fisheries Management Act 1994	Dredging or reclamation	Provide the Minister for Primary Industries 28 days notice of planned dredging or reclamation work.	S199	Yes
Fisheries Management Act 1994	Mangroves, seagrasses and marine vegetation	Do not harm any mangroves, seagrasses or other marine vegetation on public water land protected by the regulations without a permit.	S205	No
Fisheries Management Act 1994	Fish passage	Do not block fish passage without a permit.	S219	No
Environment Protection Biodiversity Conservation Act, 1999 (Commonwealth)	Flora and fauna conservation	Do not kill, injure or take a member of a listed threatened species without a permit. Comply with the terms of any EPBC Act approval for the project.	Part 13	Yes NA

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
Waste				
Protection of the Environment Operations Act 1997	Littering	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.	Part 5.6A	Yes
Protection of the Environment Operations Act 1997	Waste and transportation	Do not undertake a scheduled waste activity unless in accordance with an environmental 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: Is VENM. Does not exceed 200 tonnes in the Sydney, Newcastle and Wollongong areas, or 20,000 tonnes outside these areas. Is covered by a "general exemption". Current exempted materials are ENM, recycled aggregates and raw mulch. These exemptions are conditional and require some chemical testing of materials before they are placed onto land. A licence must be obtained if more than 2,500 tonnes (or cubic metres) is stored on a stockpile site at any one time, or more than 30,000 tonnes of waste is received per year from off site.	Part 3.2 Schedule 1	Yes
		Only transport waste to a facility that can lawfully accept the waste.	S143	Yes

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
		Do not dispose of waste in a manner that harms or is likely to harm the environment.	S115	Yes
Protection of the Environment Operations (Waste) Regulation 2005	Waste and transportation	Comply with general requirements for the transport of waste. For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.	Regulation cl.49	Yes
		Comply with record keeping requirements in relation to the transport of certain types of waste.	Regulation Part 3	Yes
Heritage				
Heritage Act 1977	Heritage	Do not undertake an activity that will affect a place, building, work, relic, moveable object or precinct which is subject to an Interim Heritage Order or is listed on the State Heritage Register without approval from the Heritage Council.	S56-57	No
		Do not disturb or excavate land with knowledge or reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed; or Do not disturb or excavate land on where a relic has been discovered or exposed unless an excavation permit in place.	S139	No
		Notify the heritage Council on discovery of a relic	S146	Yes
National Parks and Wildlife Act 1974	Aboriginal places and objects	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.	S86 S90	No

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
		Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	S89A	Yes
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)	Protection of areas and objects	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	S20	Yes
		Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.	S22	Yes
General				
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); or 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

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
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
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
Pesticides Act 1999	Hazards and risks	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.	S12 S13 S14 S15 S17	Yes

Act	Activity / aspect	Requirement	Reference	Part 3A* applicability
National Greenhouse and Energy Reporting Act, 2007 and Regulations 2008	Greenhouse gas emissions	Accounting and reporting of greenhouse gases produced and energy consumed during construction. Applicability dependent on thresholds.	-	Yes

Table 2: RMS G36 Requirements

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
Section 3	Implement a Contractors Environmental Management System (EMS)	This document
3.1	An environmental policy must be included.	Appendix A3
3.2 c)	Prepare and implement a CEMP in accordance with Clause 4 and ISO 14001 Clause 4.3.3.	This document
3.3 a)	Nominate the Environmental Manager directly responsible for ensuring that the requirements of the CEMS are implemented and maintained.	Section 4.2
3.3 b)	Indicate how suitable resources will be assigned to ensure that the CEMP is fully implemented.	Section 4.2
3.5	Include a matric or index in the CEMP showing where the environmental protection requirements of G36 have been addressed. Advise RMS Representative of any change to the CEMS or CEMP.	This table Chapter 9
3.7	Monitor and evaluate environmental performance.	Chapter 8
3.10	Schedule and undertake CEMS audits and CEMP compliance audits.	Section 8.3
4.1.1	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.	This document
4.1.1	The CEMP must be either incorporated as part of the project quality plan.	Noted
4.2	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,	Section 4.2

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
	rectifying and reporting any environmental deficiencies, controlling further construction activities until deficiencies are rectified and keeping your environmental records.	
4.2	The CEMP must identify the Environmental Manager as the authorised contact person for communications with the RMS Representative and the Environment Protection Authority (EPA) on environmental matters.	Section 4.2
4.2	A project soil conservationist must be appointed for the duration of the project. The soil conservationist will review all erosion, sediment and water pollution plans, controls and measures prior to installation.	Appendix B4
4.4.1	The CEMP must include details of: • Key emergency response personnel showing responsibilities and contact details including all-hours telephone numbers. • Emergency services (e.g. ambulance, fire brigade, spill clean-up services). • Communications strategy (internal and external). Containment measures to be taken in the event of emergency situations that may arise during the Contractor's Work and procedures for restoration.	Contacts, Section 4.2 Contacts Chapter 6 Appendix A7
4.4.2	All Environmental Incidents must be managed and reported in accordance with the RTA Environmental Incident Classification and Management Procedure.	Appendix A7
4.4.2	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: • If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial.	Appendix A7

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
	• If actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds $10,000.	
4.4.2	Prepare an Incident Emergency Spill Plan as part of the CEMP.	Appendix A7
4.5	Ensure that all staff and subcontractors working on the Site are provided with environmental training to achieve a level of competence and awareness appropriate to their assigned activities before they commence their assigned activities.	Chapter 5
	Identify at least two persons (and their contact telephone numbers) who will be available to be contacted by EPA on a 24 hour basis and who have authority to take immediate action to shut down any activity, or to effect any pollution control measure, as directed by an authorised officer of EPA.	Contacts
4.8.1	Notify local residents about new or changed construction activities which will affect access to their properties or otherwise significantly disrupt residents' use of their premises.	Section 6.3
4.8.3	Inform residents of the proposed work outside normal working hours.	Section 6.3
4.10	Report on complaint about any environmental issue, including pollution, arising from the Works.	Section 6.3
4.11	Maintain environmental records to demonstrate compliance with the CEMP.	Section 8.3, Section 8.4, Section 8.5
4.13	Undertake inspections and surveillance, and report on performance on high risk events and activities, works in environmentally sensitive areas, the adequacy of operational controls, and measurements for aspects where compliance limits have been specified.	Section 8.2, Section 8.3, Section 8.4
4.14.1	Develop and implement a risk-based auditing program.	Section 8.3
4.15	Implement a waste and recycling material data collection program.	Appendix B7

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
5	Identify the location of environmentally sensitive areas and adjacent sensitive receivers.	Appendix A6
6.2	Identify obligations under environmental legislation relevant to the Work.	Appendix A1
6.3	Obtain all necessary approvals, licences and permits required for the work and carry out work in accordance with the requirements.	Section 3.3
6.4	Identify construction activities and access requirements to the construction site and the other areas affected by the Work.	Appendix B1
6.5	Prepare and implement a soil and water management plan addressing: • Erosion and sedimentation control. • Water extraction. • Dewatering. • Works in waterways. • Impacts on groundwater from construction.	Appendix B4
6.6	Prepare and implement an air quality management plan.	Appendix B6
6.7	Prepare and implement a Noise and Vibration Management Plan.	Appendix B3
6.9	Manage clearing, mulch, flora and fauna.	Appendix B2
6.12	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.	Appendix B4
6.13, 6.14	Prepare and implement a Heritage Management Plan to manage Aboriginal and non-Aboriginal heritage.	Appendix B5

G36 reference	Requirement	Relevant section of CEMP or supporting documentation
6.15	Manage contaminated land.	Appendix B4
6.16	Prepare and implement a Waste Management Plan.	Appendix B7
6.18	Reinstate all disturbed areas both on and off the Site.	Appendix B4, Urban Design and Landscape Plan

Table 3: Ministers Conditions of Approval

CoA No.	Condition Requirements
PART A – ADMINISTRATIVE CONDITIONS	
A1	The Proponent shall carry out the project generally in accordance with the: (a) Major Projects Application 07_0090; (b) Upgrading the Pacific Highway – Oxley Highway to Kempsey – Environmental Assessment (volumes 1, 2, and 3), prepared by GHD Pty Ltd for the NSW Roads and Traffic Authority and dated September 2010; (c) Upgrading the Pacific Highway – Oxley Highway to Kempsey – Environmental Assessment Submissions Report, prepared by the NSW Roads and Traffic Authority and dated March 2011, including the revised Statement of Commitments contained therein; (d) Oxley Highway to Kempsey – Pacific Highway Upgrade Ecological Review of Fauna Crossings in the Ballengarra State Forrest, Roads and Maritime Services, dated October 2011; (e) The Roads and Maritime Services modification request and letter dated 25 October 2012 (07_0090 MOD1); (f) The Roads and Maritime Services modification requests and letters dated 17 April 2013 and 9 September 2013; the document titled Pacific Highway Upgrade – Oxley Highway to Kempsey: Aboriginal Archaeological Assessment and Artefact Salvage Methodology and Cultural Heritage Assessment Report, prepared by Kelleher Nightingale Consulting Pty Ltd, dated September 2012; the document titled Oxley Highway to Kempsey - Pacific Highway Upgrade OHK85 Test Excavation - Preliminary Results, prepared by Kelleher Nightingale Consulting Pty Ltd, dated 2013; and the document titled Pacific Highway Upgrade — Oxley Highway to Kempsey — Non- Indigenous Heritage Impact Assessment Report, prepared by Peter Kuskie and Christopher Carter (South East Archaeology Pty Limited), dated December 2007 (07_0090 MOD2); and

CoA No.	Condition Requirements
	(g) The conditions of this approval.
A2	In the event of an inconsistency between: (a) the conditions of this approval and any document listed from condition A1(a) to A1(f) inclusive, the conditions of this approval shall prevail to the extent of the inconsistency; and (b) any document listed from condition A1(a) to A1(f) inclusive, and any other document listed from condition A1(a) to A1(f) inclusive, the most recent document shall prevail to the extent of the inconsistency.
A3	The Proponent shall comply with any reasonable requirement(s) of the Director General arising from the Department's assessment of: (a) any reports, plans or correspondence that are submitted in accordance with this approval; and (b) the implementation of any actions or measures contained within these reports, plans or correspondence.
A4	Subject to confidentiality, the Proponent shall make all documents required under this approval available for public inspection on request.
A5	This approval shall lapse ten years after the date on which it is granted, unless construction works the subject of this project approval are physically commenced on or before that date.
A6	The Proponent shall ensure that all necessary licences, permits and approvals required for the development of the project are obtained and maintained as required throughout the life of the project. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such necessary licences, permits or approvals except as provided under section 75U of the Act. This shall include relevant certification requirements in accordance with section 109R of the Act.
A7	The Proponent may elect to construct and/ or operate the project in stages. Where staging is proposed, the Proponent shall submit a Staging Report to the Director General prior to the commencement of the first proposed stage. The Staging Report shall provide details of: (a) how the project 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 project. Where staging of the project is proposed, these conditions of approval are only required to be complied with at the relevant time and to

CoA No.	Condition Requirements
	the extent that they are relevant to the specific stage(s). The Proponent shall ensure that an updated Staging Report (or advice that no changes to staging are proposed) is submitted to the Director General prior to the commencement of each stage, identifying any changes to the proposed staging or applicable conditions. The Proponent shall ensure that all plans, sub-plans and other management documents required by the conditions of this approval and relevant to each stage (as identified in the Staging Report) are submitted to the Director General no later than one month prior to the commencement of the relevant stages, unless an alternative timeframe is agreed to by the Director General.
PART B – PRIOR TO CONSTRUCTION	
B1	The Proponent shall design (and implement) the fauna and waterway crossings identified in Table 6-2 of Appendix B of the document listed under condition A1(d), at the locations and in accordance with the minimum design principles identified in Table 6-2, unless otherwise agreed by the Director-General.
B2	Investigations into the design of fauna and waterway crossings identified in Table 6-2 of Appendix B of the document listed under condition A1(d) during detailed design shall be undertaken with the input of a suitably qualified and experienced ecologist and in consultation with the OEH and DPI (Fishing and Aquaculture). The Proponent shall prepare a report on the final design of fauna and/or waterway crossings identified in Table 6-2 of Appendix B of the document listed under condition A1(d), where the location of the crossing has changed and/or the crossing does not meet the minimum design principles identified in Table 6-2. The report shall be submitted to the Director General prior to the commencement of construction of the relevant crossing, and shall demonstrate how the new location and/ or design would result in acceptable biodiversity outcomes. The report shall clearly identify how the fauna and/or waterway crossing will work in conjunction with complementary fauna exclusion fencing measures to be implemented for the project. The report shall be accompanied by evidence of consultation with the OEH and DPI (Fishing and Aquaculture) in relation to the suitability of any changes to the location and/or crossing design.
B4	The Proponent shall investigate the provision of widened medians (with the aim of retaining existing vegetation in a widened median where feasible and reasonable) as an alternative to the provision of glider poles and rope bridges to facilitate the movement of gliders across the project at the following locations: (a) Cairncross 1 – between station 10000 to 11600; (b) Ballengarra 1b - between station 23200 to 24100; and (c) Maria River 1b - between station 33760 to 34380. The investigation shall be undertaken by a suitably qualified and experienced ecologist and in consultation with the OEH and DPI

CoA No.	Condition Requirements
	(Forests). The Proponent shall prepare a report on the median widening investigation, including the location and final design of the glider crossing measures and consequential impacts on other ecologically significant elements potentially affected by the widening. The report shall be submitted for the approval of the Director General no later than six months prior to the commencement of work that would result in the disturbance of native vegetation in the median widening investigation areas, or within such period otherwise agreed by the Director General. Work within the median investigation areas shall not commence until written approval has been received from the Director General.
B5	As part of the investigation into widened medians under condition B4, the Proponent shall investigate and report on the provision of widened medians at Barrys Creek (station 23967) as an alternative fauna crossing design for Koalas and Quolls.
B6	The Proponent shall, in consultation with the OEH and DPI (Fishing and Aquaculture), ensure that all waterway crossings are designed and constructed consistent with the principles of the Guidelines for Controlled Activities Watercourse Crossings (Department of Water and Energy, February 2008), Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries, February 2004) and Policy and Guidelines for Design and Construction of Bridges, Roads, Causeways, Culverts and Similar Structures (NSW Fisheries 1999). Where multiple cell culverts are proposed for creek crossings, at least one cell shall be provided for fish passage, with an invert or bed level that mimics creek flows.
B7	Prior to the commencement of construction work that would result in the disturbance of native vegetation (or as otherwise agreed by the Director General), the Proponent shall, in consultation with the OEH, prepare and submit for the approval of the Director General a Nest Box Plan to provide replacement hollows for displaced fauna. The Plan shall detail the number and type of nest boxes to be installed which must be justified based on the number and type of hollows removed (based on detailed pre-construction surveys), the density of hollows in the area to be cleared and adjacent forest, and the availability of adjacent food resources. The Plan shall also provide details of maintenance protocols for the nest boxes installed including responsibilities, timing and duration.
B8	The Proponent shall, in consultation with the OEH and DPI (Fishing and Aquaculture), develop a Biodiversity Offset Strategy that identifies the available options for offsetting the biodiversity impacts of the project in perpetuity, with consideration to the Principles for the use of biodiversity offsets in NSW (Office of Environment and Heritage website http://www.environment.nsw.gov.au/biocertification/offsets.htm dated 17 June 2011). Unless otherwise agreed to by the OEH and DPI (Fishing and Aquaculture), offsets shall be provided on a like-for-like basis and at a minimum ratio of 4:1 for areas of high conservation value (including EEC, salt marsh and poorly conserved vegetation communities identified as being more than 75% cleared in the catchment management area) and 2:1 for the remainder of native vegetation areas (including mangroves, seagrass, and non-EEC riparian vegetation). The Strategy shall include, but not necessarily be limited to: (a) the aims and objectives of the biodiversity offset strategy;

CoA No.	Condition Requirements
	(b) confirmation of the vegetation type/ habitat (in hectares) to be cleared and their condition, and the size of offsets required (in hectares); (c) details of the type of available offset measures that have been identified to compensate for the loss of threatened species and vulnerable and endangered ecological communities and/ or their habitats, and native vegetation (including mangroves, seagrasses, salt marsh and riparian vegetation). The measures shall achieve a neutral or net beneficial outcome for all the biodiversity values likely to be impacted directly or indirectly during both the construction and operation of the project; (d) the decision-making framework that would be used to select the final suite of offset measures to achieve the aims and objectives of the Strategy, including the ranking of offset measures; (e) a process for addressing and incorporating offset measures arising from changes in biodiversity impacts (where these changes are generally consistent with the biodiversity impacts identified for the project in the documents listed under condition A1), including: (i) changes to the footprint due to detailed design; (ii) changes to predicted impacts as a result of changes to mitigation measures; (iii) the identification of additional species/ habitat through pre-clearance surveys and construction; and (iv) additional impacts associated with the establishment of ancillary facilities; and (f) options for the securing and management of biodiversity offsets in perpetuity. The Biodiversity Offset Strategy shall be submitted to the Director General for approval no later than 6 weeks prior to the commencement of construction that would result in the disturbance of native vegetation, unless otherwise agreed by the Director General. The Proponent may elect to satisfy the requirements of this condition by identifying a suitable offset strategy which addresses impacts from multiple Pacific Highway Upgrade projects within the North Coast Bio-region. Any such strategy, including an agreement made with the OEH, must be made in consultation with the Department and approved by the Director General within a timeframe agreed to by the Director General.
B9	Within two years of the date of approval of the Biodiversity Offset Strategy, unless otherwise agreed by the Director General, the Proponent shall prepare and submit a Biodiversity Offset Package for the approval of the Director General. The Package shall be developed in consultation with the OEH and DPI (Fishing and Aquaculture), and shall include, but not necessarily be limited to: (a) details of the final suite of the biodiversity offset measures to be implemented for the project demonstrating how it achieves the requirements of the Biodiversity Offset Strategy (including specified offset ratios);

CoA No.	Condition Requirements
	(b) the final selected means of securing the biodiversity values of the Package in perpetuity, including ongoing management, maintenance and monitoring requirements; and (c) timing and responsibilities for the implementation of the provisions of the Package over time. The requirements of the Package shall be implemented by the responsible parties according to the timeframes set out in the Package, unless otherwise agreed by the Director General.
B10	The Proponent shall develop an Ecological Monitoring Program to monitor the effectiveness of the biodiversity mitigation measures implemented as part of the project. The program shall be developed by a suitably qualified and experienced ecologist in consultation with the OEH and DPI (Fishing and Aquaculture) and shall include but not necessarily be limited to: (a) an adaptive monitoring program to assess the effectiveness of the mitigation measures identified in conditions B1, B4, B7 and B31(b) and allow amendment to the measures if necessary. The monitoring program shall nominate performance parameters and criteria against which effectiveness will be measured and include operational road kill surveys to assess the effectiveness of fauna crossings and exclusion fencing implemented as part of the project; (b) mechanisms for developing additional monitoring protocols to assess the effectiveness of any additional mitigation measures implemented to address additional impacts in the case of design amendments or unexpected threatened species finds during construction (where these additional impacts are generally consistent with the biodiversity impacts identified for the project in the documents listed under condition A1); (c) monitoring shall be undertaken during construction (for construction-related impacts) and from opening of the project to traffic (for operation/ ongoing impacts) until such time as the effectiveness of mitigation measures can be demonstrated to have been achieved over a minimum of three successive monitoring periods (i.e. 6 years) after opening of the project to traffic, unless otherwise agreed by the Director General. The monitoring period may be reduced with the agreement of the Director General in consultation with the OEH and DPI (Fishing and Aquaculture), depending on the outcomes of the monitoring; (d) provision for the assessment of the data to identify changes to habitat usage and whether this can be directly attributed to the project; (e) details of contingency measures that would be implemented in the event of changes to habitat usage patterns directly attributable to the construction or operation of the project; and (f) provision for annual reporting of monitoring results to the Director General and the OEH and DPI (Fishing and Aquaculture), or as otherwise agreed by those agencies. The Program shall be submitted to the Director General for approval no later than 6 weeks prior to the commencement of construction that would result in the disturbance of native vegetation (unless otherwise agreed by the Director General).

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B11	The Proponent shall ensure, where feasible and reasonable, that the project is designed to not exceed the afflux and other flooding criteria within the vicinity of the project as identified or predicted in the documents listed under condition A1. New or duplicated drainage structures shall be designed to minimise changes to afflux and flooding to waterways that traverse the project alignment to the greatest extent practicable.
B12	The Proponent shall develop a Hydrological Mitigation Report for properties in the Hastings River and Wilson River floodplain areas where flood impacts are predicted to increase as a result of the project. The Report shall be based on detailed floor level survey and associated assessment of potentially flood affected properties in those areas. The Report shall: (a) identify properties in those areas likely to have an increased flooding impact and detail the predicted increased flooding impact; (b) identify mitigation measures to be implemented where increased flooding is predicted to adversely affect access, property or infrastructure; (c) identify measures to be implemented to minimise scour and dissipate energy at locations where flood velocities are predicted to increase as a result of the project and cause localised soil erosion and/or pasture damage; (d) be developed in consultation with the relevant council, NSW State Emergency Service and directly-affected property owners; and (e) identify operational and maintenance responsibilities for items (a) to (c) inclusive. The Proponent shall not commence construction of the project on or within those areas likely to alter flood conditions until such time as works identified in the hydrological mitigation report have been completed, unless otherwise agreed by the Director General.
B13	Based on the mitigation measures identified in condition B12, the Proponent shall prepare a final schedule of feasible and reasonable flood mitigation measures proposed at each directly-affected property in consultation with the property owner. The schedule shall be provided to the relevant property owner(s) prior to the implementation/ construction of the mitigation works, unless otherwise agreed by the Director General. A copy of each schedule of flood mitigation measures shall be provided to the Department and the relevant council prior to the implementation/ construction of the mitigation measures on the property.
B14	In the event that the Proponent and the relevant property owner cannot agree on feasible and reasonable flood mitigation measures to be applied to a property within one month of the first consultation on the measures (as required under condition B13), the Proponent shall employ a suitably qualified and experienced independent hydrological engineer, who has been approved by the Director General, for the purposes of this condition prior to the commencement of construction in the Hastings River and Wilson River floodplain areas affected by increased afflux from the project to advise and assist affected property owners in negotiating feasible and reasonable mitigation measures.

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B15	The Proponent shall provide assistance to the relevant council and/ or NSW State Emergency Service, to prepare any new or necessary update(s) to the relevant plans and documents in relation to flooding, to reflect changes in flooding levels, flows and characteristics as a result of the project.
B16	Prior to the commencement of construction, unless otherwise agreed by the Director General, the Proponent shall in consultation with the OEH and NOW, undertake groundwater modeling on the concept design for the project, subject to the modelling being revised should the detailed design have a significantly different impact on groundwater than the concept design. The modeling shall be undertaken by a suitably qualified and experienced groundwater expert and assess the construction and operational impacts of the proposal on the groundwater resources, groundwater quality, groundwater hydrology and groundwater dependent ecosystems and provide details of contingency and management measures in the groundwater management strategy required under condition B31(vii).
B17	The Proponent shall prepare and implement a Water Quality Monitoring Program to monitor the impacts of the project on surface and groundwater quality and resources and wetlands, during construction and operation. The Program shall be developed in consultation with the OEH, DPI (Fishing and Aquaculture) and NOW and shall include but not necessarily be limited to: (a) identification of surface and groundwater quality monitoring locations (including watercourses, waterbodies and SEPP14 wetlands) which are representative of the potential extent of impacts from the project; (b) the results of the groundwater modelling undertaken under condition B16; (c) identification of works and activities during construction and operation of the project, including emergencies and spill events, that have the potential to impact on surface water quality of potentially affected waterways, including the risks to oyster farming in the Hastings River; (d) development and presentation of parameters and standards against which any changes to water quality will be assessed, having regard to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (Australian and New Zealand nvironment Conservation Council, 2000); (e) representative background monitoring of surface and groundwater quality parameters for a minimum of twelve months (considering seasonality) prior to the commencement of construction, to establish baseline water conditions, unless otherwise agreed by the Director General; (f) a minimum monitoring period of three years following the completion of construction or until the affected waterways and/ or groundwater resources are certified by an independent expert as being rehabilitated to an acceptable condition. The monitoring shall also confirm the establishment of operational water control measures (such as sedimentation basins and vegetation swales); (g) contingency and ameliorative measures in the event that adverse impacts to water quality are identified; and

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	(h) reporting of the monitoring results to the Department, OEH and NOW. The Program shall be submitted to the Director General for approval six (6) months prior to the commencement of construction of the project, or as otherwise agreed by the Director General. A copy of the Program shall be submitted to the OEH, DPI (Fishing and Aquaculture) and NOW prior to its implementation.
B18	Prior to the commencement of pre-construction and construction in Aboriginal sites OHK46/A, OHK47/A, OHK54/A, OHK90/A, OHK91/A and OHK219/A, the Proponent shall undertake the relevant salvage mitigation measures outlined in section 19.4.1 of Volume 1 of the EA for these sites. The results of the salvage program shall be provided to the Department, the OEH and Aboriginal stakeholders within six months of the completion of the salvage program, unless otherwise agreed by the Director General.
B18A	Prior to the commencement of pre-construction and construction activities affecting the Pipers Creek PAD site, the Proponent shall: (a) undertake archaeological investigations at the Pipers Creek PAD site generally consistent with section 6 of the September 2012 Kelleher Nightingale report referenced in condition A1(f), or a methodology prepared in consultation with OEH and approved by the Director General; and (b) report on the results of the investigations, including recommendations (such as for salvage), in consultation with OEH and to the satisfaction of the Director General. The report shall include but not necessarily be limited to: (i) consideration of measures to minimise disturbance to archaeology, where significant archaeological deposits are found to be present; (ii) where impacts cannot be avoided, recommendations for any further investigations for significant archaeological deposits; and (iii) management and mitigation measures to ensure there are no additional impacts due to pre-construction and construction activities; and (c) undertake any salvage works recommended by the results of the archaeological investigations, in accordance with the report required under condition B18A(b).
B18B	Prior to the commencement of pre-construction and construction activities affecting site OHK85, the Proponent shall undertake any salvage works recommended by the results of the archaeological investigations described in the 2013 Kelleher Nightingale document referenced in condition A1(f), in accordance with the relevant salvage mitigation measures outlined in section 19.4.1 of Volume 1 of the EA.

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B18C	Within 12 months of completing any salvage work in accordance with conditions B18A and/or B18B, or at such time otherwise agreed by the Director General, the Proponent shall submit a report containing the findings of the salvage works, prepared in consultation with OEH and to the satisfaction of the Director General.
B18C	Prior to the commencement of pre-construction and construction that affects the farm complex identified as OHK11 in Table 20-1 of Volume 1 of the EA, the Proponent shall prepare an archaeological assessment, which includes a research design and methodology to guide any proposed archaeological investigation, in accordance with the relevant Heritage Council of NSW guidelines. The archaeological assessment shall be prepared in consultation with the Office of Environment and Heritage (Heritage Branch) and submitted for the approval of the Director General prior to work commencing on site OHK11, unless otherwise agreed to by the Director General. The Excavation Director for the archaeological program shall meet the requirements of the Heritage Council of NSW's Excavation Director Criteria (Heritage Council of NSW website http://www.heritage.nsw.gov.au/docs/excavationdirectors.pdf dated July 2011). Any further archaeological work recommended on this site by the assessment shall be undertaken by the Proponent in consultation with the Office of Environment and Heritage (Heritage Branch). A final report on the excavation shall be submitted to the Director General and the Heritage Council of NSW within six months of the completion of the archaeological fieldwork, unless otherwise agreed to by the Director General.
B20	The Proponent shall prepare and implement an Urban Design and Landscape Plan for the project. The Plan shall be prepared in consultation with the relevant council and shall present an integrated urban design for the project. The Plan shall include, but not necessarily be limited to: (a) a principal goal of achieving the urban design objectives outlined in Table 17-4 of Volume 1 of the EA; (b) location of existing vegetation and proposed landscaping (including use of indigenous and endemic species where possible) and design features; (c) graphics such as sections, perspective views and sketches for key elements of the project (including, but not limited to built elements such as retaining walls, cuttings, embankments, bridges, and noise barriers); (d) a description of locations along the project corridor directly or indirectly impacted by the construction of the project (e.g. temporary ancillary facilities, access tracks, watercourse crossings, etc.) and details of the strategies to progressively rehabilitate regenerate and/ or revegetate the locations with the objective of promoting biodiversity outcomes and visual integration. Details of species to be replanted/ revegetated shall be provided, including their appropriateness to the area and considering existing vegetation and habitat for threatened species;

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	(e) an assessment of the visual screening affects of existing vegetation and the proposed landscaping. Where residences and businesses have been identified as likely to experience high visual impact as a result of the project and high residual impacts are likely to remain, the Proponent shall in consultation with affected receptors, identify opportunities for providing at receptor landscaping to further screen views of the project. Where agreed to with the landowner, these measures shall be implemented during the construction of the project; (f) strategies for progressive landscaping of other environmental controls such as erosion and sedimentation controls, drainage and noise mitigation; (g) location and design treatments for any associated footpaths and cyclist elements, and other features such as seating, lighting (in accordance with AS 4282-1997 Control of the Obtrusive Effect of Outdoor Lighting), fencing, and signs; (h) evidence of consultation with the relevant council and community on the proposed urban design and landscape measures prior to its finalisation; and (i) monitoring and maintenance procedures for the built elements, rehabilitated vegetation and landscaping (including weed control) including performance indicators, responsibilities, timing and duration and contingencies where rehabilitation of vegetation and landscaping measures fail. The Plan shall be submitted for the approval of the Director General prior to the commencement of permanent built works and/ or landscaping, unless otherwise agreed by the Director General. The Plan may be submitted in stages to suit the staged construction program of the project.
B21	The Proponent shall ensure that the project is designed in consultation with DPI (Forests) to ensure that access of a standard that is at least equivalent to that currently existing and which meets relevant road safety standards is maintained within state forests to enable continued forestry operations, fire management and recreation during construction and operation unless otherwise agreed with DPI (Forests).
B22	The Proponent shall ensure that the project is designed to incorporate appropriate signage for townships along the existing highway that are bypassed by the project, in consultation with the relevant council and community. The signage policy shall be consistent with the Roads and Maritime Service's standard signposting policy and provide information on the range of services available within the towns including advice that the route through the towns may be taken as an alternative to the highway.
B23	The Proponent shall ensure that the project is designed to minimise land take impacts to surrounding properties (including agricultural properties) as far as feasible and reasonable, in consultation with the affected landowners. Where the viability of existing agricultural operations are identified to be highly affected by the land requirements of the project, the Proponent shall as part of detailed design employ a suitably qualified and experienced independent agricultural specialist (that is approved by the Director General for the purpose

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	of this condition), to assist in the following (where agreed to by the relevant landowner): (a) identifying alternative farming opportunities for the relevant properties including purchase of other residual land to enable existing/new agricultural activities to continue; and/ or (b) negotiating appropriate compensation and/or arrangements for the purchase of the property under the Land Acquisition (Just Terms Compensation) Act 1991.
B24	The Proponent shall develop and implement a Compliance Tracking Program to track compliance with the requirements of this approval. The Program shall be submitted to the Director General for approval prior to the commencement of construction and relate to both the construction and operational phases of the project, and include, but not necessarily be limited to: (a) provisions for the notification of the Director General of the commencement of works 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 project compliance with the requirements of this approval and the documents listed under condition A1, including the Statement of Commitments; (c) provisions for periodic reporting of compliance status against the requirements of this approval and the documents listed under condition A1, including the Statement of Commitments, to the Director General including at least one month prior to the commencement of construction and operation of the project and at other intervals during the construction and operation, as identified in the Program; (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 reporting and recording incidents and actions taken in response to those incidents; (f) provisions for reporting environmental incidents to the Director General during construction and operation; and (g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management.
B25	Prior to the commencement of construction, the Proponent shall establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the project. The Proponent shall, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not necessarily limited to: (a) information on the current implementation status of the project; (b) a copy of the documents referred to under condition A1 of this approval, and any documentation supporting modifications to this approval that may be granted from time to time;

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	(c) a copy of this approval and any future modification to this approval; (d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the project; (e) a copy of each current strategy, plan, program or other document required under this approval; and (f) the outcomes of compliance tracking in accordance with the requirements of condition B24.
B26	Prior to the commencement of construction, the Proponent shall ensure that the following are available for community complaints and enquiries during the construction period: (a) a telephone number on which complaints and enquiries about construction and operation activities may be registered; (b) a postal address to which written complaints and enquiries may be sent; and (c) an email address to which electronic complaints and enquiries may be transmitted. The telephone number, the postal address and the email address shall be published in a newspaper circulating in the local area prior to the commencement of construction and prior to the commencement of project operation. The above details shall also be provided on the website (or dedicated pages) required by this approval.
B27	The Proponent shall prepare and implement a Construction Complaints Management System consistent with AS 4269 Complaints Handling prior to the commencement of construction activities and must maintain the System for the duration of construction activities. 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, shall be maintained by the Proponent and included in a complaints register. The information contained within the System shall be made available to the Director General on request.
B28	The Proponent shall prepare and implement a Community Communication Strategy for the project. This Strategy shall be designed to provide mechanisms to facilitate communication between the Proponent, the Contractor, the Environmental Representative, the relevant council and the local community (broader and local stakeholders) on the construction and environmental management of the project. The Strategy shall include, but not necessarily be limited to: (a) identification of stakeholders to be consulted as part of the Strategy, including affected and adjoining landowners; (b) procedures and mechanisms for the regular distribution of information to stakeholders on the progress of the project and matters associated with environmental management; (c) procedures and mechanisms through which stakeholders can discuss or provide feedback to the Proponent and/ or Environmental

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	Representative in relation to the environmental management and delivery of the project; (d) procedures and mechanisms through which the Proponent can respond to enquires or feedback from stakeholders in relation to the environmental management and delivery of the project; and (e) procedures and mechanisms that would be implemented to resolve issues/ disputes that may arise between parties on the matters relating to environmental management and the delivery of the project. This may include the use of an appropriately qualified and experienced independent mediator. The Proponent shall maintain and implement the Strategy throughout construction of the project. The Strategy shall be approved by the Director General prior to the commencement of construction, or as otherwise agreed by the Director General.
B29	Prior to the commencement of construction of the project, or as otherwise agreed by the Director General, the Proponent shall nominate for the approval of the Director General a suitably qualified and experienced Environment Representative(s) that is independent of the design (including preparation of documentation referred to in condition A1), and construction personnel. The Proponent shall employ the Environmental Representative(s) for the duration of construction, or as otherwise agreed by the Director General. The Environment Representative(s) shall: (a) be the principal point of advice in relation to the environmental performance of the project; (b) 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; (c) monitor the implementation of environmental management plans and monitoring programs required under this approval; (d) monitor the outcome of environmental management plans and advise the Proponent upon the achievement of project environmental outcomes; (e) have responsibility for considering and advising the Proponent on matters specified in the conditions of this approval, and other licences and approvals related to the environmental performance and impacts of the project; (f) ensure that environmental auditing is undertaken in accordance with the requirements of condition B24 and the project's Environmental Management System(s); (g) be given the authority to approve/ reject minor amendments to the Construction Environment Management Plan. What constitutes a "minor" amendment shall be clearly explained in the Construction Environment Management Plan required under condition B30; and (h) 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 that relevant actions be ceased immediately should an

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	adverse impact on the environment be likely to occur.
B30	The Proponent shall prepare and (following approval) implement a Construction Environmental Management Plan for the project. The Plan shall outline the environmental management practices and procedures that are to be followed during construction, and shall be prepared in consultation with the relevant agencies and in accordance with the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004). The Plan shall include, but not necessarily be limited to: (a) a description of activities to be undertaken during construction of the project or stages of construction, as relevant; (b) statutory and other obligations that the Proponent is required to fulfil during construction including approvals, consultations and agreements required from agencies and key legislation and policies. Evidence of consultation with relevant agencies shall be included identifying how issues raised by these agencies have been addressed in the Plan; (c) a description of the roles and responsibilities for relevant employees involved in the construction of the project including relevant training and induction provisions for ensuring that employees, including contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of approval; (d) identification of ancillary facility site locations, including an assessment against the location criteria outlined in condition C28; (e) an environmental risk analysis to identify the key environmental performance issues associated with the construction phase and details of how environmental performance would be monitored and managed 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 project and/ or concurrent construction works with adjacent Pacific Highway Upgrade projects, as relevant). In particular, the following environmental performance issues shall be addressed in the Plan: (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 to monitor and manage impacts associated with the construction and operation of ancillary facilities, (iv) measures for the handling, treatment and management of contaminated materials, (v) 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 for dealing with green waste including timber and mulch from clearing activities; and measures for reducing

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	demand on water resources (including the potential for reuse of treated water from sediment control basins); (vi) 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 and a stockpile management protocol detailing locational criteria that would guide the placement of stockpiles and management measures that would be implemented to avoid/ minimise amenity impacts to surrounding residents and environmental risks (including to surrounding water courses). Stockpile sites that affect heritage, threatened species, populations or endangered ecological communities require the approval of the Director General, in consultation with the OEH; (vii) measures to monitor and manage hazard and risks including emergency management;and (viii) the issues identified in condition B31; (f) details of community involvement and complaints handling procedures during construction, consistent with the requirements of conditions B25 to B28; (g) details of compliance and incident management consistent with the requirements of condition B24; and (h) procedures for the periodic review and update of the Construction Environmental Management Plan and sub-plans required under condition B31, as necessary (including where minor changes can be approved by the Environmental Representative). The Plan shall be submitted for the approval of the Director General no later than one month prior to the commencement of construction, or within such period otherwise agreed by the Director General. Construction works shall not commence until written approval has been received from the Director General.
B31	As part of the Construction Environment Management Plan for the project required under condition B30, the Proponent shall prepare and implement the following sub plan(s): a) a Construction Traffic Management Sub-plan, prepared in accordance with the Roads and Maritime Service's QA Specification G10 – Control of Traffic and Traffic Control at Work Sites Manual (2003) to manage disruptions to traffic movements as a result of construction traffic associated with the project. The sub-plan shall be developed in consultation with the relevant council and shall include, but not necessarily be limited to: (i) identification of construction traffic routes and quantification of construction traffic volumes (including heavy vehicle/ spoil haulage) on these routes; (ii) details of vehicle movements for construction sites and site compounds including parking, dedicated vehicle turning areas, and ingress and egress points; (iii) details of potential impacts to traffic on the existing highway and associated local roads, including intersection level of service and

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	potential disruptions to pedestrians, public transport, parking, cyclists and property access; (iv) details of temporary and interim traffic arrangements to address potential impacts; (v) a response procedure for dealing with traffic incidents; and (vi) mechanism for the monitoring, review and amendment of this sub-plan; (b) a Construction Flora and Fauna Management Sub-plan to detail how construction impacts on ecology will be minimised and managed. The sub-plan shall be developed in consultation with the OEH and DPI (Fishing and Aquaculture) and shall include, but not necessarily be limited to: (i) details of pre-construction surveys undertaken to verify the construction boundaries/ footprint of the project based on detailed design and to confirm the vegetation to be cleared as part of the project (including tree hollows, threatened flora and fauna species, mangroves, seagrass and riparian vegetation). The surveys shall be undertaken by a suitably qualified and experienced ecologist and include targeted surveys during suitable conditions for Koalas, Green-thighed Frog, Giant Barred Frog and microbats within and in the vicinity of the project corridor; (ii) updated sensitive area/ vegetation maps based on B31(b)(i) above and previous survey work; (iii) details of general work practices and mitigation measures to be implemented during construction to minimise impacts on native fauna and native vegetation (particularly threatened species and EECs) not proposed to be cleared as part of the project, including, but not necessarily limited to: fencing of sensitive areas, a protocol for the removal and relocation of fauna during clearing, presence of a suitably qualified and experienced ecologist to oversee clearing activities and facilitate fauna rescues and re-location, clearing timing with consideration to breeding periods, measures for maintaining existing habitat features (such as bush rock and tree branches etc), seed harvesting and appropriate topsoil management, construction worker education, weed management (including controls to prevent the introduction or spread of Phytophthora cinnamomi), erosion and sediment control and progressive re-vegetation; (iv) specific procedures to deal with EEC/ threatened species anticipated to be encountered within the project corridor including re-location, translocation and/or management and protection measures; (v) a management strategy for the Green-thighed Frog and Giant Barred Frog in the case that the pre-construction surveys identify the presence of these species or its habitats in the project corridor or its vicinity. The strategy shall include details of the measures to avoid, minimise and mitigate impacts to these species; (vi) a Microbat management strategy in the case that the pre-construction surveys (undertaken at least 12 months in advance of disturbance to potential roosting structures, or as agreed by the Director General) identify the presence of or evidence of microbat roosting in the project corridor or its vicinity. The strategy shall detail measures to avoid, minimise and mitigate impacts to microbats and identified roost sites, including short and long term management measures;

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	(vii) an aquatic vegetation management strategy for mangroves and seagrass. The strategy shall: I. identify the potential for the translocation of mangroves and/ or seagrass impacted by the project; II. if translocation is feasible, include details of a translocation plan consistent with Policy and Guidelines for Fish Habitat Conservation and Management (NSW Fisheries 1999) including details of ongoing maintenance such as responsibilities, timing and duration; III. identify a process for incorporating appropriate compensatory habitat for mangroves and/ or seagrass impacted by the project in the Biodiversity Offset Strategy referred to in condition B8 of this approval, should the information obtained during the investigation find that translocation is not feasible or where the monitoring undertaken finds that translocation measures have not been successful (as identified through performance criteria); and IV. include detail of mitigation measures to be implemented during construction to avoid and minimise impacts to areas identified to contain these species, including impacts from the use and storage of construction plant, equipment, materials and entry by personnel; (viii) a procedure for dealing with unexpected EEC/ threatened species identified during construction including cessation of work and notification of the OEH, determination of appropriate mitigation measures in consultation with the OEH (including relevant re-location measures) and update of ecological monitoring and/ or biodiversity offset requirements consistent with conditions B8 and B10; and (ix) mechanism for the monitoring, review and amendment of this sub-plan; (c) a Construction Noise and Vibration Management Sub-plan to detail how construction noise and vibration impacts will be minimised and managed. The sub-plan shall be developed in consultation with the EPA and include, but not necessarily be limited to: (i) identification of nearest sensitive receptors and relevant construction noise and vibration goals applicable to the project; (ii) identification of key noise and/or vibration generating construction activities (based on representative construction scenarios, including at ancillary facilities) that have the potential to impact on surrounding sensitive receivers including expected noise/ vibration levels; (iii) identification of feasible and reasonable measures proposed to be implemented to minimise construction noise and vibration impacts (including construction traffic noise impacts); (iv) procedures for dealing with out-of-hour works in accordance with condition C4, including procedures for notifying the Director General concerning complaints received in relation to the extended hours approved under condition C4(d); (v) procedures and mitigation measures to ensure relevant vibration and blasting criteria are achieved, including a suitable blast program, applicable buffer distances for vibration intensive works, use of low-vibration generating equipment/ vibration dampeners or

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	alternative construction methodology, and pre- and post- construction dilapidation surveys of sensitive structures where blasting and/ or vibration is likely to result in damage to buildings and structures (including surveys being undertaken immediately following a monitored exceedance of the criteria); (vi) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise and vibration amenity, as well as procedures for dealing with and responding to noise complaints; and (vii) a program for construction noise and vibration monitoring clearly indicating monitoring frequency, location, how the results of this monitoring would be recorded and, procedures to be followed where significant exceedences of relevant noise and vibration goals are detected; (d) a Construction Soil and Water Quality Management Sub-plan to manage surface and groundwater impacts during construction of the project. The sub-plan shall be developed in consultation with the OEH, DPI (Fishing and Aquaculture) and NOW and include, but not necessarily be limited to: (i) identification of potential sources of erosion and sedimentation, and water pollution (including those resulting from maintenance activities); (ii) details of how construction activities would be managed and mitigated to minimise erosion and sedimentation consistent with condition C17; (iii) where construction activities have the potential to impact on waterways or wetlands (through direct disturbance such as construction of waterway crossings or works in close proximity to waterways or wetlands), site specific mitigation measures to be implemented to minimise water quality, riparian and stream hydrology impacts as far as practicable, including measures to stabilise bed and/ or bank structures where feasible and reasonable, and to rehabilitate affected riparian vegetation to existing or better condition. The timing of rehabilitation of the waterways shall be identified in the sub-plan; (iv) a contingency plan, consistent with the Acid Sulfate Soils Manual, to deal with the unexpected discovery of actual or potential acid sulfate soils, including procedures for the investigation, handling, treatment and management of such soils and water seepage; (v) a tannin leachate management protocol to manage the stockpiling of mulch and use of cleared vegetation and mulch filters for erosion and sediment control; (vi) construction water quality monitoring requirements consistent with condition B16; and (vii) a groundwater management strategy, including (but not necessarily limited to): I. i. description and identification of groundwater resources (including depths of the water table and water quality) potentially affected by the project based on baseline groundwater monitoring undertaken in accordance with condition B16;

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	II. ii. identification of surrounding licensed bores, dams or other water supplies and groundwater dependant ecosystems and potential groundwater risks associated with the construction of the project on these groundwater users and ecosystems; III. iii. measures to manage identified impacts on water table, flow regimes and quality and to groundwater users and ecosystems; IV. iv. groundwater inflow control, handling, treatment and disposal methods; and V. v. a detailed monitoring plan to identify monitoring methods, locations, frequency, duration and analysis requirements; and (e) a Construction Heritage Management Sub-plan to detail how construction impacts on Aboriginal and non-Aboriginal heritage will be minimised and managed. The sub-plan shall be developed in consultation with the OEH and registered Aboriginal stakeholders (for Aboriginal heritage), and include, but not necessarily be limited to: (i) In relation to Aboriginal Heritage: I. details of management measures to be carried out in relation to recorded sites and potential Aboriginal deposits (including further archaeological investigations, salvage measures and/ or measures to protect unaffected sites during construction works in the vicinity); II. procedures for dealing with previously unidentified Aboriginal objects (excluding human remains) including cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can re-commence by a suitably qualified archaeologist in consultation with the Department, OEH and registered Aboriginal stakeholders and assessment of the consistency of any new Aboriginal heritage impacts against the approved impacts of the project, and registering of the new site in the OEH's Aboriginal Heritage Information Management System (AHIMS) register; III. procedures for dealing with human remains, including cessation of works in the vicinity and notification of the Department, NSW Police Force, OEH and registered Aboriginal stakeholders and not recommencing any works in the area unless authorised by the Department and/ or the NSW Police Force); and IV. Aboriginal cultural heritage induction processes for construction personnel (including procedures for keeping records of inductions) and procedures for ongoing Aboriginal consultation and involvement; and (ii) In relation to non-Aboriginal Heritage: I. details of management measures to be carried out in relation to recorded sites (including further heritage investigations, archival recordings and/ or measures to protect unaffected sites during construction works in the vicinity), consistent with the Mitigation and Management Strategies listed in Section 9 of the Non-Indigenous Heritage Impact Assessment prepared by South East

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	Archaeology Pty Limited (dated December 2007); II. procedures for dealing with previously unidentified non-Aboriginal objects, (including cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can re-commence by a suitably qualified and experienced archaeologist in consultation with the Department and Office of Environment and Heritage (Heritage Branch) and assessment of the consistency of any new non-Aboriginal heritage impacts against the approved impacts of the project; and III. non-Aboriginal heritage induction processes for construction personnel (including procedures for keeping records of inductions).
PART C – DURING CONSTRUCTION	
C1	The Proponent shall employ feasible and reasonable measures to minimise the clearing of native vegetation during the construction of the project.
C2	The Proponent shall employ feasible and reasonable measures (including cessation of relevant works, as appropriate) to ensure that the project is constructed in a manner that minimises dust generation, including wind-blown dust, traffic-generated dust, dust from stockpiles and material tracking from construction and ancillary facility sites onto public roads.
C3	The Proponent shall only undertake construction activities associated with the project during the following standard construction hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; and (b) 8:00am to 1:00pm Saturdays; and (c) at no time on Sundays or public holidays.
C4	Works outside of the standard construction hours identified in condition C3 may be undertaken in the following circumstances: (a) works that generate noise that is: I. no more that 5 dB(A() above rating background level at any residence; or II. no more than the noise management levels specified in Table 3 of the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) at other sensitive land uses; or (b) for delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or

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	(c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or (d) construction works undertaken through sparsely populated areas (being those areas in which sensitive receptors are located greater than 200 metres away from the project boundary). In this case construction is permissible during the following hours: 6.00am to 6.00pm Monday to Friday and 7.00am to 4.00pm Saturdays and at no time on Sundays or public holidays. These works hours may be reviewed and/ or revoked by the Director General in consultation with the EPA in the case of excessive or unresolved noise complaints; or (e) with the approval of the Director General in accordance with condition C5.
C5	Construction activities (Out of Hours work) may be allowed to occur outside the construction hours specified in condition C3 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 the construction hours specified in condition C3 for technical or other justifiable reasons and will be considered on a case by case or activity-specific basis. Request for Out of Hours work 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 EPA and the Director General that activities undertaken during the varied construction hours are justified, appropriate consultation with potentially affected receivers and notification of the relevant 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 EPA on the proposed variation in standard construction hours. Despite the above, Out of Hours work may also occur in accordance with an approved Construction Environment Management Plan or Construction Noise and Vibration Management Sub-plan for this project, where that plan provides a process for considering the above on a case by case or activity specific basis by the Proponent, including factors (a) to (c) above.
C6	Blasting associated with the project shall only be undertaken during the following hours: (a) 9:00am to 5:00pm, Mondays to Fridays, inclusive; (b) 9:00am to 1:00pm on Saturdays; and (c) at no time on Sundays or public holidays. This condition does not apply in the event of a direction from the NSW Police Force or other relevant authority for safety or emergency reasons to avoid loss of life, property loss and/or to prevent environmental harm.
C7	The Proponent shall implement feasible and reasonable noise mitigation measures with the aim of achieving the construction noise management levels detailed in the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) during

<table>
<tr><th>CoA No.</th><th>Condition Requirements</th></tr>
<tr><td></td><td>construction activities. Any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the Construction Noise and Vibration Management Sub-plan required under condition B31.</td></tr>
<tr><td>C8</td><td>The Proponent shall implement all feasible and reasonable mitigation measures with the aim of achieving the following construction vibration goals:
(a) for structural damage, the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures; and
(b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006).</td></tr>
<tr><td>C9</td><td>The Proponent shall ensure that airblast overpressure generated by blasting associated with the project does not exceed the criteria specified in Table 1 when measured at the most affected residence or other sensitive receiver.
<table>
<tr><th>Airblast overpressure (dB – Lin Peak)</th><th>Allowable exceedance</th></tr>
<tr><td>115</td><td>5% of total number of blasts over a 12 month period</td></tr>
<tr><td>120</td><td>0%</td></tr>
</table></td></tr>
<tr><td>C10</td><td>The Proponent shall ensure that ground vibration generated by blasting associated with the project does not exceed the criteria specified in Table 2 when measured at the most affected residence or other sensitive receiver.
<table>
<tr><th>Receiver</th><th>Peak particle velocity (mm/s)</th><th>Allowable exccedance</th></tr>
<tr><td rowspan="2">Residence on privately owned land</td><td>5</td><td>5% of total number of blasts over a 12 month period</td></tr>
<tr><td>10</td><td>0%</td></tr>
<tr><td>Non-Aboriginal Heritage item</td><td>3</td><td>0%</td></tr>
</table></td></tr>
<tr><td>C11</td><td>To ensure that the criteria specified in conditions C9 and C10 are satisfied at the most affected residence or other sensitive receiver,</td></tr>
</table>

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	blasting trials shall be undertaken prior to the commencement of the project's blasting program, with results from the trial blasts used to determine site specific blast design to satisfy the relevant criteria.
C12	The blasting criteria identified in conditions C9 and/or C10 may be exceeded where the Proponent has a written agreement with the EPA and the relevant landowner to exceed the criteria identified in conditions C9 and/ or C10 and the Director General has approved the exceedance. In obtaining the Director General approval for any such exceedance the Proponent shall submit to the Director General: (a) details of the proposed blasting program and justification for the proposed increase to blasting criteria including alternatives considered (where relevant); (b) an assessment of the environmental impacts of the increased blast limits on the surrounding environment and most affected residences or other sensitive receivers including, but not limited to noise, vibration and air quality and any risk to surrounding utilities, services or other structures; (c) details of the blast management, mitigation and monitoring procedures to be implemented; and (d) details of consultation undertaken (including clear identification of proposed blast limits and potential property impacts) and agreement reached with the relevant landowners and EPA (including a copy of the agreement in relation to increased blasting limits). Unless otherwise agreed by the Director-General, the following exclusions apply to the application of this condition: (a) any agreements reached may be terminated by the landowner at any time should concerns about the increased blasting limits be unresolved; (b) the blasting limit agreed to under any agreement can at no time exceed a maximum Peak Particle Velocity vibration level of 25 mm/s or maximum Airblast Overpressure level of 125 dBL; and (c) these provisions under condition C12 (to increase applicable blast criteria in agreement with the relevant landowners) do not apply where the property is a non-Aboriginal heritage item.
C13	Unless otherwise agreed by the Director General, within six months of commencing construction, the Proponent shall, in consultation with the EPA, prepare and submit for the approval of the Director General, a review of the operational noise mitigation measures proposed to be implemented for the project. The review shall: (a) confirm the operational noise predictions of the project based on detailed design. This operational noise assessment shall be based on an appropriately calibrated noise model (which has incorporated additional noise monitoring, where necessary for calibration purposes). The assessment shall specifically include verification of noise levels at the Mingaletta Road rest areas, based on additional noise monitoring undertaken at this location;

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	(b) review the suitability of the operational noise mitigation measures identified in the documents listed under condition A1 to achieve the criteria outlined in the Environmental Criteria for Road Traffic Noise (Environment Protection Authority, 1999), based on the operational noise performance of the project predicted under (a) above; and (c) where necessary, investigate additional feasible and reasonable noise mitigation measures to achieve the criteria outlined in the Environmental Criteria for Road Traffic Noise (Environment Protection Authority, 1999).
C14	This approval does not allow the Proponent to destroy, modify or otherwise physically affect any human remains as part of the project.
C14A	The proponent shall not destroy, modify or otherwise physically affect any heritage items outside the approved project footprint, except where this has been approved by the Director General in accordance with condition C28 of this project approval.
C15	The Proponent shall not destroy, modify or otherwise physically affect the Maria River bridge (OHK14), unless otherwise agreed by the Director General.
C16	The measures to protect Aboriginal or historic heritage sites near or adjacent to the project during construction shall be detailed in the Heritage Management Sub-plan required under condition B31.
C17	Soil and water management measures consistent with Managing Urban Stormwater - Soils and Construction Vols 1 and 2, 4th Edition (Landcom, 2004) and Managing Urban Stormwater Soils And Construction Vols 2A and 2D Main Road Construction (Department of Environment and Climate Change, 2008) shall be employed during the construction of the project for erosion and sediment control.
C18	Where available, and of appropriate chemical and biological quality, the Proponent shall use stormwater, recycled water or other water sources in preference to potable water for construction activities, including concrete mixing and dust control.
C19	The Proponent shall construct the project in a manner that minimises impacts to private properties and other public or private structures (such as dams, fences, utilities, services etc) along the project corridor. In the event that construction of the project results in direct or indirect damage to such property or structure, the Proponent shall arrange and fund repair of the damage to a standard comparable to that in existence prior to the damage occurring, unless otherwise agreed by the relevant property or utility owner.
C20	The Proponent shall ensure that access to property is maintained during construction unless otherwise agreed with the property owner in advance and that access physically affected by the project is reinstated to at least an equivalent standard, in consultation with the property owner.

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C21	The Proponent shall, in consultation with relevant property owners, construct the project in a manner that minimises intrusion and disruption to agricultural operations/ activities in surrounding properties (e.g. stock access, access to farm dams etc), unless otherwise agreed by the relevant property owner.
C22	Where the project traverses the Cairncross, Ballengarra and Maria River state forests, the Proponent shall, in consultation with DPI (Forests), ensure that construction activities do not unduly disrupt existing forestry activities, access for fire fighting and recreation activities during construction, unless otherwise agreed by DPI (Forests).
C23	The roads likely to be used by the project's heavy construction vehicles shall be identified in the Traffic Management Sub-plan required under condition B31(a). Road dilapidation reports shall be prepared for local roads likely to be used by the project's construction traffic, and a copy of the report(s) shall be provided to the relevant council, prior to use by the project's heavy construction vehicles. Any damage resulting from the use of the identified local roads by the project's heavy construction vehicles, aside from that resulting from normal wear and tear, shall be repaired at the cost of the Proponent, unless otherwise agreed by the relevant council.
C24	The Proponent shall not cause, permit or allow waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.
C25	The Proponent shall maximise the reuse and/or recycling of waste materials generated on site as far as practicable, to minimise the need for treatment or disposal of those materials off site.
C26	The Proponent shall ensure that liquid and/or non-liquid waste generated on the site is assessed and classified in accordance with Waste Classification Guidelines (Department of Environment and Climate Change, 2008) and where removed from the site is directed to a waste management facility lawfully permitted to accept the materials.
C27	The Proponent shall store and handle dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with: (a) relevant Australian Standards; (b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume within the bund; and (c) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, Technical Bulletin (Environment Protection Authority, 1997).

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	In the event of an inconsistency between the requirements listed from (a) to (c) above, the most stringent requirement shall prevail to the extent of the inconsistency.
C28	Unless otherwise approved by the Director General in accordance with this condition, the sites for ancillary facilities (except stockpiles) associated with the construction of the project shall: (a) be located more than 50 metres from a waterway; (b) have ready access to the road network or direct access to the construction corridor; (c) be located in areas of low ecological significance and require minimal clearing of native vegetation (not beyond that already required by the project); (d) be located on relatively level land; (e) be separated from the nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant); (f) not unreasonably affect the land use of adjacent properties; (g) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; (h) provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours; and (i) be located in areas of low heritage conservation significance (including identified Aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the project. Ancillary sites identified that do not meet the above criteria shall be assessed against this criteria to demonstrate how any impacts can be mitigated and managed to acceptable standards (including demonstrating consistency with project impacts identified in the documents listed under condition A1, to the satisfaction of the Director General. Such assessment(s) can be submitted separately or as part of the Construction Environmental Management Plan required under condition B30.
C28A	The proponent may request to establish and operate an ancillary facility prior to commencement of construction under condition C28. Where establishment and operation of an ancillary facility prior to commencement of construction is proposed, the proponent shall demonstrate that establishment and operation of that ancillary facility prior to commencement of construction complies with all relevant conditions of approval, to the satisfaction of the Director General.
C29	The Director General's approval is not required for minor ancillary facilities (e.g. lunch sheds, office sheds, and portable toilet facilities) that do not comply with the criteria set out in condition C28 of this approval and which:

CoA No.	Condition Requirements
	(a) are located within an active construction zone within the approved project footprint; and (b) have been assessed by the Environmental Representative to have: I. minimal amenity impacts to surrounding residences, with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and II. minimal environmental impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the project; and (c) have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in a Construction Environment Management Plan for the project.
PART D – PRIOR TO OPERATIONS	
D1	Prior to the commencement of operation, the Proponent shall incorporate the project into its existing environmental management systems.
PART E – DURING OPERATIONS	
E1	Within 12 months of the commencement of operation of the project, or as otherwise agreed by the Director General, the Proponent shall undertake operational noise monitoring to compare actual noise performance of the project against noise performance predicted in the review of noise mitigation measures required by condition C13, and prepare an Operational Noise Report to document this monitoring The Report shall include, but not necessarily be limited to: (a) noise monitoring to assess compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under condition C13 and documents specified under condition A1 of this approval; (b) a review of the operational noise levels in terms of criteria and noise goals established in the Environmental Criteria for Road Traffic Noise (Environment Protection Authority, 1999); (c) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which project noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers; (d) details of any complaints and enquiries received in relation to operational noise generated by the project between the date of commencement of operation and the date the report was prepared; (e) any required recalibrations of the noise model taking into consideration factors such as actual traffic numbers and proportions;

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	(f) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of all feasible and reasonable mitigation measures; and (g) identification of additional feasible and reasonable measures to those identified in the review of noise mitigation measures required by condition C13, that would be implemented with the objective of meeting the criteria outlined in the Environmental Criteria for Road Traffic Noise (Environment Protection Authority, 1999), when these measures would be implemented and how their effectiveness would be measured and reported to the Director General and the EPA. The Proponent shall provide the Director General and the EPA with a copy of the Operational Noise Report within 60 days of completing the operational noise monitoring referred to in (a) above or as otherwise agreed by the Director General.

Table 4: Conditions of Approval under the EPBC Act

CoA No.	Condition Requirements
1	The person taking the action must not clear more than 211 hectares of Koala (*Phascolarctos cinerea*) habitat, 232 hectares of Grey-headed Flying-fox (*Pteropus poliocephalus*) habitat, 215 hectares of Spotted-tail Quoll (*Dasyurus maculatus*) habitat and 7.7 hectares of Giant-Barred Frog (*Mixophyes iteratus*) habitat within the project corridor of the proposed action.
2	To assist in mitigating the impacts of the proposal on the Koala, Grey-headed Flying-fox, Spotted-tail Quoll and the Giant-Barred Frog during construction, the person taking the action must prepare and submit a Flora and Fauna Management Plan for each stage of the action, for the Minister's written approval prior to commencement of each stage of the action. The Flora and Fauna Management Plan for each stage must be approved by the Minister in writing prior to commencement of the relevant stage. These plans must include: a. Measures to be implemented to avoid, suppress and control the spread of weeds, plant pathogens and invasive species; b. Measures to avoid and minimise other indirect impacts that may result from the proposal during and after construction, including erosion and sedimentation; c. Measures to manage aquatic habitat on-site to at least maintain habitat values for the Giant Barred Frog; d. A detailed description of the pre-clearance surveys to be undertaken by a suitably qualified expert within all areas proposed for disturbance, including: hollow bearing trees, logs, existing culverts and bridges, no earlier than 48 hours prior to the removal of vegetation occurring in that area to ensure that the area is free of the Koala, Giant-Barred Frog, Grey-headed Flying-fox and Spotted-tail Quoll. e. Measures to relocate and/or ensure the appropriate care of individuals of the Koala, Giant-Barred Frog, Grey-headed Flying-fox and Spotted-tail Quoll that are identified during searches referred to in condition 2d; and

CoA No.	Condition Requirements
	f. clear key milestones, monitoring, performance indicators, corrective actions and timeframes for the completion of all actions outlined in the plan.
3	To assist in mitigating the impacts of the proposal on the Koala, Spotted-tail Quoll and the Giant-Barred Frog, the person taking the action must construct and maintain fauna crossings and fencing in all areas that are likely to benefit these species for the duration of the impact of the action. a. The fauna crossings must: i. be effective for the Koala, Spotted-tail Quoll and/or Giant Barred Frog (the relevant species targeted to use the fauna crossing); ii. provide dry passage up to a 1 in 100 year Average Recurrence Interval (ARI) event for dedicated fauna crossings and up to a one in 1 year 72 hour ARI event for combined fauna crossings; iii. include a minimum of 11 dedicated fauna crossings and 30 combined fauna crossings for the project; iv. not increase in length more than 10 per cent from the lengths provided in Schedule 2 of this notice, and not reduce in width and height from the values provided in Schedule 2 of this notice without the written consent of the Minister; v. be bridges in areas that are likely to benefit the Giant-Barred Frog. b. If a change to the fauna crossing design is proposed that does not meet the parameters described in Condition 3a), the person taking the action must: vi. provide evidence to the Minister that these will remain effective for the Koala, Spotted-tail Quoll or Giant-Barred Frog (as relevant for the fauna crossing) for the Minister's written approval prior to commencement of the stage relevant to that fauna crossing; or vii. provide written evidence to the Minister detailing how the resulting loss in connectivity will be compensated for with increased connectivity for the impacted species. This must be approved in writing by the Minister, prior to commencement of stage 2 and stage 3. c. Fencing must be constructed at a minimum the locations identified in Schedule 3 of this notice.
4	Prior to commencement of stage 2 and stage 3 of the action, the person taking the action must submit an Ecological Monitoring Program for approval by the Minister that determines the effectiveness of the mitigation measures implemented as part of the project. The Ecological Monitoring Program must be approved in writing by the Minister prior to commencement of stage 2 and stage 3, and must include:

CoA No.	Condition Requirements
	a. The baseline data collected from surveys undertaken by a suitably qualified expert on the Koala, Spotted-tail Quoll and Giant-Barred Frog within all habitat areas outside areas to be cleared of vegetation for the proposed action, that are likely to contain these species and that are likely to be adversely impacted by the action (as determined by a suitably qualified expert).The data must address the densities, distribution, habitat use and movement patterns of these species; b. The methodology to be implemented for the ongoing monitoring of road kill, the species densities, distribution, habitat use and movement patterns, and the use of fauna crossing during construction and operation of the action, including the timing, and duration of the methodology; c. Goals and performance indicators to measure the success of proposed fauna crossings, which must be specific, measureable, achievable, realistic and timely (SMART), and be compared against baseline data described in condition 4a) d. Details of contingency measures that would be implemented in the event of changes to densities, distribution, habitat use and movement patterns that are attributable to the construction or operation of the project. Monitoring must continue until mitigation measures can be demonstrated to have been effective for the Koala, Spotted-tail Quoll, and Giant-Barred Frog. Should monitoring associated with this condition demonstrate that the use of fauna crossings and/or fencing is not achieving its intended purpose or is having a detrimental effect upon Koala, Spotted-tail Quoll, and Giant-Barred Frog (as determined by the Minister), the Minister may require that the person taking the action implement alternative forms of mitigation and/or corrective actions to address the relevant impacts to Koala, Spotted-tail Quoll, and Giant-Barred Frog. Such measures must be implemented as requested.
5	To compensate for the loss of 240 hectares of threatened species habitat the person taking the action must prepare and submit a Biodiversity Offset Management Plan (BOMP) for the Minister's written approval within 6 months of commencement of the action. The BOMP must be approved in writing by the Minister within 6 months of commencement of the action. The BOMP must include: a. the identification of the portions of the lands described as the "Proposed Biodiversity Offset Areas" in the Map at Schedule 1 of this notice that are necessary to achieve the outcomes required by the *Environmental Offsets Policy 2012* (or subsequent published revisions). This must include offset attributes, shapefiles, textual descriptions and maps to clearly define the location and boundaries of the offset area(s); b. the results of targeted field surveys within the offset sites (undertaken at any ecologically appropriate time of the year) to assess and describe habitat suitability and presence / absence of individuals in relation to the Koala, Grey-headed Flying-fox, Spotted-tail Quoll and Giant Barred frog;

CoA No.	Condition Requirements
	c. an assessment of the baseline population for the Koala, Spotted-tail Quoll, Giant-Barred Frog, and Grey-headed Flying-fox which are detected within the offset area during field surveys; d. a description of the current quality (prior to any management activities) of the offset area(s) identified in Condition 5a with reference to the Koala, Spotted-tail Quoll, Giant-Barred Frog, and Grey-headed Flying-fox; e. an assessment demonstrating how the offset area(s) achieve the outcomes required by the *Environmental Offsets Policy 2012* (or subsequent published revisions) and user guide; f. Should the offset sites identified in 5a not be sufficient to achieve the outcomes required by the *Environmental Offsets Policy 2012* (or subsequent published revisions) and user guide, as determined in writing by the Minister, the person taking the action must provide further suitable offset sites and include these as part of the BOMP; g. information about the Koala, Grey-headed Flying-fox, Spotted-tail Quoll, Grey-headed Flying-fox, and Giant Barred frog (in relation to ecology, biology and conservation status) to inform appropriate management actions; h. targeted management actions, regeneration and revegetation strategies to be undertaken on the offset area(s) to improve the ecological quality of these areas for the Koala, Grey-headed Flying-fox, Spotted-tail Quoll and Giant Barred frog i. clear performance objectives for management actions that will enable maintenance and enhancement of habitat within the offset area, as well as contribute to the better protection of individuals and / or populations of Koala, Spotted-tail Quoll, Giant-Barred Frog, and Grey-headed Flying-fox onsite; j. anticipated timeframes for achieving performance objectives. k. performance and completion criteria for evaluating the management of the offset area, including contingency actions, criteria for triggering contingency actions and a commitment to the implementation of these actions in the event that performance objectives are not met; l. a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; m. details of who would be responsible for monitoring, reviewing, and implementing the BOMP. n. a description of funding arrangements or agreements including work programs and responsible entities; The approved BOMP must be published on the NSW Roads and Maritime Services internet web site, within 1 month of the BOMP being approved.

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	The approved BOMP must be implemented.
6	If an offset site proposed as a part of Condition 5 is already required to be protected as a result of a separate EPBC Act approval, only the management actions which can be demonstrated to be additional to those required for the separate approval, can be considered as an offset for this project. The legal protection of the site and management measures required for a separate approval cannot be considered a part of the offset, in accordance with the *Environmental Offsets Policy 2012* (or subsequent published revisions).
7	Within 12 months of approval of the Biodiversity Offset Management Plan (BOMP), the person taking the action must secure the offset area(s) identified in Condition 5a), under relevant conservation legislation. The legal instrument chosen must be registered on title, and must prevent any future development activities from occurring on the land protected, and ensure the active management of that land for the better protection of matters of national environmental significance for the duration of the impact of the action. Evidence of compliance with this condition must be provided to the Department within 30 days after the land(s) have been secured.
8	Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the BOMP, Flora and Fauna Management Plans and Ecological Monitoring Plan as specified in the conditions. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published. Noncompliance with any of the conditions of this approval must be reported to the Department within 2 business days of becoming aware of the non-compliance. At any time within the life of this approval the Minister may agree, in writing, that further reporting is not required if compliance with all requirements has been demonstrated to the Minister's satisfaction.
9	Within 30 days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.
10	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to these conditions of approval, including measures taken to implement the BOMP, Ecological Monitoring Plan and Flora and Fauna Management Plans, 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 publicised through the general media.
11	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be approved by the Minister and the audit report must address the criteria to the satisfaction of the Minister
12	If the person taking the action wishes to carry out any activity otherwise than in accordance with the BOMP, Ecological Monitoring Plan and Flora and Fauna Management Plans as specified in the conditions, the person taking the action must submit to the Department for

CoA No.	Condition Requirements
	the Minister's written approval a revised version of that Plan. The varied activity shall not commence until the Minister has approved the varied Plan in writing. The Minister will not approve a varied Plan unless the revised Plan would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised Plan, that Plan must be implemented in place of the Plan originally approved.
13	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and ecological communities to do so, the Minister may request that the person taking the action make specified revisions to the BOMP, Ecological Monitoring Plan and Flora and Fauna Management Plans, as specified in the conditions and submit the revised BOMP, Ecological Monitoring Plan and Flora and Fauna Management Plans for the Minister's written approval. The person taking the action must comply with any such request. The revised approved BOMP, Ecological Monitoring Plan and Flora and Fauna Management Plans must be implemented. Unless the Minister has approved the revised BOMP, Ecological Monitoring Plan and Flora and Fauna Management Plans then the person taking the action must continue to implement the BOMP, Ecological Monitoring Plan and Flora and Fauna Management Plans originally approved.
14	If, at any time after 5 years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.
15	Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all plans referred to in these conditions of approval on their website. Each plan must be published on the website within 1 month of being approved.

APPENDIX A2 – ENVIRONMENTAL ASPECTS AND IMPACTS

This Environmental Aspect and Impact Register was initially prepared by the Oxley Highway to Kempsey development team to supplement the Environmental Risk Analysis conducted as part of the Environmental Assessment (EA). This register has subsequently been reviewed and updated by the McConnell Dowell OHL Joint Venture for the construction phase of the 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, SoC, and review of the environmental risks identified by the EA and subsequent Submissions Report.

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
Air quality	• General earthworks. • Vegetation clearing. • Open excavation works. • Spoil handling. • Stockpiling • Vehicular movements on unsealed roads. • Material haulage • Quarrying. • Vehicle emissions. • Handling of chemicals, waste and hazardous goods.	• Complaints from neighbours, including loss of amenity, dust in living areas, swimming pools.	B (moderate)	• Induct personnel on air quality issues and safeguards. • Use water carts on unsealed surfaces and stockpiles. • Utilise safe dust suppressants to reduce dust generation. • Use street sweepers to reduce dust in areas of dust build up. • 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 smoke, dust, odours and fumes. • All disturbed areas stabilised, revegetated and/or landscaped as soon as practicable. • Minimise tracked mud/dust on public roads. • No burning or incineration of any material at any time. • Dust monitoring. • Avoid “hot-work” during total fire bans and obtain any necessary permits/exemptions from the Rural Fire Service. • WorkCover licensing requirements will be complied with for the storage of hazardous substances and dangerous goods. • Appropriately stocked spill kits will be readily available	C (Low)	AQMP EWMS SWMP Complaints procedure Induction
		• Potential adverse health effects.	C (Low)		C (Low)	
		• Degradation of water quality and other aspects of the natural environment.	C (Low)		C (Low)	
		• Health risks to neighbours and members of the public from release of gases and/or smoke.	C (Low)		C (Low)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
				at all chemical storage locations and during chemical use. • Material Safety Data Sheets (MSDSs) will be obtained, complied with and retained on site for all required chemicals. • Pesticide use will be in accordance with the Pesticides Act, 1999.		
Biodiversity	• Clearing of native vegetation. • Stockpile / haul road construction near vegetation. • Works near and in creeks / temporary crossings. • General earthworks near vegetation. • Vehicular movements. • Open excavation works.	• Loss of habitat for threatened species.	A (High)	• Induct personnel on biodiversity issues and mitigation measures. • Prior to construction – identify and fence all flora and fauna habitat areas required to be protected as identified in the Environmental Assessment and/or detailed design documentation. • Minimise clearing of all vegetation and undertake progressive revegetation. • Locate and construct fauna crossings as identified in the Environmental Assessment and/or detailed design documentation. • Implement ongoing weed monitoring and management programs. • Disturbed areas will be monitored for effective soil stabilisation and restoration / rehabilitation. • Implement a stages clearing process and undertake fauna rescue during clearing as required.	B (moderate)	FFMP EWMS Vegetation Clearing procedure Fauna handling procedure Induction
		• Potential longer term impacts associated with increased habitat fragmentation.	A (High)		B (moderate)	
		• Direct impact to flora or fauna during construction.	B (moderate)		C (Low)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
				• Engage arborist to provide advice on habitat tree health and provide ongoing advice. • Design and construct all temporary waterway crossings to maintain fish passage. • Design and installation of glider poles and fauna crossings to maintain safe passage of fauna. • Undertake threatened species management as required under the Environmental Assessment and/or detailed design documentation / Approval. • Manage unexpected threatened species finds in accordance with the procedure in Appendix I of the FFMP, • Implement washing procedures to prevent the spread of pests and disease. • Undertake monitoring as required in the Approval. • Implement Frog hygiene protocols as per Hygiene Protocol for the Control of Disease in Frogs (DECC NSW, 2008) when moving between wet-area work sites representing giant barred frog habitat (including Maria River and associated tributaries, Cooperabung, Barrys, Smiths and Pipers creeks).		
Aboriginal heritage	• Early works including non-substantial construction	• Impact to identified heritage items prior to completion of any	A (High)	• Prior to construction – identify and assess Aboriginal heritage items on proposed sites and predict potential impacts.	B (moderate)	HMP EWMS Impact to

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
	activities eg services relocations. • Initial clearing and/or grubbing of vegetation. • Initial removal of topsoil. • Construction of site compounds and spoil / mulch and / or equipment stockpile areas. • Temporary access roads during construction.	required salvage program. •		• Induct personnel on heritage issues and mitigation measures. • Protect identified heritage items with protective fencing or flagging and signage from being disturbed during construction. • Undertake salvage works in accordance with the HMP prior to impacting site. • If design changes or construction activities impact on areas outside of those identified in the EA, OEH and relevant Aboriginal groups will be consulted and approval obtained pre any required salvage. • Implement unexpected find procedures as required.		identified heritage procedure Induction Skeletal remains procedure
		• Impact (machinery, procedure vibration, stockpiles) during the construction period to identified sites	A (High)		B (moderate)	
		• Impact to undiscovered or undocumented heritage sites	B (moderate)		C (Low)	
		• Change in visual integrity of cultural area	A (High)		B (moderate)	
		• Finding / disturbing burials or human remains	C (Low)		C (Low)	
Non-Aboriginal heritage	• Early works including non-substantial	• Impact to identified heritage items.	B (moderate)	• Prior to construction – identify and assess non-Aboriginal heritage items on proposed sites and predict potential impacts.	C (Low)	HMP EWMS

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
	construction activities eg services relocations. • Initial clearing and/or grubbing of vegetation. • Initial removal of topsoil. • Construction of site compounds and spoil / mulch and / or equipment stockpile areas. • Temporary access roads during construction.	• Vibration damage during the construction period to identified sites.	B (moderate)	• Induct personnel on heritage issues and safeguards. • Protect identified heritage items with protective fencing or flagging from being disturbed during construction. • Undertake archival recording as specified in the HMP. • Regular inspection of heritage protection fencing. • Implement unexpected find procedures as required. • Landholder consultation.	C (Low)	CNVMP Chance find procedures Induction
		• Impact to undiscovered or undocumented heritage sites.	B (moderate)		C (Low)	
		• Change in visual integrity of heritage sites.	B (moderate)		C (Low)	
Noise and vibration	• Site establishment. • Earthworks. • Batch plant. • Bridge works. • Piling. • Paving. • Saw cutting.	• Noise impacts on sensitive receivers during construction.	A (High)	• Liaise (agreements where applicable) with local communities and affected residents. • Adherence to working hours in CNVMP unless otherwise approved. • Implement operational noise mitigation measures as early as possible. • Respite periods for particularly noisy/ short duration activities (in accordance with regulatory guidelines	B (Moderate)	CNVMP EWMS Blasting procedure Negotiated agreements Complaints procedure Induction
		• Vibration impacts on nearby receptors, including heritage.	B (moderate)		C (Low)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
	• Blasting. • Crushing and screening. • Rock hammering and drilling.			and/or CNVMP). • 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.		

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
				• Discuss noise and vibration monitoring results at each ERG.		
Soil and water quality	• Clearing and grubbing. • Earthworks. • Storage of fuels, chemicals and other dangerous goods. • Maintenance of plant and equipment, including servicing and refuelling. • Sediment basin management. • Drainage works. • Concrete works. • Batch plant. • Temp access road construction / removal from waterway areas. • Bridge construction.	• Erosion and movement of soils.	A (High)	• Appropriately designed erosion control structures (eg sedimentation basins, ERSED-straw bales, silt fences and sand bags) will be installed, maintained and cleaned regularly. • Locate spoil stockpiles, plant and equipment away from drainage lines, watercourses or stormwater drains in accordance with established criteria. • Install clean water diversions to ensure clean and dirty water are not mixed on site. • Storage, compound access and parking areas sealed, as early during works as practicable. • Chemical storage meets WorkCover and EPA bunding/storage requirements. • Wheel mud reduction/ cleaning measures at exit of all sites where required. • Well designed temporary waterway crossings minimising risk of fines in waterways and designed to address larger flow volumes. • Buffer zones of vegetation will be maintained adjacent to waterways for as long as practical. • Rehabilitation and landscaping works of disturbed areas undertaken as soon as the works are completed	B (moderate)	SWMP EWMS SWMP Basin management procedure Induction Targeted ERSED training Design for temporary waterway crossings Unexpected Discovery of Contaminated Land Procedure
		• Captured dirty water discharge from basins.	A (High)		B (moderate)	
		• Dirty water not captured and leaves site.	A (High)		B (moderate)	
		• Contamination of sediment basins and /or waterways from spills.	B (moderate)		C (Low)	
		• Disturbance to creeks from access road construction.	A (High)		B (moderate)	
		• Haul road washout from flood event.	A (High)		B (moderate)	
		• Disturbance on unidentified	B (moderate)		C (Low)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
		contaminated land eg historical agricultural practice such as tick dips.		and/or progressively where possible. • Appropriately designed, implemented and maintained silt control systems to mitigate risk of water pollution during upgrade of the creek bridges. • Implement concrete washout process within bunded areas. • Provide and maintain spill kits. • Consult / confirm with EPA and Primary Industries for temporary creek crossings construction / removal methods. • Establish clean water catch drains/ diversion early in Project before topsoil stripping. • Design drainage to maximise dirty water to sediment basins. • Engage soil conservationist to advise on ERSED issues. • Establish dedicated ERSED crews for the Project. • Install signage at discharge points to assist workers to understand implications of dirty water release in sensitive areas. • Meet new RMS Dewatering guidelines. • Implement appropriate procedures to identify, contain, handle and management contaminated material.		

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
				• Ensure that waterway crossings are designed and constructed in a way that ensures they are stable even when overtopped. • Ensure that roads are appropriately stabalised prior to predicted rainfall events.		
Water management	• Extraction of groundwater. • Water use for dust suppression, washing of plant and equipment, landscaping, compaction etc. • Water use for drinking water, hand washing, toilets etc. • Excavation water table. • Use of water for concrete batching • Quarrying. • General earthworks and construction.	• Groundwater interception and ingress into excavations.	B (moderate)	• Construct “Turkeys Nest” type basins for storing captured stormwater. • Prioritise the use of captured stormwater over other sources. • Re-use / recycle water where possible. • Minimise excavations proposed to intercept groundwater. • Drainage / bridging layers in floodplain.	B (moderate)	SWMP EWMS Basin management procedure Induction
		• Reduction of aquifer storage.	C (Low)		C (Low)	
		• Changes to the natural groundwater flow in the area surrounding the Project due to compaction of the road surface.	B (moderate)		C (Low)	
		• Changes in the recharge and runoff patterns as a result of construction.	B (moderate)		C (Low)	
		• Contamination of groundwater due	B (moderate)		C (Low)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
		to construction activities.				
Mulch and tannin	• Vegetation clearing and storage of mulch	• Tannin impacts on waterways.	A (High)	• Implement the RMS mulch and tannin protocol.	C (Low)	
Flooding	• Waterway crossings. • Transverse drainage. • Bridge pier locations. • Bridge openings. • Haul and bridge roads.	• Restriction to flow paths causing localised flooding.	B (moderate)	• Design drainage structures to cope with design flood events and Environmental Assessment commitments. • Locate compounds / plant / storage above flood level events stated in the EA. • Design and build temporary crossings to be stabilised and minimise scour / erosion during flood events. • Install scour protection as early as possible. • Look at predicting flood events from gauges or rainfall predictions. • Design and construct Project in accordance with CoA and SoC. • Ensure that waterway crossings are designed and constructed in a way that ensures they are stable even when overtopped.	C (Low)	SWMP EWMS Establish design for temporary waterway crossings.
		• Changes to flood levels – increased impact to receivers.	B (moderate)		C (Low)	
		• Stormwater inflow to site – clean stormwater getting mixed with dirty site water.	A (High)		B (moderate)	
		• Flood damage to plant / equipment / satellite compounds.	B (moderate)		C (Low)	
		• Erosion of haul/ access road during large flood events.	A (High)		B (moderate)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
Spoil and Fill	• Cuts. • Fill areas. • Borrow pits. • Quarries. • Haulage of spoil and fill. • Stockpiling. • Spoil areas.	• Demand on local resources – local quarries / suppliers.	B (moderate)	• Design for balanced earthworks. • Refer to mitigation measures stated in the Air Quality (Dust) row above and Traffic and Transport Management row below. • Off site spoil movements to be monitored and tracked on the site waste disposal register as per the EPA guidelines, including characterisation of the spoil to determine correct disposal locations and volumes. • Spoil to be beneficially reused, on or off site, where applicable and meeting environmental requirements. Includes reuse of excavated material, either as fill, or as earth mounds for noise control, or beautification, shielding or revegetation mounds on site. • All loads accessing public roads to be covered to prevent any loss of material, which may cause driver safety issues. • Only locate stockpiles in accordance with criteria in CEMP. • Implement appropriate procedures to identify, contain, handle and management contaminated material. • Classify and dispose of any contaminated land in accordance with EPA guidelines.	C (Low)	SWMP EWMS AQMP CEMP Unexpected Discovery of Contaminated Land Procedure
		• ERSED issues from cuts / batters / stockpiles.	A (High)		B (moderate)	
		• Sensitive area damage from stockpiling.	A (High)		B (moderate)	
		• Disturbance on unidentified contaminated land eg historical agricultural practice such as tick dips.	B (moderate)		C (Low)	
		• Exposing acid sulphate soils or potential acid	A (High)	• Minimise time of exposure of ASS and PASS. • Clearing and grubbing to be minimised in areas of	B (moderate)	EWMS SWMP

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
		sulfate soils.		expected ASS and PASS. • RMS Acid Sulfate Soil Chance Find Procedure and Treatment of Acid Sulfate Soil Procedure.		ASS Chance Find Procedure Treatment of ASS Procedure
Waste Management	• Generation of waste during construction activities including building materials, excess unsuitable spoil material, vegetation material.	• Excessive waste being directed to landfill.	B (moderate)	• Apply waste hierarchy principles – avoid-reduce-reuse-recycle. • Waste materials contained in waste bins or other suitable containers, and collected for recycling, reuse or disposal by the licensed waste contractor. • Separate, contain, manage and dispose contaminated waste to prevent migration and further contamination whilst maintaining compliance with EPA requirements. • Label and store all liquid waste containers in a bunded area prior to removal off-site. • Undertake inspections of the worksite and waste storage areas to ensure litter / debris is regularly cleaned up and contained on site. • Establish recycling system early on in Project. • Establish good segregation areas for concrete and waste concrete is not to be transported off site for land disposal. • Section 143 Notices Under the PoEO Act and provision of a letter to landholder highlighting the need for a “s.143 Notice”, the Contractor’s role and the respective roles of the RMS and the landholder in	C (Low)	WEMP EWMS Waste reporting register
		• Incorrect disposal of contaminated waste. • Not meeting POEO VENM, ENM and mulch requirements.	• A (High)		B (moderate)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
				ensuring that the waste is appropriately managed. • Consider types of waste, how each waste type will be used as a beneficial use and address in the approvals that no other type of waste will be used.		
Energy	• Extraction / processing / transportation of materials. • Fuel and energy use. • Vegetation removal.	• Excess energy consumption and greenhouse gas generation during construction	• A (High)	• Use local material and personnel where possible to reduce transport emissions. • Restrict vegetation clearance to the minimum required. • Conduct energy audits during the project to identify and address energy waste.	B (moderate)	EWMS FFMP / Vegetation Clearing Procedure Equipment maintenance procedures. Induction
Traffic and transport	• Haulage of material. • Import of material / plant / equipment. • Travel to / from site.	• Accidents - Safety of commuters, pedestrians, cyclists, contractors and subcontractors. • Delays	• A (High)	• 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.	B (moderate)	TMP EWMS Induction

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
Visual Impact, Land-scaping and Rehabilitation	• Cuttings and cut finishes. • Bridge design Revegetation / landscaping. • Removal of visually prominent native vegetation. • Evening / night works. • Rehabilitation of disturbed land.	• General public aesthetic impacts	B (moderate)	• 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 view scapes. • 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 Management Plan. • Monitoring and weed control.	C (Low)	UDLMP EWMS
		• Heritage related visual.	A (High)		B (moderate)	
General Environmental Management	• Environmental management / supervision. • Incident response.	Non-compliance with CEMP, SoC, MCoA, legislative requirement.	A (High)	• Ensure all environmental personnel are trained in the CEMP and all associated documents. • EO / EM diligence in including requirements from CEMP and procedures into EWMS and training. • Regular review of environmental management documents.	B (moderate)	CEMP Procedures RMS Incident Management Guidelines/ procedures EWMS
		Failure to follow requirements of strategies / procedures.	A (High)		B (moderate)	

Issue	Construction activity / aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures (to be considered and where applicable further developed in associated management documents)	Risk level following mitigation	Management Documents / Training Required
		Failure to report environmental issues.	A (High)	• Regular review of compliance with environmental management documents, SoC, CoA etc. • Regular environment team meetings. • Environmental Manager to be involved in design and construction meetings. • Training in environmental emergency response. • Ensure NCR process is followed.	B (moderate)	Compliance Tracking Program Internal / external audits
		Inconsistent advice to construction personnel.	B (moderate)		C (Low)	
		Inadequate response to environmental incident/ emergency.	A (High)		B (moderate)	
Socio-economic	All stages of construction	Temporary restricted access to properties due to construction works.	B (moderate)	• Maintain access or provide alternative access to individual landholdings at all times. • Ensure that there is constant access to business through the utilisation of service roads.	C (Low)	TMP

APPENDIX A3 - ENVIRONMENTAL POLICY

McConnell Dowell OHL Joint Venture

ENVIRONMENTAL POLICY

The McConnell Dowell & Obrascon Huarte Lain SA (OHL) Joint Venture is delivering the Kundabung to Kempsey (K2K) Pacific Highway Upgrade Project for Roads and Maritime Services.

The McConnell Dowell – OHL Joint Venture is committed to protecting the environment and keeping environmental impacts as low as reasonably practicable. Our goals include the prevention of pollution and other adverse environmental impacts, efficient and sustainable use of resources, and recycling of materials where possible. The Joint Venture will provide the necessary resources and management support to achieve the Projects goals.

The Joint Venture is committed to achieving a sustainable and environmentally sensitive outcome and will:

- Provide visible and demonstrated leadership from the McConnell Dowell – OHL Joint Venture Management Team.
- Comply with all legal and other requirements applicable to the Kundabung to Kempsey Pacific Highway Upgrade Project.
- Support the Principles of Ecologically Sustainable Development as detailed in the Protection of Environment Administration Act 1991 (NSW).
- Maintain an Environmental Management System that meets the requirements of AS/NZS ISO 14001 Environmental Management Systems for the duration of the Project.
- Regularly monitor and undertake audits of environmental performance.
- Identify potential environmental impacts, risks and sensitivities and develop and implement the best applicable environmental protection, mitigation and management strategies.
- Establish environmental targets and continuously monitor and improve our environmental performance through a program of on-going training, auditing and review.
- Communicate openly and transparently with key stakeholders on environmental and sustainability matters.
- Establish and maintain a positive working relationship with the client, stakeholders and Project Environmental Review Group (ERG).
- Consult and communicate with employees, contractors and the local Kundabung, Kempsey and surrounding communities.
- Establish measurable objectives and targets to quantify our environmental performance and demonstrate continual improvement.
- Create an environmentally aware culture based on our Zero Harm philosophy where everyone accepts accountability for their actions and care for the environment is integrated into the responsibilities and work ethic of personnel.
- Clearly define responsibilities and accountabilities for employees and contractors.
- Include environmental performance criteria in the procurement process and ensure all contractors and sub-contractors to conform to these criteria.

This policy provides a framework for setting and reviewing environmental objectives and targets for the Kundabung to Kempsey Pacific Highway Upgrade Project. It will be reviewed on a regular basis during the duration of the Project and will be communicated to all Joint Venture employees, contractors and suppliers.

Signed

David Harper

Ana Lopez-Tulloch

Charles Hall

Antonio Jane Rodriguez

010-B003-2602 Rev 0 May 2014

APPENDIX A4 – SITE COMPOUND AND ANCILLARY FACILITIES ASSESSMENT

Notes: Within the table Y = Yes, satisfies environmental protection requirements; N = no, does not satisfy environmental protection requirement, some further mitigation required.

Reference Number	Location (Chainage)	Purpose	a) Be located more than 50 metres from a waterway.	b) Have ready access to the road network or direct access to the construction corridor.	c) Be located in areas of low ecological significance and require minimal clearing of native vegetation (not beyond that already required by the project).	d) Be located on relatively level land.	e) Be separated from the nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant).
Lot 71 DP705896	Ch 29,600 West	Storage (RMS Motel Site)	Y. The site is located more than 50m from a waterway.	Y. The site has direct access to the local road network	Y. Located in an area of low ecological significance.	Y. Located in an area of relatively level land.	N. Located within 200m of the nearest residences.
Lot 72 DP62/703051	Ch 28,300 – 29,200 East	Site compound, plant yard, service area, batch plant	Y. The site is located more than 50m from Smiths Creek.	Y. The site has direct access to the construction corridor.	Y. Located in an area of low ecological significance.	Y. Located in an area of relatively level land.	N. Located within 200m of the nearest residences.
Lot 64 DP1012/862894	Ch 26,500 – 27,200 West	Batch Plant	Y. The site is located more than 50m from a waterway.	Y. The site has direct access to the construction corridor.	Y. Located in an area of low ecological significance	Y. Located in an area of relatively level land.	N. Located within 200m of the nearest residences.
N/A	Smiths Creek	Site shed and portaloo	The exact site for this facility has not yet been determined. Further assessment will be undertaken to determine compliance with the criteria.				
N/A	Pipers Creek	Site shed and portaloo	The exact site for this facility has not yet been determined. Further assessment will be undertaken to determine compliance with the criteria.				
N/A	Stumpy Creek	Site shed and portaloo	The exact site for this facility has not yet been determined. Further assessment will be undertaken to determine compliance with the criteria.				
N/A	Ch. 28650	Early Works Office	Y, an unnamed drainage line is approximately 55m to the north, and the nearest waterway, Smiths Creek is located 300m to the south.	Y. The site has direct access to the road network.	Y. No clearing would be required for the proposed office complex.	Y. Located in an area of relatively level land.	Y. The proposed site office is approximately 300m from the nearest residences.

Reference Number	Location (Chainage)	Purpose	f) Not unreasonably affect the land use of adjacent properties	g) Be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented.	h) Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.	i) Be located in areas of low heritage conservation significance (including identified Aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the project.	Is criteria met?	Mitigation measures?
Lot 71 DP705896	Ch 29,600 West	Storage	Y. The site will not unreasonably affect adjacent land owners.	Y. The site is located about the 20 year ARI.	Y. The site will provide sufficient storage area.	Y. The site will be located in an area of low heritage significance.	N. One of the criteria is not met, however this site was approved by the Director-General on 1 May 2014, and as such, further approval is not required if the site is consistent with this approval.	EWMS for site establishment Where required, adjacent affected individuals will be consulted directly and provided with targeted notifications regarding the use of the proposed ancillary facilities.
Lot 72 DP62/703051	Ch 28,300 – 29,200 East	Site compound, plant yard, service area, batch plant	Y. The site will not unreasonably affect adjacent land owners.	Y. The site is located about the 20 year ARI.	Y. The site will provide sufficient storage area.	Y. The site will be located in an area of low heritage significance.	N. One of the criteria is not met, therefore Director-General approval would be required.	EWMS for site establishment Where required, adjacent affected individuals will be consulted directly and provided with targeted notifications regarding the use of the proposed ancillary facilities.
Lot 64 DP1012/862894	Ch 26,500 – 27,200 West	Batch Plant	Y. The site will not unreasonably affect adjacent land owners.	Y. The site is located about the 20 year ARI.	Y. The site will provide sufficient storage area.	Y. The site will be located in an area of low heritage significance.	N. One of the criteria is not met, therefore Director-General approval would be required.	EWMS for site establishment Where required, adjacent affected individuals will be consulted directly and provided with targeted notifications

Reference Number	Location (Chainage)	Purpose	f) Not unreasonably affect the land use of adjacent properties	g) Be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented.	h) Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.	i) Be located in areas of low heritage conservation significance (including identified Aboriginal cultural value) and not impact on heritage sites beyond those already impacted by the project.	Is criteria met?	Mitigation measures?
								regarding the use of the proposed ancillary facilities.
N/A	Smiths Creek	Site shed and portaloo	The exact site for this facility has not yet been determined. Further assessment will be undertaken to determine compliance with the criteria.					
N/A	Pipers Creek	Site shed and portaloo	The exact site for this facility has not yet been determined. Further assessment will be undertaken to determine compliance with the criteria.					
N/A	Stumpy Creek	Site shed and portaloo	The exact site for this facility has not yet been determined. Further assessment will be undertaken to determine compliance with the criteria.					
N/A	Ch. 28650	Early Works Office	Y	Y the site is above the 1 in 20 year ARI.	N/A. Materials storage is not proposed, the site is proposed as an office only.	Y. no known heritage sites are located in the vicinity of the proposed site office.	Y. Approval to be sought with Project ER / RMS.	EEC located on the property will be fenced to ensure no impacts. No clearing or construction activities required.

APPENDIX A5 – DOCUMENT REGISTER

Environmental Management Document	Purpose	Document no.	Document Title	Approvals/ Requirements
Environmental Policy	Policy	QMS# 010-B003-2602	Environmental Policy	RMS
Construction Environmental Management Plan	• Policy • Legal and other requirements • Risk assessment Objectives and Targets • Roles and responsibilities • Communication and training • Monitoring, auditing and reporting • Corrective action • Management review • Management actions	QMS# 025-Y001-2602	Oxley Highway to Kempsey Construction Environmental Management Plan	Director-General, DPE
Environmental Management Sub-Plans	• Objectives and Targets • Roles and responsibilities • Legal and other requirements • Training • Monitoring, auditing and reporting	QMS# 600-Y006-2602	Construction traffic management sub-plan	DPE
		QMS# 025-Y003-2602	Construction flora and fauna management sub-plan	DPE, DoE
		QMS# 025-Y007-2602	Construction noise and vibration management sub-plan	DPE

Environmental Management Document	Purpose	Document no.	Document Title	Approvals/ Requirements
	• Management actions	QMS# 025-Y008-2602	Construction soil and water quality management sub-plan	DPE
		QMS# 025-Y006-2602	Construction heritage management sub-plan	DPE
		QMS# 025-Y002-2602	Construction air quality management sub-plan	Roads and Maritime
		QMS# 025-Y009-2602	Construction waste and energy management sub-plan	Roads and Maritime
Urban design and landscape management	• Objectives • Materials • Methodology	**TO BE CONFIRMED**	Urban Design and Landscaping Plan	Director-General, DPE
Compliance tracking program	• Compliance status • Auditing • Recording and reporting	**TO BE CONFIRMED**	Compliance tracking program	Director-General, DPE
Environmental forms and checklists	• Monitoring and auditing • Recording and reporting	**TO BE CONFIRMED**	Rainfall Inspection Checklist	Construction Manager
		QMS# 025-F002-2602	Site Environmental Weekly Checklist	
Environmental procedures	• Operational controls and instructions	MMS# 000-D004-000	Compliance with Legal and other Requirements Register	Construction Manager
		QMS# 030-Y010-2602	Complaints and Enquiries Procedure	

Environmental Management Document	Purpose	Document no.	Document Title	Approvals/ Requirements
		QMS# 020-Y006-2602	Emergency Incident Response Management Plan and Procedure	
Environmental work method statements	• Management measures • Operational controls	QMS# 025-X011-2602	EWMS Working platforms in or adjacent to waterways	Roads and Maritime Project Environmental Representative ERG (High Risk) Construction Manager
		QMS# 025-X007-2602	EWMS Temporary Waterway Crossings	
		QMS# 025-X003-2602	EWMS Site compound establishment	
		QMS# 025-X010-2602	EWMS Public road access and managing mud tracking	
		QMS# 025-X009-2602	EWMS Batch plant establishment and operation	
		QMS# 025-X014-2602	EWMS Wet Road Construction Activities Management	
		QMS# 025-X005-2602	EWMS Clearing and Grubbing	
		QMS# 025-X004-2602	EWMS Sediment basin design, construction and management	

Environmental Management Document	Purpose	Document no.	Document Title	Approvals/ Requirements
		QMS# 025-X008-2602	EWMS Dewatering	
		QMS# 025-X012-2602	EWMS Piling	
		QMS# 025-X013-2602	EWMS Blasting	
		QMS# 025-X015-2602	EWMS Water extraction procedure	

APPENDIX A6 – SENSITIVE AREA PLANS

Refer to Sensitive Area Plans

- QMS# 025-Z002-2602 App A6
- QMS# 025-Z003-2602 App A6
- QMS# 025-Z004-2602 App A6
- QMS# 025-Z005-2602 App A6
- QMS# 025-Z006-2602 App A6
- QMS# 025-Z007-2602 App A6
- QMS# 025-Z008-2602 App A6
- QMS# 025-Z009-2602 App A6

APPENDIX A7 – ROADS AND MARITIME ENVIRONMENTAL INCIDENT CLASSIFICATION AND REPORTING

Refer to Roads and Maritime Environment Incident Classification and Reporting Procedure (QMS # 025-E017-2602).

APPENDIX B1 – CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Refer to Construction Traffic Management Sub-Plan (QMS # 600–Y006–2602).

APPENDIX B2 – CONSTRUCTION FLORA AND FAUNA MANAGEMENT SUB PLAN

Refer to Construction Flora and Fauna Management Sub-Plan (QMS # 025–Y003–2602).

APPENDIX B3 – CONSTRUCTION NOISE AND VIBRATION MANAGEMENT SUB PLAN

Refer to Construction Noise and Vibration Management Sub-Plan (QMS # 025–Y007–2602).

APPENDIX B4 – CONSTRUCTION SOIL AND WATER QUALITY MANAGEMENT SUB PLAN

Refer to Construction Soil and Water Quality Management Sub-Plan (QMS # 025–Y008–2602).

APPENDIX B5 – CONSTRUCTION HERITAGE MANAGEMENT SUB PLAN

Refer to Construction Heritage Management Sub-Plan (QMS # 025–Y006–2602).

APPENDIX B6 – CONSTRUCTION AIR QUALITY MANAGEMENT SUB PLAN

Refer to Construction Air Quality Management Sub-Plan (QMS # 025–Y002–2602).

APPENDIX B7 – CONSTRUCTION WASTE AND ENERGY MANAGEMENT SUB PLAN

Refer to Construction Waste and Energy Management Sub-Plan (QMS # 025–Y009–2602).