



Transport
Roads & Maritime
Services

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Stage 2 of Foxground and Berry bypass

September 2017



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Contents

1	Introduction	1
1.1	Background.....	1
1.2	Purpose of this CEMP	1
1.3	Environmental management documentation.....	4
1.4	Consultation	6
1.5	CEMP approval.....	6
1.6	Distribution	7
1.7	Revision	7
2	Project Overview	9
2.1	General features	9
2.2	Staging and Program	12
2.3	Construction activities and sequencing.....	12
2.4	Ancillary facilities.....	13
2.5	Location and management of stockpiles.....	14
3	Planning.....	16
3.1	Project environmental obligations	16
3.2	Legal and other requirements.....	16
3.3	Approvals, permits and licensing	16
3.4	Environmental policy	16
3.5	Environmental aspects, impacts and risk assessment.....	17
3.6	Objectives and targets	17
3.7	Project modifications and refinements	18
4	Implementation and operation.....	19
4.1	Resources, roles, responsibilities and authority	19
4.2	Sub-contractor management	24
5	Competence, training and awareness	25
5.1	Environmental induction	25
5.2	Toolbox talks, training and awareness.....	25
5.3	Daily pre-start meetings	26
6	Communication	27
6.1	Internal communication	27
6.2	Communication with relevant agencies and authorities	27
6.3	Stakeholder and community communication	28
7	Incidents and emergencies	30
8	Inspections, monitoring and auditing	31
8.1	Environmental inspections.....	31
8.2	Environmental monitoring.....	31
8.3	Compliance tracking program.....	32

8.4	Auditing and reporting	32
8.5	Non-conformity, corrective and preventative actions.....	33
9	Review and improvement.....	34
10	Documentation.....	34
10.1	Environmental records	34
10.2	Document control.....	35

Tables

Table 1-1	CEMP requirements (CoA B35).....	2
Table 1-2	Environmental management sub-plans.....	4
Table 2-1	Construction activities and sequencing	12
Table 2-2	Infrastructure for minor ancillary facilities	14
Table 3-1	Environmental objectives and targets	17

Figures

Figure 1-1	Environmental management documentation.....	4
Figure 2-1	Foxground and Berry Bypass Project	11
Figure 2-2	Indicative program of construction works	12
Figure 4-1	Project Environmental Management Structure	19

Appendices

Appendix A1	Legal and other requirements
Appendix A2	Stakeholder and agency CEMP consultation
Appendix A3	Environmental aspects, impacts and risk assessment
Appendix A4	Environmental policy
Appendix A5	Ancillary facilities assessment
Appendix A6	Sensitive Area Plans
Appendix A7	Environmental Incident Classification and Reporting Procedure
Appendix A8	Environmental inspection checklist

Sub-Plans

Appendix B1	Construction Traffic Management Sub-plan
Appendix B2	Construction Flora and Fauna Management Sub-plan
Appendix B3	Construction Noise and Vibration Management Sub-plan
Appendix B4	Construction Soil and Water Quality Management Sub-plan
Appendix B5	Construction Heritage Management Sub-plan
Appendix B6	Construction Air Quality Management Sub-plan
Appendix B7	Construction Waste and Energy Management Sub-plan

Glossary / Abbreviations

AFG	Aboriginal Focus Group
Ancillary facility	Defined by the Project Approval 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'.
ASS	Acid Sulfate Soils
CAMs	Case and Action Management system
CCS	Community Communication Strategy
CEMP	Construction Environmental Management Plan
Compliance audit	Verification of how implementation is proceeding with respect to a construction environmental management plan (CEMP) (which incorporates the relevant approval conditions).
CoA	Conditions of Approval
Consultation Manager	A stakeholder data management software package
Director General (DG)	Director General of the NSW Department of Planning and Infrastructure (or delegate). Now the Secretary of the Department of Planning and Environment.
DPI	The NSW Department of Primary Industries now part of NSW Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS)
DP&E	Department of Planning and Environment
DP&I	Department of Planning & Infrastructure
DTIRIS	Department of Trade and Investment, Regional Infrastructure and Services
EA	Environmental Assessment
ESA	Environmentally Sensitive Area
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).
EPA	NSW Environment Protection Authority
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 (ER)	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	<i>Environmental Planning and Assessment Act 1979</i>
EPL	Environment Protection Licence
EWMS	Environmental Work Method Statement
FBB	Foxground and Berry Bypass
Minister, the	Minister for Planning and Environment (formerly Minister for Planning and Infrastructure)
NA	Not applicable
Non-compliance	Failure to comply with the requirements of the Project approval or any applicable license, permit or legal requirements.
Non-conformance	Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation.
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
PESCP	Progressive Erosion and Sediment Control Plans
PIN	Penalty Infringement Notice
Project, the	Stage 2 of the Foxground and Berry Bypass (FBB) Project, where the Princes Highway Upgrade - Foxground and Berry Bypass Project is defined as “ <i>The construction and operation of approximately 11.6 kilometres of two lane divided carriageways (with the exception of the cutting through Toolijooa Ridge which comprises two lanes plus a climbing lane in each direction), with provisions for the possible future widening to three lanes within the road corridor (if required in the future).</i> ”
Project Approval, the	The written approval <i>under Section 75J of the Environmental Planning & Assessment Act 1979</i> from the Minister for Planning and Infrastructure for the project dated 22 July 2013
RMS	Roads and Maritime Services
Secretary	Secretary of the Department of Planning & Environment
SoC	Statement of Commitments
TRFW	Toolijooa Road Fill Works

1 Introduction

1.1 Background

The Roads and Maritime Services (RMS) is upgrading the Princes Highway to provide a four lane divided highway between Waterfall and Jervis Bay Road, Falls Creek.

In September 2010 the Foxground and Berry Bypass project (the Project) was declared by the Minister for Planning to be a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* applies. An Environmental Assessment was prepared and placed on public exhibition in November – December 2012. The Submissions Report, which included changes to the proposal made following consideration of submissions made during the exhibition period, was submitted to the Minister for Planning and Infrastructure in May 2013. Approval of the Project was granted by the Minister on 22 July 2013.

The Project comprises an upgrade of 11.6 kilometres of the Princes Highway between Toolijooa Road north of Foxground and Schofields Lane south of Berry to achieve a four lane divided road (two lanes in each direction) with median separation. It includes bypasses of the towns of Foxground and Berry. The Project will be delivered under a design and construct (D&C) contract. A description of the Project is provided in Chapter 2.

The Project is comprised of two stages:

- Stage 1 - Toolijooa Road Fill Works (TRFW), and
- Stage 2 - remainder of the Project works.

Stage 1 (TRFW) was constructed under a CEMP approved by the Director-General of the DP&I on 31 January 2014 as a separate package of works from Stage 2 and is scheduled to be completed in June 2014. Stage 1 involved filling works to support the realignment of the Princes Highway at the extreme eastern end of the Project, between Mount Pleasant and Toolijooa Road. Stage 2 will involve the remainder of the Project's construction works, including building on the engineered fill established during Stage 1, to bring the new road platform to its ultimate design height.

This Construction Environmental Management Plan (CEMP) addresses Stage 2 of the Project.

1.2 Purpose of this CEMP

This CEMP and sub-plans have been prepared to comply with the Minister's Conditions of Approval (CoA). A description of the Project is provided in Chapter 2.

It has been prepared in accordance with:

- the *Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004)
- the Project Approval
- RMS QA Specification G36, and
- AS/NZS ISO 14001.

The purpose of this CEMP is to provide a structured approach to the management of environmental issues during construction of the Project. Implementing this CEMP will ensure that the Project meets regulatory and policy requirements, including RMS requirements and the Minister's Project Approval, in a systematic manner. In particular, this CEMP:

- describes the Project in detail, including activities to be undertaken and relative timing
- provides specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impacts

- provides specific mechanisms for compliance with applicable policies, approvals, licences, permits, consultation agreements and legislation
- describes the environmental management related roles and responsibilities of personnel
- states objectives and targets for issues that are important to the environmental performance of the Project, and
- outlines a monitoring regime to check the adequacy of controls as they are implemented during construction.

The CEMP addresses the requirements of Condition of Approval (CoA) B35. The requirements of this condition and where they are met in this CEMP are shown in Table 1-1.

Table 1-1 CEMP requirements (CoA B35)

CoA no.	Requirement	Reference
B35	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 CEMP, Appendices and Sub-Plans Appendix A2
(a)	A description of activities to be undertaken during construction of the project or stages of construction, as relevant.	Chapter 2
(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.	Appendix A1, Appendix A2, Compliance Tracking Program
(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.	Chapter 4 Chapter 5
(d)	Identification of ancillary facility site locations, including an assessment against the location criteria outlined in condition C32.	Section 2.4, Appendix A5
(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 Princes Highway Upgrade projects, as relevant). In particular, the following environmental performance issues shall be addressed in the Plan:	Section 3.5, Appendix A3 Chapter 7 Chapter 8 Sub-Plans
	(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,	Appendix A5 Appendix A3.

CoA no.	Requirement	Reference
(iv)	measures for the handling, treatment and management of contaminated materials,	Appendices B4 & B7
(v)	measures to monitor and manage waste generated during construction including but not necessarily limited to: <ul style="list-style-type: none"> - 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 OEH;	Appendix B4
(vii)	measures to monitor and manage hazard and risks including emergency management; and	Chapter 7, Chapter 8, Appendix A3, CCS Section 8.2
(viii)	the issues identified in condition B36;	Appendix B1 CTMP Appendix B2 CFFMP Appendix B3 CNVMP Appendix B4 CSWQMP Appendix B5 CHMP
(f)	Details of community involvement and complaints handling procedures during construction, consistent with the requirements of conditions B30 to B33.	Section 6.3 Community Communication Strategy (CCS) CoA B30 – CCS Section 7.2 CoA B31 – CCS Section 7.2 and 8.2. CoA B32 – CCS Section 5.2, 7.2 and 8.2
(g)	Details of compliance and incident management consistent with the requirements of condition B29.	Chapters 7 & 8 Compliance Tracking Program
(h)	Procedures for the periodic review and update of the Construction Environmental Management Plan and sub plans required under condition B35 and B36 respectively, as necessary (including where minor changes can be approved by the Environmental Representative).	Section 1.7 Chapter 9
	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 1.5

1.3 Environmental management documentation

This CEMP is the overarching management plan for a suite of environmental management documents for the Project as shown in Figure 1-1 below.

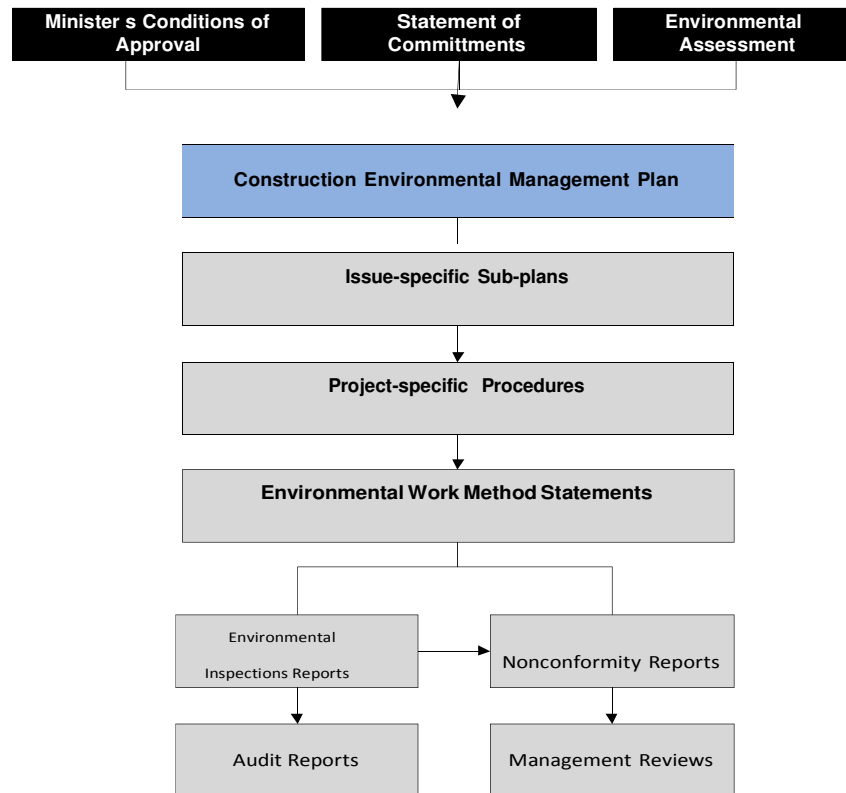


Figure 1-1 Environmental management documentation

1.3.1 Environmental management sub-plans

A number of environmental management sub-plans and other documents support this CEMP. These documents address requirements of the Project Approval, SoCs and other measures identified in the environment assessment documentation.

A list of construction sub-plans and other documents for the Project is provided in Table 1-2 below.

Table 1-2 Environmental management sub-plans

CoA	Document name
B29	Compliance Tracking Program
B36(a)	Construction Traffic Management Sub-plan
B36(b)	Construction Flora and Fauna Management Sub-plan
B36(c)	Construction Noise and Vibration Management Sub-plan
B36(d) B35(e)(ii), (iv) and (vi)	Construction Soil and Water Quality Management Sub-plan including groundwater management strategy, hydrology, stockpile management, contaminated land management procedures.
B36(e)	Construction Heritage Management Sub-plan
B35(e)(i)	Construction Air Quality Management Sub-plan

CoA	Document name
B35(e)(v)	Construction Waste and Energy Management Sub-plan
B23	Urban Design and Landscape Plan
B33	Community Communication Strategy

1.3.2 Environmental work method statements

Environmental work method statements (EWMS) are prepared to manage and control high-risk construction activities that have the potential to adversely impact on the environment. EWMS will be prepared prior to the commencement of particular construction activities, i.e. works in waterways, on site and will incorporate area-specific mitigation measures and controls. EWMS will be prepared progressively in the lead up to and throughout construction in consultation with RMS and relevant agencies, and approved by the Environment Manager.

EWMS for activities which may be considered high environmental risk include:

- working platforms in or adjacent to waterways
- temporary waterway crossings
- site compound establishment
- public road accesses and managing mud tracking
- managing runoff from curing processes
- clearing and grubbing
- sediment basin design, construction and management, and
- dewatering.

All construction personnel and sub-contractors will be trained in the relevant EWMS, and will 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 the Environmental Manager.

1.3.3 Progressive erosion and sediment control plans

Progressive Erosion and Sediment Control Plans (PESCPs) are used to identify the approximate location of erosion and sediment control structures within the Project site. They are produced for construction stages from initial vegetation clearing to rehabilitation, when erosion and sediment controls are no longer required and are removed. PESCPs will be developed in accordance with the requirements of CoA C20 and implemented prior to commencing activities at all works areas 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 the Project Engineers and reviewed and approved by the Environmental Manager. They will be reviewed and revised regularly to reflect the changing site conditions.

1.3.4 Sensitive Area Plans

The Project traverses environmentally and socially sensitive areas. To assist pre-construction planning and on-site construction management, these areas are consolidated on series of map-based sheets that extend the length of the Project. Sensitive Area Plans will include the following information where relevant:

- construction boundary/footprint of the Project following pre-construction/pre-clearing survey (CoA B36(b)(ii))
- vegetation to be cleared following pre-construction/pre-clearing survey (CoA B36(b)(ii))
- sensitive receivers, e.g. residential dwellings, educational institutions
- flora features, including threatened species and endangered ecological communities
- fauna corridors
- Aboriginal and non-Aboriginal heritage sites identified to be conserved
- local waterways, and
- contaminated land.

The Sensitive Area Plans are included in Appendix A6.

1.3.5 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.

1.4 Consultation

In accordance with the requirements of the Project Approval, consultation with the designated stakeholders and agencies was undertaken during the development of this CEMP and sub plans. The agencies and stakeholders consulted include:

- Department of Primary Industries (DPI) (Fishing and Aquaculture)
- Environment Protection Authority (EPA)
- Heritage Council of NSW
- Kiama Municipal Council
- Shoalhaven City Council
- Office of Environment and Heritage (OEH)
- Office of Environment and Heritage – Aboriginal heritage
- NSW Office of Water (NOW), and
- Registered Aboriginal Stakeholders

The main comments and issues raised during this consultation are provided in Appendix A2.

Consultation will continue throughout the construction of the Project with relevant stakeholders and agencies. Where relevant, the outcomes of this consultation will be documented in subsequent revisions of the CEMP.

1.5 CEMP approval

This CEMP must be endorsed by the RMS Project Manager and the RMS Environment Representative prior to submission to the Secretary of the Department of Planning & Environment.

Submission of the CEMP for the approval of the Secretary is required no later than one month prior to the commencement of construction or as otherwise agreed by the Secretary. Construction will not commence until written approval of the CEMP has been received from the Secretary.

The sub plans prepared under CoA B36 also require approval by the Secretary prior to commencement of construction. Further explanation and details of these documents are provided in Section 1.3.

1.6 Distribution

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

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
- Community Relations Manager
- RMS Representative, and
- RMS Environment Representative.

1.7 Revision

A document review process will be implemented to ensure that environmental documentation, including this CEMP and sub plans, are updated as appropriate for the specific works that are occurring on-site. This includes the management review process described in Chapter 9. Reviews will be undertaken as a result of any of the following:

- when there is a change in the scope of the Project that requires a change in environmental controls
- when there is a need to improve performance in an area of environmental impact
- at the completion of environmental audits as required, and
- as a result of changes in environmental legislation applicable and relevant to the Project.

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

The revised document will then be issued to the Project Manager and the Environmental Representative for certification of the changes. The Environmental Representative can approve minor changes to the CEMP including 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, or
- do not compromise the ability of the Project to meet approval or legislative requirements.

Where the Environmental Representative deems it necessary, the amended CEMP will be forwarded to the Secretary of the DP&E for approval. The amended CEMP will be provided to the RMS Representative.

Each revision of the CNVMP, no matter how minor, will be provided to the EPA.

Revised versions of the CEMP will be made available through the process described in Section 1.6.

2 Project Overview

2.1 General features

Figure 2-1 provides an overview of the FBB Project. The Project, as described in the environmental assessment, comprises the following key features:

- construction of a four lane divided highway (two lanes in each direction) with median separation
- bypasses of the Foxground bends and the Berry township
- construction of around 6.6 kilometres of new highway where the Project deviates from the existing highway alignment at Toolijooa Ridge, the Foxground bends and the Berry township
- provision for the possible widening of the highway (if required in the future) to six lanes within the road corridor and, in some areas, construction of the road formation to accommodate future additional lanes where safety considerations, traffic disruption and sub-optimal construction practices are to be avoided
- grade-separated interchanges at:
 - Toolijooa Road
 - Austral Park Road
 - Tindalls Lane
 - east of Berry at the existing Princes Highway, referred to as the northern interchange for Berry
 - west of Berry at Kangaroo Valley Road, referred to as the southern interchange for Berry.
- a major cutting at Toolijooa Ridge (around 900 metres long and up to 26 metres deep)
- six lanes (two lanes plus a climbing lane in each direction) through the cutting at Toolijooa Ridge for a distance of 1.5 kilometres
- four new highway bridges at:
 - Broughton Creek bridge 1
 - Broughton Creek bridge 2
 - Broughton Creek bridge 3
 - Berry
- three highway overbridges:
 - Austral Park Road interchange, providing southbound access to the highway
 - Tindalls Lane interchange, providing southbound access to and from the highway
 - Southern interchange for Berry, providing connectivity over the highway for Kangaroo Valley Road along its existing alignment.
- eight underpasses including roads, drainage structures and fauna underpasses
- modifications to local roads, including Toolijooa Road, Austral Park Road, Gembrook Lane, Tindalls Lane, North Street, Queen Street, Kangaroo Valley Road, Hitchcocks Lane and Schofields Lane
- diversion of Town Creek into Bundewallah Creek upstream of its confluence with Connollys Creek and to the north of the Project at Berry
- modification to about 47 existing property accesses
- provision of a bus stop at Toolijooa Road and retention of the existing bus stop at Tindalls Lane

- dedicated u-turn facilities at Mullers Lane, the existing highway at the Austral Park Road interchange, the extension to Austral Park Road, and Rawlings Lane
- roundabouts at the southern interchange for Berry and the Woodhill Mountain Road junction with the exiting Princes Highway
- two culs-de-sac on North Street and the western end of Victoria Street in Berry.
- tie-in with the existing highway about 75 metres north of Toolijooa Road and about 440 metres south of Schofields Lane
- left in/left out only provisions for direct property accesses to the upgraded highway.
- dedicated public space with shared pedestrian/cycle facilities along the southern side of the upgraded highway from the playing fields on North Street to Kangaroo Valley Road, and
- ancillary operational facilities, including permanent detention basins, stormwater treatment facilities and a permanent ancillary facility site for general road maintenance.

As a result of the community consultation during the display of the environmental assessment changes were made to the Project including a number of property access and boundary adjustments, road alignment optimisation, as well as:

- removal of turnaround facility on the Austral Park Road extension
- changed local road access arrangement for Gembrook Lane, opposite the Tindalls Lane interchange
- removal of retaining wall and reshaping of a constructed dam at the northern interchange for Berry.
- realignment of the Town Creek diversion
- Victoria Street to remain open with a two-way connection between Queen and Victoria streets and a southbound on-ramp south of Victoria Street, and
- modified Schofields Lane intersection with the provision of an underpass with connecting property accesses.

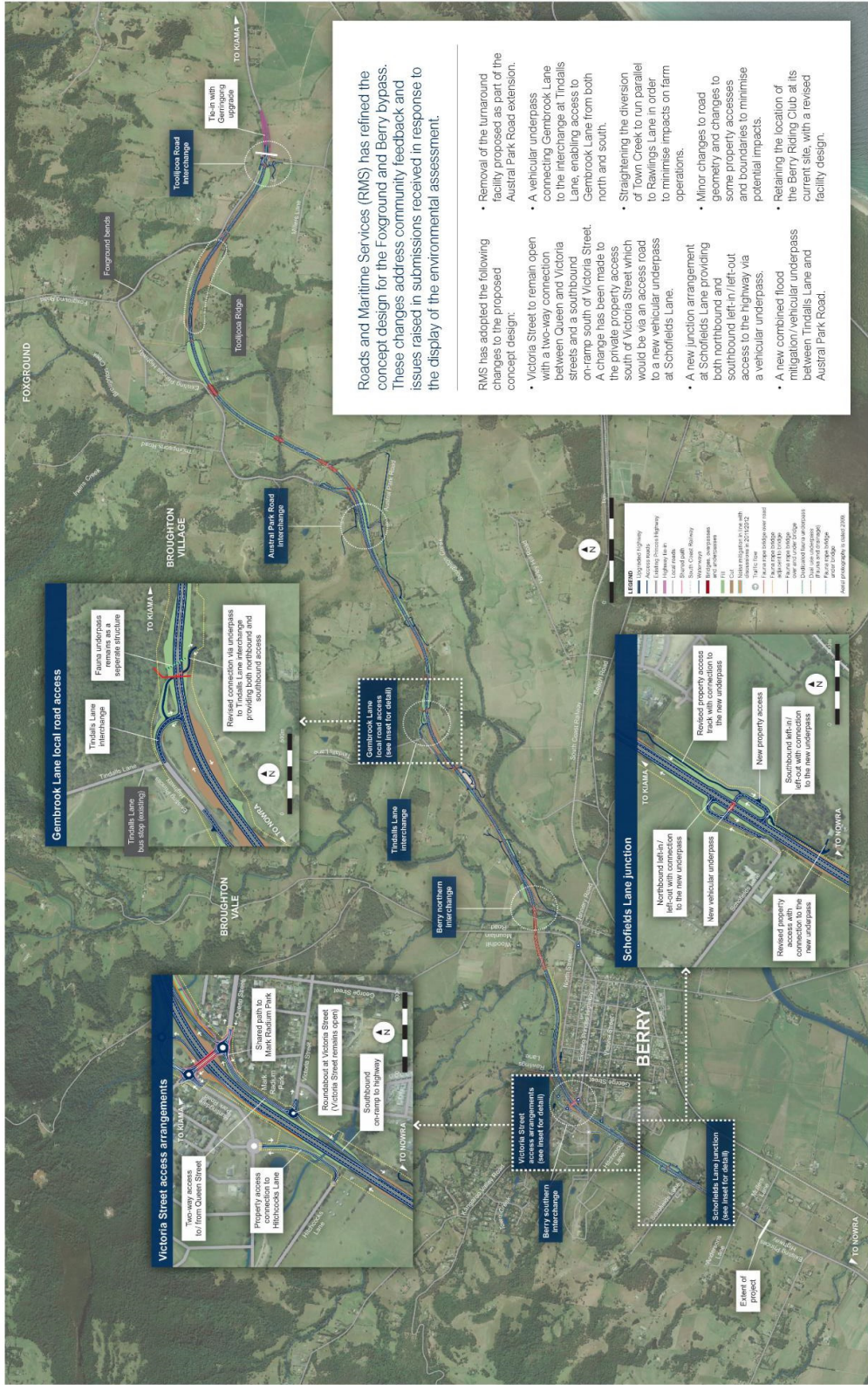


Figure 2-1 Foxground and Berry Bypass Project

Roads and Maritime Services (RMS) has refined the concept design for the Foxground and Berry bypass. These changes address community feedback and issues raised in submissions received in response to the display of the environmental assessment.

RMS has adopted the following changes to the proposed concept design:

- Removal of the turnaround facility proposed as part of the Austral Park Road extension.
- A vehicular underpass connecting Gembrook Lane to the interchange at Tindalls Lane, enabling access to Gembrook Lane from both north and south.
- Straightening the diversion of Town Creek to run parallel to Rawlings Lane in order to minimise impacts on farm operations.
- Minor changes to road geometry and changes to some property accesses and boundaries to minimise potential impacts.
- Retaining the location of the Berry Riding Club at its current site, with a revised facility design.

Victoria Street to remain open with a two-way connection between Queen and Victoria streets and a southbound on-ramp south of Victoria Street. A change has been made to the private property access south of Victoria Street which would be via an access road to a new vehicular underpass at Schofields Lane.

A new junction arrangement at Schofields Lane providing both northbound and southbound left-in/left-out access to the highway via a vehicular underpass.

A new combined flood mitigation/vehicular underpass between Tindalls Lane and Austral Park Road.

2.2 Staging and Program

In accordance with CoA A9 construction of the Project involves two stages:

- Stage 1 - Toolijooa Road Fill Works (TRFW); and
- Stage 2 - remainder of the FBB Project works.

As explained in Section 1.1, Stage 1 (TRFW) was constructed as a separate package of works to the rest of the FBB Project and was completed in March 2014. Construction activities and indicative sequencing for the remainder of the FBB Project works (Stage 2) to be constructed under this CEMP are provided in Section 2.3 below.

Stage 2 will be delivered in one stage, with construction commencing in 2014/15. An indicative program is provided in Figure 2-2 below.

Activity	2014	2015	2016	2017
Site establishment / site preparation				
Earthworks and drainage				
Relocation / protection of services				
Bridge construction				
Pavements				
Improvements to existing highway				
Finishing works / other works				

Figure 2-2 Indicative program of construction works

2.3 Construction activities and sequencing

The construction activities and indicative sequencing for the Project are provided in Table 2-1 below.

Table 2-1 Construction activities and sequencing

Component	Typical activities
Site establishment	<ul style="list-style-type: none"> • Fencing of the road corridor • Implementation of initial environmental safeguards • Establishment of construction site facilities and access • Additional surveys and geotechnical investigations, as required • Installation of temporary traffic controls and line marking • Pre-clearing vegetation fauna surveys
Site preparation	<ul style="list-style-type: none"> • Vegetation clearing and grubbing • Processing (including recycling) of various materials for use in fencing or landscaping activities • Installation of site sediment and erosion controls and pollution management measures • Stripping and stockpiling of topsoil for reuse • Construction of internal haulage and access routes • Adjustment of some property accesses • Construction of temporary creek crossing structures

Component	Typical activities
Relocation / protection of services	<ul style="list-style-type: none"> • Consultation with relevant service providers on service relocation • - Relocation or protection of services including electricity, gas, water and telecommunications infrastructure
Earthworks and bridge construction	<ul style="list-style-type: none"> • Earthworks, including blasting and movement of materials along the alignment from cutting to fill embankment areas • - Ground improvements for soft soils • - Batter treatments • - Bridge construction, including abutments and delivery of pre-cast elements and installation of piers
Drainage and fauna crossings	<ul style="list-style-type: none"> • Preparation of construction diversion drains and sediment ponds • - Construction of road drainage structures, including culvert extensions and permanent sediment basins
Pavements	<ul style="list-style-type: none"> • Construction of pavement layers including selected material, sub-surface drainage, sub-base and base layers and surfacing
Improvements to existing highway	<ul style="list-style-type: none"> • Earthworks • - Construction of pavement layers, including selected material, sub-surface drainage, sub-base and base layers and surfacing as required
Other works	<ul style="list-style-type: none"> • Installation of safety barriers, lighting, fencing and roadside furniture • Line marking and raised pavement markers • - Sign posting • - Landscaping • - Installation of noise barriers • - Relocation of property accesses
Finishing works	<ul style="list-style-type: none"> • Removal of temporary works • - Progressive rehabilitation of disturbed areas • - Restoration and landscaping of temporary sites • - Site clean-up and disposal of all surplus waste materials • - Decommission construction facilities and commissioning new road and related infrastructure

2.4 Ancillary facilities

An ancillary facility is defined in the Project Approval 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*”. Ancillary facilities will be required to support construction of the Project. Six site compounds will accommodate the majority of management, engineering, specialist and administrative personnel and will typically comprise:

- office accommodation
- staff amenities
- light vehicle parking
- a maintenance workshop, and
- material and chemical storage

The locations of the proposed site compounds are shown in Appendix A5. An assessment of the proposed ancillary facilities against the criteria specified in CoA C32 is also included in Appendix A5. Where the criteria are unable to be met for any proposed ancillary facility, an assessment demonstrating how potential environmental impacts from construction or operation of the facility can be mitigated and managed to acceptable standards will be undertaken by Fulton Hogan and submitted to the Secretary for approval as detailed in CoA C33.

Should changes to the location of existing ancillary facilities or additional ancillary facilities be required during construction, an assessment against the criteria detailed in CoA C32 will be undertaken by Fulton Hogan to demonstrate how the potential environmental impacts can be mitigated and managed to acceptable standards.

A number of minor ancillary facilities, such as office buildings, lunch buildings and toilet blocks, will also be required to support construction activities at different stages of the Project. These will be located within active construction zones within the approved project boundary. Since the location and nature of minor ancillary facilities will be subject to frequent change throughout construction, they are not shown in Appendix A5.

Minor ancillary facilities may include any, or a combination, of the infrastructure listed in Table 2-2.

Table 2-2 Infrastructure for minor ancillary facilities

Infrastructure	Description
Office buildings	<ul style="list-style-type: none"> 1 portable office building
Lunch buildings	<ul style="list-style-type: none"> 1 portable lunch room building (12 person)
Toilet blocks	<ul style="list-style-type: none"> 1 portable toilet block
First aid buildings	<ul style="list-style-type: none"> 1 first aid building
Light vehicle parking	<ul style="list-style-type: none"> 20-25 light vehicles
Materials storage	<ul style="list-style-type: none"> 2 shipping storage containers
Bunded chemical/ dangerous goods storage container	<ul style="list-style-type: none"> 2 bunded shipping storage containers

In accordance with the requirements of CoA C34, the Secretary's approval is not required for minor ancillary facilities that do not comply with the criteria set out in CoA C32 and which:

- are located within an active construction zone within the approved project footprint; and
- have been assessed by the Environmental Representative to have:
 - 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
 - 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
- have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in the CEMP.

2.5 Location and management of stockpiles

Temporary stockpiles will be required during construction to store materials for construction or materials generated from within the construction site including:

- road base constituents;
- stripped topsoil;
- pre-cast concrete components;
- rock crushing and screening machinery;
- crushed rock;
- excavated material 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, steel and other material stored for either future use in the Project or prior to removal from site; and
- topsoil, mulch, excess timber for landscaping and revegetation works.

Stockpiles are not defined in the Project Approval as an ancillary facility and therefore the criteria in CoA C33 do not apply to the location of stockpiles. Stockpiles will be located and managed in accordance with the criteria contained in the *Stockpile Management Protocol* (Appendix F of the CSWQMP). The Protocol includes standard mitigation measures that will be implemented to minimise or avoid impacts of stockpiles on the environment.

3 Planning

3.1 Project environmental obligations

All construction personnel working on the Project have the following environmental 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 RMS 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, and
- 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 the Project is contained in Appendix A1. The register will be maintained by the Environmental Manager and will be reviewed prior to the commencement of construction, at regular intervals during construction and at least annually as part of the management review, 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.

3.3 Approvals, permits and licensing

The following approvals, permits and licences have been obtained or are required for the Project:

- Project Approval under Section 75J of the *EP&A Act* granted by the Minister for Planning & Infrastructure on 22 July 2013.
- An environmental protection licence (EPL) for road construction under the *Protection of the Environment Operations Act 1997*.

Fulton Hogan will be responsible for obtaining any other approvals that must be obtained under any Act or law before construction may be lawfully carried out. In accordance with CoA A8, all licences, permits and approvals will be kept up-to-date as required throughout the life of the development.

3.4 Environmental policy

The Environmental Policy attached in Appendix A4 describes Fulton Hogan's commitment to continual improvement in environmental performance and compliance with applicable legal requirements.

Fulton Hogan's Environmental Policy is displayed at the site office, and communicated to staff, sub-contractors and other interested parties via inductions and ongoing awareness programs.

3.5 Environmental aspects, impacts and risk assessment

A risk management approach was 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 the community and other key stakeholders.

The objectives of the risk assessment are to:

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

Appendix A3 contains a list of issues, related aspects and corresponding risks associated with the Project. Measures to mitigate the identified environmental risks are also provided.

3.6 Objectives and targets

Environmental objectives and targets have been established as a means of assessing environmental performance during construction of the Project. The objectives and targets are consistent with Fulton Hogan's Environmental Policy and have been developed with consideration of the key issues identified through the environmental assessment and risk assessment process. The performance of the Project against the objectives and targets will be documented in the Project construction compliance reports and as part of the periodic 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
Construct the Project in accordance with environmental approvals	Full compliance with statutory approvals.	Audits, construction compliance reporting, management review.
Compliance with all legal requirements	No regulatory infringements (PINs or prosecutions). No formal regulatory warning.	Audits, construction compliance reporting, management review.
Implement an EMS that meets the requirements of AS/NZS ISO 14001	Address non-conformances and corrective actions within specific timeframes (CoA B29g)	Audits, management reviews.
Engage with the affected community, minimise complaints and respond to any complaints within a suitable timeframe	Disseminate regular Project updates and other information through the Project website (CoA B30) and other tools identified in the Community Communication Strategy (CoA B33). Record and respond to complaints within the timeframe specified in the Community Communication Strategy (CoAs B31, B32 & B33).	Review complaints register, construction compliance report, audits.
Continuously improve environmental performance	Develop and maintain a program of ongoing environmental training. Capture lessons learnt from environmental	Construction compliance report, management review, audits.

Objective	Target	Measurement tool
	<p>incidents to minimise repeat issues.</p> <p>Encourage and reward innovation and effort throughout the workforce.</p>	

3.7 Project modifications and refinements

3.7.1 General changes

Modifications/refinements to the Project may be required as a result of detailed design or changed circumstances during construction. RMS 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 RMS Environmental Representative is responsible for the assessment of Project refinements and management of the consistency assessment process. The Contractor's 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 will be communicated to the Contractor's Environmental Manager. The Contractor's Environmental Manager will undertake an environmental assessment and consistency review for the proposed changes in consultation with the RMS Environmental Representative to determine if a Project modification may be required.

Should the consistency review determine that a Project modification may be 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 a modification application under Section 75W of the *EP&A Act* will be prepared and submitted to the Secretary for determination.

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

4 Implementation and operation

4.1 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 the Figure below.

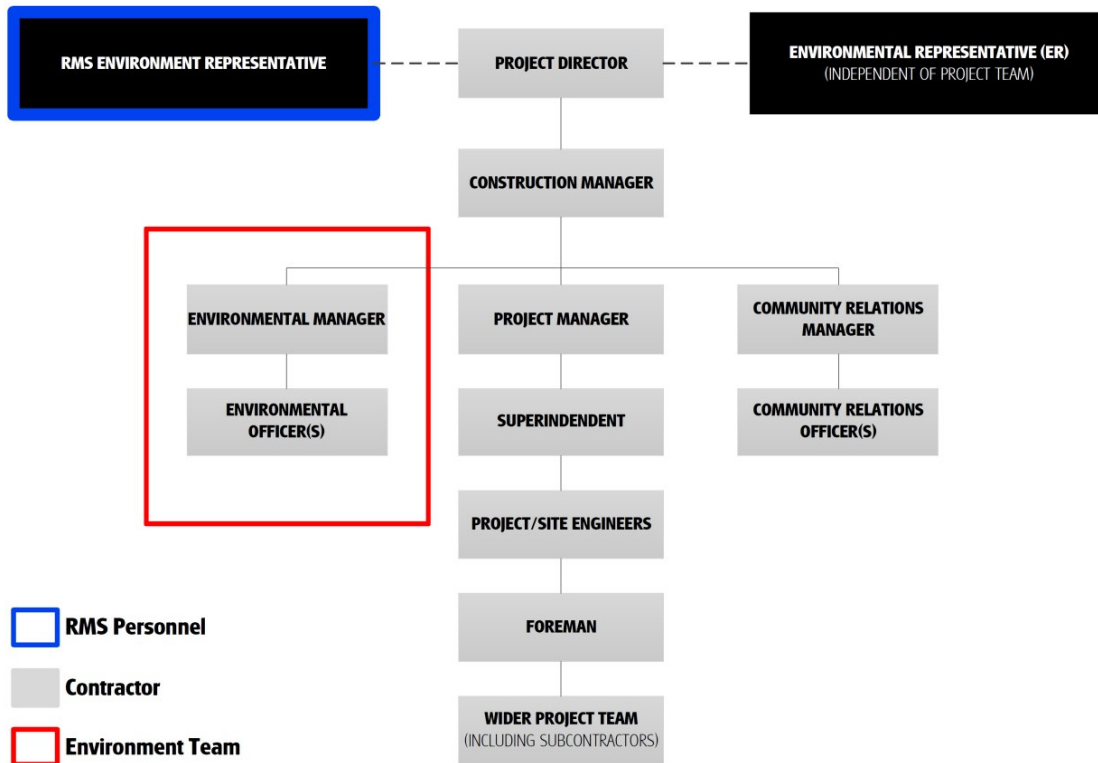


Figure 4-1 Project Environmental Management Structure

4.1.1 Environmental Representative (ER)

The responsibilities of the independent Environmental Representative (ER) are defined in CoA B34:

- 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 RMS and the community is required
- monitor the implementation of environmental management plans and monitoring programs required under the Project Approval
- monitor the outcome of environmental management plans and advise the RMS upon the achievement of project environmental outcomes
- have responsibility for considering and advising the RMS on matters specified in the conditions of this approval, and 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 B29 and the project's Environmental Management System(s)

- be given the authority to approve / reject minor amendments to the CEMP. What constitutes a “minor” amendment is explained in section 1.7, and
- having 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.

RMS Roles

4.1.2 RMS Environment Representative

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

- review 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 by the RMS Representative
- monitor the environmental performance of the Project in relation to RMS requirements
- evaluate and advise on compliance with RMS environmental requirements, and
- review and approve any environmental management plans for the Project or related activities that are not required to be approved by the Secretary.

Contractor Roles

4.1.3 Project Director

The Project Director is responsible for ensuring resources are made available to enable delivery of the Project to comply with the Project Approval and other relevant regulatory and Project requirements. The Project Director is also responsible for liaising with the Environmental Representative and government authorities where appropriate.

4.1.4 Construction Manager

The environmental responsibilities of the Construction Manager include:

- 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 RMS, Environmental Representative and other government authorities as required, and
- stop work immediately where there is an actual or potential risk of harm to the environment.

4.1.5 Project Manager

The environmental responsibilities of the Project Manager include:

- ensure all works comply with relevant regulatory and Project requirements

- ensure the requirements of this CEMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements
- endorse and support the Project environmental policy attached at Appendix A4
- liaise with RMS, the 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 and issues raised resolved in accordance with Section 8.2 of the Community Communication Strategy, and
- stop work immediately where there is an actual or potential risk of harm to the environment.

4.1.6 Superintendent

The environmental responsibilities of the superintendent include:

- 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 Officers
- co-ordinate action in emergency situations and allocate required resources, and
- stop activities where there is an actual or potential risk of harm to the environment and advise the Construction Manager and Environmental Manager.

4.1.7 Environmental Manager

The environmental responsibilities of the Environmental Manager include:

- overall responsibility for the management of environmental aspects of the Project
- development, implementation, monitoring and updating of the CEMP and sub plans
- report to Project Manager 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 set targets 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 RMS and regulatory authorities
- prepare reports on a monthly basis outlining the Project Works undertaken, achievements and areas where improvements were made
- oversee site environmental monitoring, inspections and internal audits
- manage all subcontractors and consultants with regards to environmental matters, including assessing their environmental capabilities and 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 RMS and relevant authorities in the event of an environmental incident and manage close-out of these
- stop activities where there is actual or potential risk of harm to the environment or to prevent an environmental non-conformance and advise the Project Manager, Construction Manager and Superintendent, and
- assist the Community Relations Manager to resolve environment-related complaints.

4.1.8 Environmental Officer

The environmental responsibilities of the Environmental Officer include:

- assist in preparing the CEMP (including any future revisions)
- develop PESCP in consultation with the superintendent, site engineers, foreman 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 of non-conformances with the CEMP or corrective actions required to the Environmental Manager
- assist in identifying environmental risks
- advise the Environmental Manager and Construction Manager of the need to stop work if there is the potential for an unacceptable impact on the environment to occur
- advise the Construction Manager or site construction staff to take reasonable steps to avoid or minimise impacts
- provide reports to the Environmental Manager on any major issues resulting from the Project
- advise site staff on 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, and
- 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.

4.1.9 Community Relations Manager

The environmental responsibilities of the Community Relations Manager:

- ensure that all community consultation activities are carried out
- report any environmental issues raised by stakeholders or members of the community to the Environmental Manager
- communicate environment related Project progress, performance, mitigation measures and issues to stakeholders and the community, and
- maintain the 24 hour complaints hotline.

4.1.10 Project/ Site Engineers

The environmental responsibilities of the Project/Site engineers include:

- provide input into the preparation of environmental planning documents as required
- ensure instructions and information relating to project environmental risks are provided to staff
- 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 environmental risks
- identify resource needs for implementation of CEMP requirements and related documents
- ensure that environment related complaints are investigated to ensure effective resolution
- take action in the event of an environmental incident or potential environmental incident and allocate the required resources to minimise environmental impact, and
- report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent and Environmental Manager.

4.1.11 Foreman

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

- undertake environmental duties as defined by the superintendent or Project/Site engineers
- 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, and
- stop activities where there is an actual or potential risk of harm to the environment and advise the Project Manager, Construction Manager, Superintendent or Environmental Manager.

4.1.12 Wider Project Team (including sub-contractors)

- comply with the relevant requirements of the CEMP and other environmental documentation
- participate in the Project/site induction program
- report any environmental incidents to the foreman immediately or as soon as practicable if reasonable steps can be adopted to control the incident

- undertake remedial action as required to ensure environmental controls are maintained in good working order, and
- stop activities where there is an actual or potential risk of harm to the environment and advise the Project Manager, Construction Manager, Superintendent or Environmental Manager.

4.2 Sub-contractor management

Sub-contractors' environmental requirements and responsibilities will be addressed in the contract documentation. As part of the selection process, consideration will also be given to their past environmental performance. The Environmental Manager, or delegate, will participate in the tender assessment and selection process where it is deemed necessary due to associated environmental risks. All sub-contractors will be required to complete a 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
- effectiveness of the sub-contractor's environmental protection measures
- sub-contractor's compliance with the requirements of this CEMP, and
- maintenance of environmental measures.

5 Competence, training and awareness

The Project Director has overall responsibility for ensuring the requirements of this CEMP are fully implemented. The Environmental Manager will coordinate environmental training in conjunction with other training and development activities.

5.1 Environmental induction

All personnel, including sub-contractors, are required to attend a compulsory site induction that includes an environmental component prior to commencement on-site. The Environmental Manager (or delegate) will conduct the environmental component of the site induction. The environmental component will include an overview of:

- relevant details of the CEMP including purpose and objectives
- key environmental issues, i.e. protection of sensitive areas, dust and noise management
- 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, and
- 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 where required to address Project modifications, legislative changes or amendments to this CEMP or related documentation.

The Environmental Representative will review and endorse the induction program and monitor its implementation.

5.2 Toolbox talks, training and awareness

Toolbox talks will be used to raise awareness and educate personnel on construction related environmental issues. The toolbox talks will be used to ensure environmental awareness continues during construction. Toolbox talks will include details of EWMSs for relevant personnel.

Toolbox talks will be tailored to specific environmental issues including:

- 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
- noise
- housekeeping and waste
- concrete washout
- dewatering
- project and clearing limits

- works in waterways
- dust control
- preparation for heavy rainfall events
- out of hours work approval processes, and
- dealing with direct enquiries from the community, stakeholders and the media

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

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact.

Awareness notes, in the form of posters, booklets or similar may be developed and distributed to engineers, leading hands, foreman and others with a responsibility for managing specific work locations or activities. Awareness notes may also be distributed to the broader workforce at daily pre-start meetings (see section 5.3) or made available in worker crib sheds / break facilities.

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

5.3 Daily pre-start meetings

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

The Foreman, or other appropriate site staff member, will conduct a daily pre-start meeting for the site workforce before the commencement of work each day (or shift) or where changes occur during a shift. Pre-start meetings may be project-wide and/or held for specific work areas.

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

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

6 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.

Fulton Hogan's Environment Team will meet regularly to discuss on-site environmental management, amendments to plans, changes to construction activities etc.

Regular meetings may also be scheduled with the Environmental Representative and RMS Environment staff to communicate ongoing environmental performance and to discuss issues to be addressed.

The Environment Team members will participate regularly in toolbox talks to communicate to the wider project personnel on environmental performance, to advise on sensitive environmental matters for future work areas and to receive feedback from on-site personnel.

Information relating to toolbox talks and daily pre-start meetings is provided in Sections 5.2 and 5.3 above.

6.2 Communication with relevant agencies and authorities

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

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

- Shannon Chisholm (Environmental Manager) 0400 459 769, and
- Andrew McRae (Project Director), 0429 368 562.

Upon consultation with the NSW Environmental Manager and the Operations Manager, each relevant authority will be notified immediately via the appropriate telephone number should a pollution incident occur that causes or threatens material harm to the environment.

The relevant authorities to be notified are:

- the EPA
- the Ministry of Health via the local Public Health Unit
- Work Cover
- Kiama Municipal Council,
- Shoalhaven City Council, and
- Fire and Rescue NSW.

For further details, refer to the Contacts List on page ii of this CEMP.

Should the EPA be notified of any pollution incident, RMS will be notified verbally within two hours and in writing as soon as the cause, extent and details are known.

A report will be submitted to RMS on each occasion the site is visited by the EPA or any other Authority, other than for arranged inspections. The report will detail the purpose,

outcome and actions pertaining to the visit and will be submitted to the RMS Representative within one working day of the EPA or any other Authority visit.

6.3 Stakeholder and community communication

6.3.1 Community Communication Strategy

In accordance with CoA B33, a *Community Communication Strategy (CCS)* has been developed for the Project to provide mechanisms to facilitate communication between RMS, the Project Team, the Environmental Representative, Kiama Municipal Council, Shoalhaven City Council and the local community on construction-related and environmental matters. The CCS also addresses the key construction issues that are likely to affect the community including traffic, property access, noise and vibration and landscaping.

6.3.2 Complaints and enquires procedure

The project will respond to and manage complaints made by stakeholders in accordance with *AS-ISO 10002-2006 Complaints Handling* (which has superseded *AS 4269 Complaints Handling*).

All community enquiries and complaints related to the construction activities will be referred to the toll free 24-hour project information line (1800 506 976). A site office postal address (PO Box 353 Berry NSW 2535) and email address (foxgroundandberrybypass@rms.nsw.gov.au) will be provided for receipt of complaints and enquiries. The telephone number, the postal address and the email address will be published in newspapers circulating in the local area prior to the commencement of construction and provided on the Project website.

Information on all complaints received will be entered into Consultation Manager. Consultation Manager is a stakeholder data management software package which will keep a register of all contacts together with the following record of each contact:

- Date and time of contact.
- Type of communication (telephone, letter, meeting, etc.).
- Name, address, contact telephone number of stakeholder.
- Nature of contact (e.g. enquiry, complaint).
- Actions taken in response including follow up contact with the stakeholder.
- Details of whether resolution was reached.
- Details of whether mediation was required or used.
- Any monitoring to confirm that the enquiry or complaint has been satisfactorily resolved.

The information contained within Consultation Manager will be made available to the Secretary of the DP&E on request. Refer to Section 8.2 of the *Community Communication Strategy* for further details regarding enquiries, feedback, complaints management and dispute resolution.

6.3.3 Key participation activities and communication tools

The community will be informed about community impacts through the use of a range of activities/tools including, for example, email notifications, project webpages, media releases, letters and newspaper advertisements. For further details, refer to Section 7.2 of the *Community Communication Strategy*.

6.3.4 Environmental Review Group

An Environmental Review Group (ERG) will be established and will function for the duration of the Project. The Group's meetings will be coordinated by the ER and will include RMS representatives, Project team members, relevant government agencies and local councils. The ERG will meet on a regular basis to review environmental management issues related to the Project including for example:

- updates on the progress of construction and general environmental performance
- upcoming high environmental risk construction activities
- results of environmental monitoring, inspections and audits
- reports on recent environmental incidents and any lessons learnt
- discussions on any issues raised by the regulators or relevant government agencies, and
- discussions on the environmental issues raised by the community.

7 Incidents and emergencies

All incidents and emergencies will be managed in accordance with the *Emergency Preparedness and Response Plan*. Fulton Hogan's Case and Action Management system (CAMs) software will be used to record all environment incidents.

RMS's *Environmental Incident Classification and Reporting Procedure* will be implemented in the event of an environmental incident. The Procedure is provided in Appendix A7.

The RMS Representative and the Environmental Representative will be notified verbally immediately of an incident. Incident reports will be provided to the RMS Representative and the Environmental Representative within 24 hours of Fulton Hogan becoming aware of the incident, 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.

In accordance with CoA A5, RMS will notify the Secretary and other relevant government agencies of any incident with actual or potential significant off-site environmental impacts on people or the biophysical environment as soon as practicable and within 24 hours after the occurrence of the incident. Fulton Hogan will provide RMS with full written details of the incident for RMS to forward to the Secretary within seven days of the date on which the incident occurred. Where an incident also requires reporting to the OEH and/or EPA the incident report prepared for the purposes of notifying the OEH and/or EPA would meet this requirement.

In accordance with CoA A6, Fulton Hogan will address the cause or impact of any incident, as it relates to the Project Approval and reported in accordance with CoA A5, within such period as requested by the Secretary.

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

8 Inspections, monitoring and auditing

8.1 Environmental inspections

8.1.1 Weekly and post rainfall site inspections

The Environmental Manager and/or Environmental Officers will undertake inspections of the work sites weekly and after rainfall events to evaluate the effectiveness of environmental controls. The results of the inspections will be recorded in the Environmental Inspection Checklist included in Appendix A8.

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. The completion of the actions will be monitored to ensure they are implemented within the timeframes specified in the Checklist.

8.1.2 Environmental Representative and RMS inspections

The Environmental Representative and RMS staff will undertake regular inspections of work sites during construction. Inspections by the Environmental Representative and RMS Project staff will typically occur on a weekly or fortnightly basis depending on the complexity of the work and anticipated environmental risks associated with the stage of construction.

A member of the Project environment team will participate in all Environmental Representative and client 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.

8.2 Environmental monitoring

The monitoring required under the Project Approval during construction is described in detail in the relevant environmental management sub-plans.

The Environmental Representative and RMS Representative will be advised of any non-conformances identified through monitoring activities. Details will be reported by the Environmental Manager in the monthly report.

Where a non-conformance is detected or monitoring results are outside of the expected range and are confirmed to be 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 8.5 will be implemented. Steps in the process will typically include:

- an analysis of the results by the Environmental Manager to determine 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, and
- implementing actions to rectify or mitigate the non-conformance.

An Environmental Incident Report Notice may be issued by the Environmental Manager in response to the non-conformance if it is found to be construction related.

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

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

8.3 Compliance tracking program

A *Compliance Tracking Program* (CTP) has been developed for the Project in accordance with the requirements of CoA B29. The CTP contains:

- provisions for the notification of the Secretary 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 and the documents listed under condition A1, including the Statement of Commitments
- provisions for periodic reporting of compliance status against the requirements of the Project Approval and the Major Project Application, Environmental Assessment and the Submissions Report, including the Statement of Commitments, to the Secretary including 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 Secretary during construction and operation, and
- 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 B29 will be met and identifies the frequency for the Project compliance reporting and independent auditing.

8.4 Auditing and reporting

Internal audits will be carried out by suitably qualified and experienced Fulton Hogan personnel not directly associated with the Project every six (6) months, with the first audit occurring no longer than three (3) months after commencement of construction.

These audits will be undertaken to verify compliance with:

- this CEMP and sub plans
- the requirements of the Project Approval, and
- any relevant legal and other requirements (e.g. licenses, permits, regulations, RMS contract documentation).

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*, as required by CoA B29(d). External auditing will be undertaken 6 monthly, with the first audit being held six months after the submission of the pre-construction compliance report to the DP&E.

8.5 Non-conformity, corrective and preventative actions

Fulton Hogan's Quality Plan describes the process for managing non-conforming work practices and initiating corrective/preventative actions or system improvements.

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

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

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

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

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

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

9 Review and improvement

Management reviews will be undertaken as part of the continual improvement process as required by CoA B35(h). The management review can consist of group or executive reviews.

A group review is initiated by the Environmental Manager and includes relevant Project team members and stakeholders. The environment team meet on a regular basis to review environmental management issues for the Project. The environment team meeting can be run in conjunction with a wider group meeting if the Environmental Manager deems it appropriate.

A group review will typically 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 changes in operational needs such as resourcing, and

An executive review will typically include the same items listed above and is initiated by the Project Director. An executive review can be undertaken in conjunction with Project Director and Senior managers' meetings.

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

10 Documentation

10.1 Environmental records

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

- monitoring, inspection and compliance reports/records;
- correspondence with public authorities;
- induction and training records;
- reports on environmental incidents, other environmental non-conformances, complaints and follow-up action;
- community engagement information;
- minutes of CEMP and construction environmental management system review meetings and evidence of any action taken.

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

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

10.2 Document control

Fulton Hogan will coordinate the preparation, review and distribution, as appropriate, of the environmental documents listed above. During construction, the environmental documents will be stored at the main site compound.

Fulton Hogan will implement a document control procedure to control the flow of documents within and between RMS, 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, and
- archived.

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