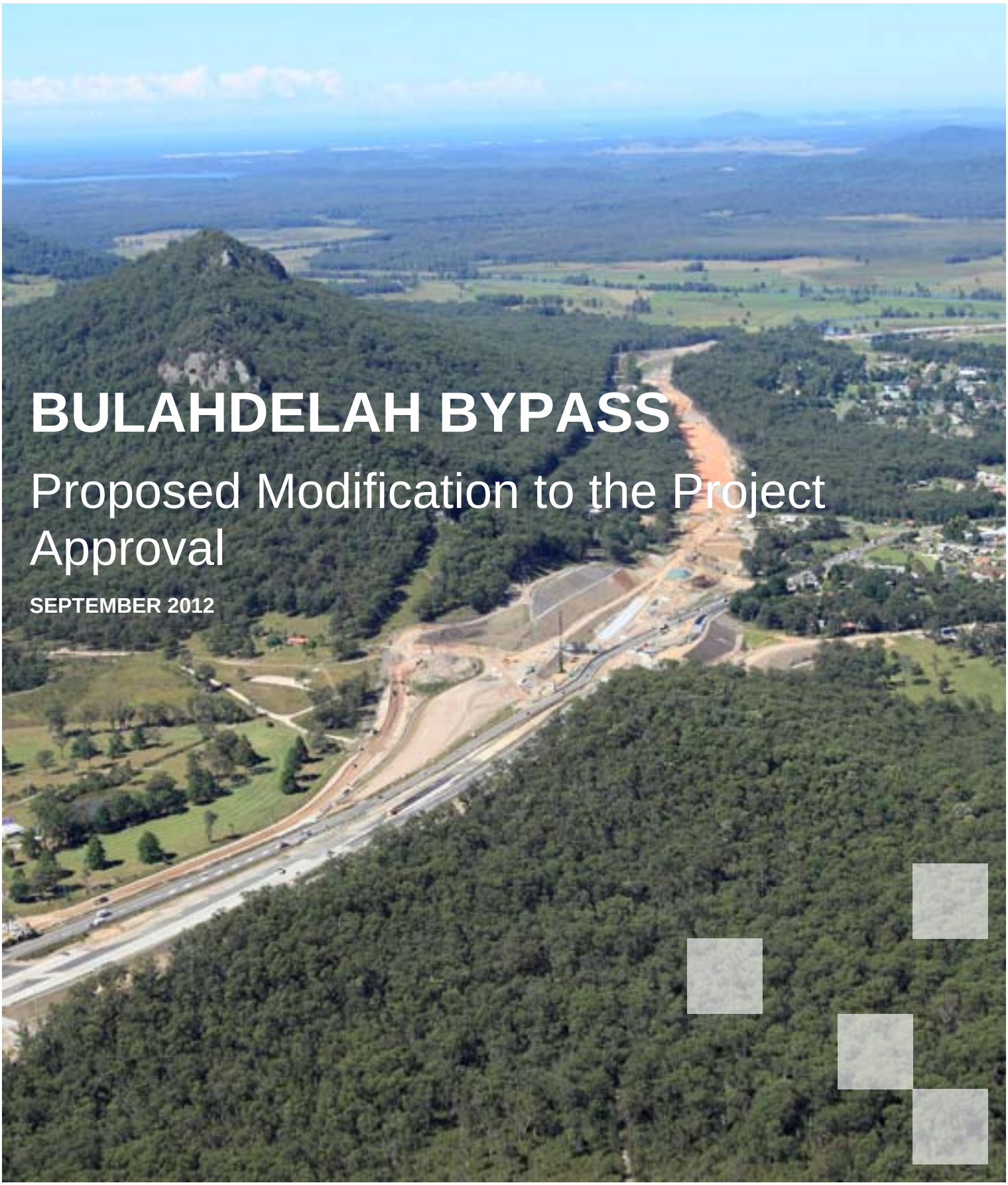
Transport Roads & Maritime Services

NSW GOVERNMENT



BULAHDELAH BYPASS

Proposed Modification to the Project Approval

SEPTEMBER 2012

Abbreviations

Abbreviation	Full Name
CEMP	Construction Environmental Management Plan
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CoA	Conditions of Approval
D-G	Director General
DPI	NSW Department of Primary Industries
DoPI	NSW Department of Planning and Infrastructure, formerly the Department of Planning
EIS	Environmental Impact Statement
EMS	Environmental Management System
ENMM	Environmental Noise Management Manual
EPA	Environmental Protection Authority
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
NPW Act	*National Parks and Wildlife Act 1974*
OEH	Office of Environment and Heritage
OEMP	Operational Environmental Management plan
RFS	Road and Fleet Services
RMAP	Road Maintenance Annual Plan
RMS	Roads and Maritime Services
SIS	Species Impact Statement
SoC	Statement of Commitments
SOP	Standard Operating Procedure

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1 Introduction

1.1 The Approved project

On behalf of the Australian and NSW governments, Roads and Maritime Services (RMS) proposes to upgrade the Pacific Highway at Bulahdelah. The Bulahdelah Pacific Highway Upgrade, referred to as the Bulahdelah Upgrade, will involve the construction of about 8.6 kilometres of four lane divided road as an eastern bypass of the Bulahdelah township.

The Bulahdelah Upgrade was an activity that was assessed and determined under the former Part 3A of the *Environmental Planning and Assessment Act 1979*. It is within the Great Lakes local government area.

In November 2004, RMS finalised the Environmental Impact Statement (EIS) and the Species Impact Statement (SIS) for the Project. Two plant species listed as threatened under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) were confirmed as occurring within the footprint of the proposed Upgrade. As a result the Commonwealth Minister for the Environmental and Heritage determined that the proposal is a controlled action. The Minister for the Department of Environment and Water Resources granted approval, under Part 9 of EPBC Act on 10 September 2007, subject to five conditions of approval.

The then NSW Minister for the Department of Planning approved the Bulahdelah Upgrade on 9 July 2007, subject to 54 conditions of approval.

1.2 Proposed Modification

RMS proposes that Condition of Approval 6.5 be modified to the following:

"Prior to the commencement of operation, the Proponent shall incorporate the project into its existing management systems."

This condition relates to the requirement for an Operational Environmental Management Plan (OEMP). The proposed modification does not consider changes to environmental management during the operational stage; it focuses only on administrative and system-related aspects of the Minister's approval. The text from Condition of Approval 6.5 is included in Appendix A.

1.3 Justification for the Proposed Modification

The Infrastructure Asset Management branch of Roads and Maritime Services, is responsible for managing the maintenance of the State road network, while Roads and Fleet Services (RFS) provide the maintenance services. Further details on how infrastructure asset management and RFS manage the road network are included in section 2.1 and 2.2. Once operational, it is proposed that the Bulahdelah Upgrade would be maintained under this system.

Contemporary project approvals generally do not require the preparation and implementation of an OEMP. Recent RMS project approvals have not required the development of an OEMP or, have successfully modified their approval to remove this condition. Such projects include:

- F3 to Branxton Highway Link (the Hunter Expressway).
- Pacific Highway Upgrade – Devils Pulpit Project.
- Pacific Highway Upgrade: Wells Crossing to Iluka Road – Glenugie upgrade project.
- Pacific Highway Upgrade – Tintenbar to Ewingsdale Project.
- Pacific Highway Upgrade – Warrell Creek to Urunga Project.

While this proposed modification seeks to remove the requirement to develop an OEMP, a suite of plans have been approved for the Bulahdelah Upgrade that address environmental management

measures during the operational phase. No changes are proposed to these plans. These plans include:

- *Upgrade of the Pacific Highway at Bulahdelah: Wallum Froglet Management Pla*n.
- *Upgrade of the Pacific Highway at Bulahdelah: Squirrel Glider Management Plan.*
- *Upgrade of the Pacific Highway at Bulahdelah: Orchid Management and Translocation Plan.*
- *Alunite Mine Site Management Plan: Bulahdelah Pacific Highway Upgrade.*
- *Pacific Highway Upgrade Bulahdelah: Urban and Landscape Design Supplementary Report.*
- *Pacific Highway Upgrade Bulahdelah: Urban and Landscape Design Report.*
- *Bulahdelah Bypass Detail Design Noise Assessment.*

Details of the operational management measures and activities to be undertaken during the operational phase are provided in section 2 and Appendix C, respectively. Appendix C of this modification outlines all operational activities for the project and where these issues are addressed within existing plans or management systems. Where operational requirements are not included within existing approved plans for the project, the specific management requirements are outlined within this modification proposal report.

2 Proposed Management of Relevant Operational Issues

2.1 RMS Network Management

The Bulahdelah Upgrade would be monitored and managed in accordance with RMS specifications M1–General Network Management Requirements and M30–Maintenance Intervention and Investigatory Requirements (Corridor).

Under RMS Specification M1, joint planning assessments of the road network are undertaken on an annual basis by RMS Hunter Infrastructure Asset Management and RFS (the Service Provider). Based on these inspections, maintenance requirements would be prioritised and a Road Maintenance Annual Plan (RMAP) would be developed for the Hunter region. If a defect at the Bulahdelah Upgrade is identified during the operational stage, specification M30 is triggered, which identifies the requirements for intervention and investigation of the defective asset. Under this specification defects would be assessed and a requirement for intervention would be provided based on the assessment.

2.2 Routine Road Maintenance Activities

RFS is the service provider that delivers road and bridge construction and maintenance services. RFS manages routine road maintenance activities under the Road Services Management Plan (2012) and the RFS Environmental Management System (2008). These documents describe how RFS manages the environmental impacts for their activities. The RFS EMS has been developed to satisfy the ISO 14001:2004 requirements for environmental management systems. It includes the environmental policy, legal and other requirements, communicating and reporting structures, staff training, as well as environmental management of maintenance and construction activities.

2.3 Specific Operational Environmental Management Measures

2.3.1 Orchid Management

All operational management obligations in relation to orchid management are represented in the Upgrade of the Pacific Highway at Bulahdelah: Orchid Management and Translocation Plan (2010). This plan was approved by the Director-General in January 2010.

2.3.2 Squirrel Glider Management

All operational management obligations in relation to squirrel glider management are represented in the Upgrade of the Pacific Highway at Bulahdelah: Squirrel Glider Management Plan (2010). This plan was approved by the Director-General on 18 December 2009.

2.3.3 Wallum Froglet Management

As the presence of Wallum Froglets was identified after project approval was received there are no operational management obligations in relation to wallum froglet management under the project's CoA or SoC. However a Wallum Froglet Management Plan (2008) has been developed for the project which includes operational management measures. This plan was approved by the Director-General as part of the Baulderstone Construction Environmental Management Plan (CEMP) on 16 July 2010.

2.3.4 Operational Noise Management

An Operational Noise Report (2009) was developed for the Bulahdelah upgrade and approved by the Director-General on 3 September 2009, in accordance with CoA 2.24. Additional operational noise requirements are outlined in table 1 below.

Table 1: Operational noise management requirements and methods.

Management requirement	Management Method
CoA 3.3 – undertake operational noise monitoring	A noise auditing program will be undertaken within one year of commencement of operation of the project.
CoA 3.4 – Submit an operational noise audit report to the D-G.	An operational noise audit report would be submitted to the D-G within 60 days of completing the operational noise monitoring program.
SoC 6.1 – Monitor noise levels at St Brigid's Church.	St Brigid's church would be monitored 6 months after construction is completed.

2.3.5 Water Quality Management

There are currently no approved plans that address the project commitments in relation to water quality management. Details of water quality management requirements and the manner in which RMS proposes to manage these requirements are outlined in table 2.

Table 2: Water quality management requirements and methods.

Management requirement	Management Method
SoC 10.8 – Groundwater Monitoring	Preloading and soft soil settlement occurred during the construction phase of the project. Monitoring during the construction phase determined that the stability and strength of the soft alluvial soils does not require further monitoring.
SoC 10.8 – Downstream water quality monitoring	The pH of up stream and downstream surface water bodies within the Wallum Froglet habitat will be undertaken as part of the bi-annual population counts.
Acid Sulphate soil monitoring	Basins established to contain acid sulphate soils runoff will be monitored monthly for 6 months after the completion of construction works and bi-annually for a further 2 years.

2.3.6 Cultural Heritage Management

All operational management obligations in relation to European heritage management are represented in the Alunite Mine Site Management Plan: Bulahdelah Pacific Highway Upgrade (2010). In accordance with CoA 6.2 this plan was developed in consultation with the former Heritage Office and the DPI and was approved on 25 August 2009. Further amendments have been made to the plan, which was approved as part of the Baulderstone CEMP on 16 July 2010 and then on 25 May 2012 for changes to Mountain Park.

The management of Aboriginal heritage artefacts would be undertaken in accordance with an approved care and control agreement with OEH.

2.3.7 Landscaping and Rehabilitation Management

All operational management obligations in relation to landscaping and rehabilitation management are represented in the Urban and Landscape Design Report (2009) and the Urban and Landscape Design Supplementary Report (2010). These reports were approved by the Director General on 16 July 2010.

2.3.8 Traffic Management

There are currently no approved plans that address traffic monitoring during the operations phase. Details of the projects traffic monitoring commitments and the proposed to management method is included in table 3, below:

Table 3: Traffic monitoring requirements and methods

Management requirement	Management Method
SoC 4.5 - Traffic Studies to compare operational traffic levels to the levels recorded before the proposal	Traffic studies would be undertaken 6 and 12 months after opening.
SoC 4.5 - Traffic Monitoring to verify the need for a northbound climbing lane north of the Myall river	Traffic monitoring to verify the need for a northbound climbing lane would be undertaken 6 and 12 months after opening.
SoC 4.5 - Traffic Monitoring of town traffic at Lee Street, Crawford Street, and Stroud Street to verify the volumes against traffic models and assess impacts	Traffic Monitoring of town traffic would be undertaken 6 and 12 months after opening.
SoC 4.5 - Traffic movements monitoring and compare with predicted levels	Traffic movements monitoring would be undertaken 6 and 12 months after opening.
SoC 4.1 – Road dilapidation report	Post construction road dilapidation reports will be undertaken during the operational phase.

2.4 Other Operational Approval Obligations of the Bulahdelah Upgrade

2.4.1 Environmental Impact Audit Report

There are currently no approved plans that address the project's commitments in relation to the submission of an Environmental Impact Audit Report-Operations. Details of the project's commitments and how it is proposed to manage these commitments are included in table 4, below.

Table 4: Environmental Impact Audit Report requirements and methods

Management requirement	Management Method
SoC 1.10 - Submit an Environmental Impact Audit Report—Operations to the D-G a maximum of 24 months after the activity begins operation.	An environmental impact audit report—operations would be submitted to the D-G a maximum of 24 months after the activity begins operation.
i. Be certified by an independent person at RMS expense. Details of certifier to be provided to the D-G prior to preparation.	The environmental impact audit report—operations would be certified by an independent person at RMS expense. Details of certifier would be provided to the D-G prior to preparation
ii. Compare the operational impact predictions made in the EIS, Submissions Report and any supplementary studies with the actual impacts.	A comparison of the operational impact predictions made in the EIS, Submissions Report and any supplementary studies with the actual impacts would be included in the environmental impact audit report—operations.
iii. Assess the effectiveness of implemented mitigation measures and safeguards.	An assessment of the effectiveness of implemented mitigation measures and safeguards would be included in the environmental impact audit report—operations.

iv.	Assess compliance with the system for operational maintenance and monitoring.	An assessment of compliance with the system for operational maintenance and monitoring would be included in the environmental impact audit report—operations.
v.	Discuss the results of consultation with the local community particularly any feedback or complains.	A discussion of the results of consultation with the local community particularly any feedback or complains would be included in the environmental impact audit report—operations.
vi.	Be made publicly available.	The environmental impact audit report—operations would be made publically available.

2.4.2 Management of Mountain Park

The design of the Alum Mountain Park Picnic area was developed in consultation with Great Lakes Council, the Community Interest Group and the Karuah Local Aboriginal Land Council. The design was approved as part of the *Bulahdelah Bypass Project, Pacific Highway, Urban Design and Landscape Design Addendum Report* (2012). This report was approved by the Department of Planning and Infrastructure on 25 May 2012.

Prior to opening, Mountain Park would be rehabilitated and landscaped by RMS in accordance with the approved Urban and Landscape Design Addendum Report. Negotiations are currently underway with Great Lakes Council (GLC) regarding the ongoing maintenance and management of Mountain Park. It is anticipated that ownership of Mountain Park would be transferred to the GLC and RMS would contribute financially towards future maintenance and management responsibilities.

2.4.3 Town Improvements

There are currently no approved plans that address the project commitments in relation to town improvement works. However agreement has been reached with Council in regard to the funding of specific town improvements works identified in the EIS. There is one town improvement commitment that is not addressed under this agreement. Details of this commitment and how RMS proposes to manage the commitment is included below in table 5.

Table 5: Town improvements management requirements and methods

Management requirement	Management Method
Appendix F of the EIS – Providing limited on-street heavy vehicle parking facilities on existing highway near central service stations.	Parking restrictions along the existing highway would be reviewed post opening. This is the responsibility of the local traffic committee which includes a representative from RMS. It is envisaged that this issue would be raised by the RMS representative to the Traffic Committee post opening.

References

Brown, K 2008, *Upgrade of the Pacific Highway at Bulahdelah: Wallum Froglet Management Plan,* report to the Roads and Maritime Services.

Brown, K 2009, *Upgrade of the Pacific Highway at Bulahdelah: Squirrel Glider Management Plan,* report to the Roads and Maritime Services.

Brown, K 2010, *Upgrade of the Pacific Highway at Bulahdelah: Orchid Management and Translocation Plan,* report to the Roads and Maritime Services.

Campbell, A & Isles, S 2001, *Environmental Noise Management Manual,* Roads and Maritime Services, Surry Hills.

Navin Officer 2010, *Alunite Mine Site Management Plan: Bulahdelah Pacific Highway Upgrade*, report to the Roads and Maritime Services, Kingston.

NSW Department of Planning and Infrastructure 2007, *Project Approval – Bulahdelah Bypass,* project approval by F Sartor, NSW Department of Planning, Sydney.

Roads and Fleet Services 2008, *Environmental Management System,* Roads and Fleet Services.

Roads and Fleet Services 2012, *Road Services Management Plan,* Roads and Fleet Services.

Road Services 2004, *Standard Operating Procedure (Environmental Management) – Waste Management.* Road and Fleet Services.

Roads and Maritime Services 2009, *Urban and Landscape Design Report,* Roads and Maritime Services.

Roads and Maritime Services 2010, *Pacific Highway Upgrade Bulahdelah - Urban and Landscape Design Supplementary Report*, Roads and Maritime Services.

Roads and Maritime Services 2012*, Bulahdelah Bypass Project, Pacific Highway, Urban Design and Landscape Design Addendum Report*, Roads and Maritime Services.

Sainsbury, M 2006, *Bulahdelah Upgrade of the Pacific Highway – Submissions Report,* Roads and Maritime Services, Parramatta.

Wilkinson Murray Pty Limited 2009, *Bulahdelah bypass Detail Design – Noise Assessment*, report to SMEC Australia PTY LTD.

See Reference
DoPI – *see* NSW Department of Planning and Infrastructure
RFS – *see* Roads and Fleet Services

Appendix A – Text of Condition of Approval 6.5

Operation Environmental Management Plan

6.5 Prior to the commencement of operation of the project, or each stage of the project, the Proponent shall prepare and submit for the approval to the Director-General an **Operational Environmental Management Plan** to detail an environmental management framework, practices and procedures to be followed during the operation of the project. The Plan shall be consistent with the Department's *Guideline for the Preparation of Environmental Management Plans* (DIPNR 2004), and shall include, but not necessarily be limited to:

a) A description of all activities to be undertaken during operation of the project including an indication of stages of operation, where relevant;
b) Statutory and other obligations that the Proponent is required to fulfil during operation including all approvals, consultation and agreements required from authorities and other stakeholders, and key legislation and policies;
c) Details of how the environmental performance of the operation will be monitored, and what actions will be taken to address identified adverse environmental impacts. In particular, the following environmental performance issues shall be addresses in the plan:
    I. Measures to monitor and manage ecological factors, including effectiveness and maintenance of relocated, hollows, nest boxes and aerial crossings;
    II. Measures to monitor and manage heritage sites, including objects that have been moved off-site for keeping as a result of the proposal;
    III. Measures to monitor and manage noise impacts;
    IV. Measures to monitor and minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters;
d) A description of the roles and responsibilities for all relevant employees involved in the operation of the project; and
e) Complaints handling procedures during operation.

Nothing in this approval restricts the Proponent from incorporating the above operational environment plan into existing management systems administers by the Proponent.

The plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of operation of the project, or within such period otherwise agreed by the Director-General. Operation of the project shall not commence until written approval has been received from the Director-General.

Appendix B – Summary of Outcomes to CoA from the Proposed Modification

Requirement of Condition of Approval 6.5	Outcome from Proposed Modification
a). A description of all activities to be undertaken during operation of the project including an indication of stages of operation, where relevant	A description of all activities to be undertaken during the operational phase is included in appendix C of this proposed modification.
b). Statutory and other obligations that the Proponent is required to fulfil during operation including all approvals, consultation and agreements required from authorities and other stakeholders, and key legislation and policies;	A description of statutory are included within the RFS Environmental management System (2008).
c).Details of how the environmental performance of the operation will be monitored, and what actions will be taken to address identified adverse environmental impacts. In particular, the following environmental performance issues shall be addresses in the plan: *I. Measures to monitor and manage ecological factors, including effectiveness and maintenance of relocated hollows, nest boxes and aerial crossings;*	Ecological performance would be managed through the measures outlined in the Squirrel Glider Management Plan and RMS Specification M30 Maintenance Intervention and Investigatory Requirements (Corridor). The Squirrel Glider Management Plan is required under conditions of approval 3.2.
II. Measures to monitor and manage heritage sites, including objects that have been moved off-site for keeping as a result of the proposal;	Heritage sites and objects would be managed under the Alunite Mine Site Management Plan and through a care and control agreement with OEH.
III. Measures to monitor and manage noise impacts;	Noise impacts would be managed through noise auditing, which is required under conditions of approval 3.3 and 3.4.
IV. Measures to monitor and minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters;	Measure to minimise soil erosion would be managed through the Urban and Landscape Design Report and in the Urban and Landscape Design Supplementary Report. Monitoring of these measures would be undertaken in accordance with RMS Specifications M 321 - Landscape Maintenance and M30 – Maintenance Intervention & Investigatory Requirements (Corridor).
d). A description of the roles and responsibilities for all relevant employees involved in the operation of the project; and	A description of the roles and responsibilities for all relevant employees involved in the operation of the project is included in appendix A of the RFS Environmental Management System.
e). Complaints handling procedures during operation.	The Project Hotline for up to 12 months after the commencement of operation and RMS Environmental Hotline for the entire operation period.

Appendix C – A description of all activities required to be undertaken in the operational phase

Activity	Responsibility	Timing	Required Under	Where Addressed
Submit an Environmental Impact Audit Report – Operations to the Director General	Pacific Highway Office	A maximum of 24 months after the activity begins operation.	RMS Statement of commitment 1.10	This commitment is addressed in section 2.4.1 of this proposed modification.
Flora and Fauna				
Maintenance of Fauna-Exclusion fencing	Project Ecologist during wallum froglet monitoring RMS Hunter Infrastructure Asset Management	Frog fencing between Ch 92975 and Ch 93675 would be conducted regularly as part of the wallum froglet management. Fauna fencing will be inspected yearly. Based on these inspections maintenance requirements will be prioritised and a Road Maintenance Annual Plan (RMAP) established.	SoC 7.3 & Appendix F of the EIS	Wallum Froglet Management Plan, Section 3.5 for frog fence RMS Specification M1-General Network Management requirements & M 30 Maintenance Intervention and Investigatory Requirements (Corridor) for fauna fence.
Squirrel Glider Monitoring				
Nest Box Monitoring	Project Ecologist	Annually (during summer) for up to 5 years after the commencement of operation.	CoA 3.2	Squirrel Glider Management Plan, Section 4.4
Monitoring of Crossing Structures	Squirrel Glider Specialise	For a period of 6 months at one structure followed by 6 months at a different structure. Totalling an entire 12 month monitoring period. If no gliders are recorded additional monitoring will be undertaken on a 6 month basis until gliders are recorded. The results will be reviewed 2 years post-construction.	CoA 3.2	Squirrel Glider Management Plan, Section 4.3
Population Counts	Squirrel Glider Specialist	Biannually, during summer and winter for up to 5 years after the commencement of operation.	CoA 3.2	Squirrel Glider Management Plan, Section 4.2
Monitoring Evaluation Reports	Project Ecologist	• Annually for 2 years outlining population status and any need for contingency. • A brief report annually for 5 years after the commencement of operation. • A final report at the conclusion of the 5 year post construction monitoring period.	CoA 3.2	Squirrel Glider Management Plan, Section 4.6

Orchid Monitoring				
Population Counts and monitoring review	Project Ecologist and CSIRO, Centre for Plant Biodiversity Research	• Annually for 5 years for plants retained *in-situ*. • Translocated *Cryptostylis hunteriana* twice in the first year between Sept and Dec. • Translocated *Rhizanthella slateri* 4 times during the initial year, at least one of which between Sept-Dec. • Translocated *Corybas Dowlingii* twice per year (once in July). • Biannually in years 2-5 after translocation. • At year 5 a review of monitoring results would be undertaken. • If determined to be required by the monitoring review, monitoring would be undertaken yearly for a further 5 years	CoA 3.1 & SoC 7.3	Orchid Management Plan, Section 7.2
Flowering and seed set monitoring	CSIRO, Centre for Plant Biodiversity Research	Annually for 5 years post construction.	CoA 3.1 & SoC 7.3	Orchid Management Plan, Section 7.3
Orchid pollinator (Ichneumon Wasp) monitoring	CSIRO, Centre for Plant Biodiversity Research	Annually for 3 years following construction.	CoA 3.1 & SoC 7.3	Orchid Management Plan, Section 7.4
Rainfall, Hydrology and Soil Moisture monitoring	CSIRO, Centre for Plant Biodiversity Research	2 years post construction.	CoA 3.1 & SoC 7.3	Orchid Management Plan, Section 7.5
Monitoring Annual Report	Project Ecologist	Annually for the duration of the monitoring program	CoA 3.1 & SoC 7.3	Orchid Management Plan, Section 7.7
Final Translocation Report	Project Ecologist	7 years post construction	CoA 3.1 & SoC 7.3	Orchid Management Plan, Section 7.7
Wallum Froglet Monitoring				
Population counts, hydrology and pH monitoring	Project Ecologist	Biannually for up to 4 four years post construction.	No requirement as the presence of Wallum froglets was identified after project approval	Wallum Froglet Management Plan, Section 4.2 and 4.3
Habitat Restoration	Project Ecologist	Annually in conjunction with the wallum froglet surveys.		Wallum Froglet Management Plan, Section 4.4
Annual monitoring report	Project Ecologist	Annually for the duration of the monitoring program.		Wallum Froglet Management Plan, Section 4.5
Monitoring evaluation report	Project Ecologist	At the conclusion of the monitoring period		Wallum Froglet Management

				Plan, Section 4.5
Soil and Water				
Groundwater Monitoring	Major Projects Implementation	Preloading and soft soil settlement occurred during the construction phase of the project. Monitoring of during the construction phase determined that the stability and strength of soft alluvial soils does not require further monitoring.	SoC 10.8 & Appendix F of the Bulahdelah EIS	This commitment is addressed in section 2.3.5 of this proposed modification.
Downstream water quality monitoring	Major Projects Implementation	pH of upstream and downstream surface water bodies in the wallum froglet habitat will be undertaken as part of the bi-annual population counts.	SoC 10.8 & EIS Technical paper 8, Section 4.3.2	Wallum Froglet Management Plan, Section 4.3
Acid Sulphate Soils Monitoring	Major Projects Implementation	Basins established to contain acid sulphate soils runoff will be monitored monthly for 6 months after the completion of construction works and for a further 2 years.	No Operational Requirements	This commitment is addressed in section 2.3.5 of this proposed modification.
Develop and implement Maintenance and inspection program for operational water treatment facilities	RMS Hunter Infrastructure Asset Management	Inspected yearly, based on these inspections maintenance requirements will be prioritised and a RMAP established.	SoC 10.8 & Appendix F of the Bulahdelah EIS	RMS Specification M1-General Network Management requirements & M 30 Maintenance Intervention and Investigatory Requirements (Corridor).
Inspection and Maintenance of Drainage Structures and sediment basins	RMS Hunter Infrastructure Asset Management	Inspected yearly, based on these inspections maintenance requirements will be prioritised and a RMAP established.	SoC 7.3 & Appendix F of the Bulahdelah EIS	RMS Specification M1-General Network Management requirements & M 30 Maintenance Intervention and Investigatory Requirements (Corridor).
Traffic				
Traffic monitoring for a northbound climbing lane	Major Projects Implementation	6 and 12 months after opening to traffic	SoC 4.5 & Appendix F of the EIS	These commitments are addressed in section 2.3.8 of this proposed modification.
Traffic Monitoring of town Traffic	Major Projects Implementation	6 and 12 months after opening to traffic	SoC 4.5 & Appendix F of the EIS 5	
Traffic movements monitoring	Major Projects Implementation	6 and 12 months after opening to traffic	SoC 4.5 & Appendix F of the EIS 5	
Traffic Studies	Major Projects Implementation	6 and 12 months after opening to traffic	SoC 4.5 & Appendix F of	

			the EIS	
Road Dilapidation report	Major Projects Implementation	Once during operation	SoC 4.1	
Noise				
Post construction noise monitoring	Major Projects Implementation	Between 2 and 12 months after opening Monitor noise levels at St Brigid's Church 6 months after construction is completed.	CoA 3.3, SoC 6.3, SoC 6.2, and Appendix F of the EIS	These commitments are addressed in section 2.3.4 of this proposed modification.
Submit an operational noise auditing report to the D-G	Major Projects Implementation	Within 60 days of completing the operational noise monitoring program.	CoA 3.4	
Landscaping				
Monitor and maintenance of landscape or rehabilitation works by a landscape specialist	RMS Hunter Infrastructure Asset Management	Inspected yearly, based on these inspections maintenance requirements will be prioritised and a RMAP established.	SoC 13.4	Urban and Landscape Design Supplementary Report
Hazard and Risk Management				
Implement the Hazard and Risk Management Sub plan-Operation	RMS Hunter RFS	Hazard and risk management will be managed under the RMS Specification M1- General Network Management requirements	SoC 14.3	RMS Specification M1- General Network Management requirements
Waste				
Develop and implement procedures to avoid, minimise, reuse/recycle, treat and dispose of waste streams during operation.	RMS Hunter RFS	RFS has a Standard Operating Procedure (SOP) for waste management. This procedure includes procedures for avoid, minimise reuse/ recycle, treat and dispose of waste streams during operation.	Appendix F of the EIS	RMS Specification M1- General Network Management requirements. Road Services SOP (Environmental management) Waste Management.
Implement the Waste Management and Re-use Sub plan-Operation	RMS Hunter RFS	RFS would implement the Standard Operating Procedure (SOP) for waste management	SoC 15.3	
Town Improvements				
Undertake town improvement works in Bulahdelah such as: - The relocation of rest area toilet facilities currently adjacent the Bulahdelah Golf Course to a suitable location in Bulahdelah. -	Great Lakes Council	Agreement has been made with Great Lakes Council for RMS to fund town improvement works, which will be undertaken by the Council. RMS is currently seeking approval for the funds to be transferred to the council for the town improvement work. It is anticipates that this will occur prior to opening.	Appendix F of the EIS	These commitments are addressed in section 2.4.3 of this proposed modification
- Improving access (vehicular and pedestrian) to the public	Great Lakes Council		Appendix F of the EIS	

reserve south-west of existing Myall River bridge,				
- Providing limited on-street heavy vehicle parking facilities on existing highway near central service stations	Traffic Committee	Parking restrictions along the existing highway will be reviewed post opening. This is the responsibility of the traffic committee which includes a representative from RMS. This issue would be raised by the RMS representative post opening.	Appendix F of the EIS	
A streetscape scheme for the existing highway including landscaping and minor traffic calming.	Great Lakes Council	Agreement has been made with Great Lakes Council for RMS to fund town improvement works, which will be undertaken by the Council. RMS is currently seeking approval for the funds to be transferred to the council for the town improvement work. It is anticipates that this will occur prior to opening.	Appendix F of the EIS	
Energy and Resource Use				
Develop and implement maintenance procedures that ensure efficient work practices.	RMS Hunter RFS	Energy and resource use during the operational phase will be managed in accordance with the RMS Environmental Sustainability Strategy	Appendix F of the EIS	RMS Environmental Sustainability Strategy.

Appendix D – Minutes of Environmental Review Group (ERG) Meetings

Bulahdelah Bypass

ERG Meeting Minutes

Meeting Date	4th April 2012

Meeting Details

Project	Bulahdelah Bypass		
Day	Thursday 9am	Minutes Recorded by	David Bone
Location	BPL Compound, Bulahdelah		
Purpose	Site inspection, Site Debrief, Burdekins Gap Stockpile, Easter Shutdown, Approvals, Operational Mgt Plan		

Attendees

Name	Organisation
Simone Garwood (SG)	EPA
Alex Gale (AG)	BPL
Nathan Russel (NR)	BPL
Sam Leigh(SL)	BPL
David Bone (DB)	OSEM
David Ledlin (DL)	RMS
Bernie O'Brien (BoB)	RMS(PES)
Tony Compton (TC)	RMS
Douglas Flemming (DF)	RMS
Paul Stathis (PS)	BPL
Chris Sheen (CS) 5/4/11	DPI Fisheries
Apologies	
Brendon Titley (BT)	BPL
Bryce Gorham (BG)	EPA
Craig Harre (CH)	EPA (TSU)
James Sakker (JS)	DPI Fisheries
Janelle Bancroft (JB)	RMS (PHO)
Belinda Bock (BB)	RMS (PHO)

Meeting Minutes/Actions Start time 9am

Item	Summary Minutes	Action	
		by Whom	*by When*
1.0	**Welcome and introductions:** • David Bone (ER) chaired the meeting and all parties were introduced. • Due to the small number present at the ERG, a site inspection was held to ensure all aspects of site management was in place for the longer Easter break. • CS attended the site on 5/4/11to inspect and review the modified EWMS for sheet pile removal ands Smith Bridge removal		
2.0	**Site Inspection** The site was inspected from South to North, comments on particular areas were as follows. Particular changes which were evident to the group were: • Traffic Switch 3 was in operation over the northern interchange Lee St on ramp. • Additional switches in this area would likely be conducted in May (waste water access road) and August (Fry's Creek Bridge) weather permitting. • The new sediment basin in the old highway alignment was being constructed • Cut 2 still has 50,000m3 to be removed		
2.1	**Southern Floodplain area** • SG commented that all areas around stockpile F should be finished off as you go and not left to come back to. Cover and topsoil required over ASR material on two sides and cleanwater drain may need reinstatement after this process. • Lime stockpiled on stockpile area E to be spread, contained, capped prior to works being complete for Easter • Area 9 basin pump still not in place. Pump has been ordered but not delivered. • Additional sumps in area 9 created in front of basins to assist in dirty water mgt.		

Item	Summary Minutes	Action	
		by Whom	*by When*
	• The lime stockpile on the floodplain bridge west abutment requires reinstatement of bunding.		
2.2	**Myall River Sheetpile Removal** • CS commented to ensure silt curtains are in place. Two rows. • When the sheet pile is removed to document this through photographs. • Show the length of material removed(tape measure). As Fisheries wont be diving to assess the cut below bed level James Sakker will need to be confident that the cut has been achieved at the correct level below the bed. • I am assuming the original length of the sheet piling is recorded?	NR	**Ensure actions undertaken and supplied to DPI Fisheries**
2.2	**Bombah Point Road** • Upgrade controls over pipe between existing road and project		
2.3	**Basin 97700** • The treatment station assembled here was explained • SG commented that the basin required desilting	SL	**Desilt basin 97700**
2.4	**Lee Street Basin** • The baffle inserted in this basin to stop short circuiting needs to be extended above inlet. • SG commented to update the basin table for any capacity changes to basins.	SL	**Extend baffle**
2.5	**Waste Water Access Road Area** • The area to the west of the waste water access road contained a break in the bund which could allow dirty water to enter the clean water drain along the western side of the project. • Road milling towards the golf club access road was observed to be very dusty and close to the highway traffic.	SL SL	**Repair Bund** **Investigate milling operation to reduce dust.**
3.0	**Spoil Sites – Burdekins Gap** • Burdekins Gap spoil site signage is in place • SG requested that the NPWS ranger be contacted	SL	**Contact**

Item	Summary Minutes	Action	
		by Whom	*by When*
	regarding the use of the area and access arrangements • TC advised that wild horses are present in this area and to take care • SG asked if the known archaeology site had been fenced and/or managed? SL replied that it had been identified and was not impacted. • SL highlighted that the use of the stockpile would start after Easter.		**Ranger**
4.0	**Easter Shutdown** • SL highlighted the management of the site during the shutdown period • A crew is on standby each day if required • Contact points are the same as usual		
5.0	**Upcoming Works** • The 24hr bridge deck pour on the southern interchange will commence after Easter, with current planning for Wednesday 11/4/12. • Concrete trucks will be entering the site via the Pacific Highway at Gate 1.		
6.0	**Complaints** • SG noted that a complaint regarding early starting of works was not substantiated • SG asked if the OOHW notifications could also be sent to EPA		
7.0	**Operational Management** • DL highlighted that the newer consents do not have OEMP's included and that the project was looking to modify the conditions requiring these plans to be developed. • DL DF DB highlighted that this project has ongoing Mgt plans for key environmental aspects which would normally be part of OEMP, with other actions being considered standard and covered by existing RMS procedures.	DL	**Prepare mod.**
8.0	**Basin Management** • SG noted that all correlations between TSS and NTU should be sent to EPA prior to being used in the field.		

Item	Summary Minutes	Action	
		by Whom	*by When*
	• Methods described and agreed for basin testing are to be followed and no other methods are approved for use.		
7.0	**POEO Act reporting** • AG noted that BPL are ready to manage data uploads to website • AG requested a link to RMS project web page to be developed or a Pac Highway approach to reporting links to be discussed.	DL/BB	**RMS to advise BPL on links and reporting requirements**
Next Meeting to be held on 3rd May 2012 commencing at 9am. Location: BPL Compound			

Meeting closed at 12pm

Bulahdelah Bypass

ERG Meeting Minutes

Meeting Date	3rd May 2012

Meeting Details

Project	Bulahdelah Bypass		
Day	Thursday 9am	Minutes Recorded by	David Bone
Location	BPL Compound, Bulahdelah		
Purpose	Site inspection, Site Debrief, Myall River works, OOHW, OIAAG		

Attendees

Name	Organisation
Alex Gale (AG)	BPL
Nathan Russel (NR)	BPL
Sam Leigh(SL)	BPL
David Bone (DB)	OSEM
David Ledlin (DL)	RMS
Bernie O'Brien (BoB)	RMS(PES)
Tony Compton (TC)	RMS
Douglas Flemming (DF)	RMS
Paul Stathis (PS)	BPL
Chris Sheen (CS) 5/4/11	DPI Fisheries
Belinda Bock (BB)	RMS (PHO)
Apologies	
Simone Garwood (SG)	EPA
Brendon Titley (BT)	BPL
Melissa Mayfield-Smith (MMS)	RMS

Meeting Minutes/Actions Start time 9am

Item	Summary Minutes	Action	
		by Whom	*by When*
1.0	**Welcome and introductions:** • David Bone (ER) chaired the meeting and all parties were introduced. • Due to the small number present at the ERG, a site inspection was held to ensure all aspects of site management was in place.		
2.0	**Site Inspection** The site was inspected from South to North, comments on particular areas were as follows.		
2.1	**Myall River Sheetpile Removal** • CS commented at meeting of 5/4/11 "ensure silt curtains are in place. Two rows". CS noted on this inspection that the second curtain was still required to be installed. • Ensure that spoil placed on river bank is removed to behind sediment fence controls or to final location. • It was noted that the Smith Bridge had been entirely removed • Remove old redundant silt fence and install new fence • Repair exclusion fence around scarred tree on banks of Myall River prior to bank stabilization works.	SL	**Install silt curtains in Myall River as per EWMS. Remove spoil material. Install new fence and remove redundant materials.** **Repair exclusion fencing and signage**
2.2	**Golf Road Access Road** • Access road sealed and new basin under construction • New basin connection and spillway to be reworked.		
2.3	**Sensitive Area** • Basins (97300+97600) in this area need continued management as fill levels come up to ensure inlets are cut to allow water to enter the basins. Several berm failures noted where water cannot reach basin.	SL	**Repair damaged sections and upgrade controls to basins**
2.4	**Lee Street Basin** • The inlet to the basin could be better placed further away from the outlet and may catch additional water.	SL	**Investigate moving inlet.**
2.5	**Burdekins Gap Stockpile** • The stockpile site was inspected and was noted to be		

Item	Summary Minutes	Action	
		by Whom	*by When*
	70% complete. • Hydromulching of exposed surfaces is required. *Note: Inspection on 31/5/12 showed stockpile shaped and hydromulched with growth evident.*		
2.6	**Bombah Point Road** • The area over the headwall between the existing road and the new formation requires upgrading if it to remain open for more than 2 weeks. • RMS liaising with GLC regarding required drainage treatment for this area. *Note: Inspection of 31/5/12 shows this area has been upgraded as required.*	SL	**Upgrade Controls in this area**
2.7	**Cut 2** • Top bench in this cut has been hydromulched and has not grown. This area will need further treatment. Repair and respray when access is resolved.	SL	**Retreat batter**
2.8	**Cut 3** • Another 2 months work will be required in this area to bring the cut down to the required level. • This will require rock hammering and crushing • Dust will need to be actively managed in this area to avoid complaints		
2.9	**Cut 5 Stockpile** • This stockpile is temporary and is planned to be removed. *Note: Inspection on 31/5/12 noted this stockpile had been removed.*		
3.0	**Operational Management** • DL highlighted that MMS was preparing a review document to examine what additional management tasks were required in operation. • Ongoing tasks identified include: Squirrel Gliders, Orchids, Alunite Mine precinct. • BOB highlighted that ASR areas may also require ongoing monitoring.	DL	**Review ongoing operational tasks and prepare mod.**
4.0	**OOHW** • The modification document is still with EPA	SG	**Update ERG on progress with this application**

Item	Summary Minutes	Action	
		by Whom	*by When*
5.0	**6 Month Compliance Reports** • BOB highlighted that the 6th and 7th compliance reports were with DOPI for review.		
6.0	**Southern Interchange Bridge** • The 20 hour continuous deck pour was achieved with no issues or complaints noted.		
7.0	**OIAAG** • BB Updated the meeting on the progress with orchid monitoring. Given that one of the researchers (Dr Chris Howard) was leaving CSIRO. • The next meeting was to address updates to fire assets mapping including orchid zones and a research update • Ongoing operational monitoring was also to be addressed • BB to organize date for next meeting	BB	**Organise next OIAAG meeting**
8.0	**Standout Area** • The Paving teams work on the southern section of the project was noted as being the standout work area for this inspection. • Thanks to all the crews working in this area.		
Next Meeting to be held on 7th June 2012 commencing at 9am. Location: BPL Compound			

Meeting closed at 1pm

Bulahdelah Bypass

ERG Meeting Minutes

Meeting Date	7th June 2012

Meeting Details

Project	Bulahdelah Bypass		
Day	Thursday 9am	Minutes Recorded by	David Bone
Location	BPL Compound, Bulahdelah		
Purpose	Project update, Stockpiling (ASR), Operational Mgt Plan review, Orchid meeting agenda, Site inspection, EPL reporting, OOHW Management		

Attendees

Name	Organisation
David Ledlin (DL)	RMS
Melissa Mayfield-Smith (MMS)	RMS
David Bone (DB)	OSEM
Tony Compton (TC)	RMS
Douglas Flemming (DF)	RMS
Nathan Russel (NR)	BPL
Bernie O'Brien (BoB)	RMS(PES)
Paul Stathis (PS)	BPL
Sam Leigh(SL)	BPL
Simone Garwood (SG)	EPA
Belinda Bock (BB)	RMS (PHO)
Apologies	
Brendon Titley (BT)	BPL
Craig Harre (CH)	EPA (TSU)
James Sakker (JS)	DPI Fisheries
Janelle Bancroft (JB)	RMS (PHO)
Alex Gale (AG)	BPL

Meeting Minutes/Actions Start time 9am

Item	Summary Minutes	Action	
		by Who	*by When*
1.0	**Welcome and introductions:** • David Bone (ER) chaired the meeting and all parties were introduced. • Due to time constraints a site inspection was undertaken at the start of the meeting, with other discussions held following the site inspection		
2.0	**Site Inspection** Comments from the site inspection which occurred commencing from the south and travelling north were:		
2.1	***Spoil Sites*** • SG commented in general that all completed spoil sites on the floodplain should have rehabilitation works completed as soon as possible to avoid erosion and sedimentation of drains and maintenance issues • Burdekins Gap spoil site has been partially completed and has been hydromulched. SG commented that when more materials are placed in this area, ensure that NPWS has access to the National Park at all times. SL commented that he had met with the ranger but had been difficult to contact recently. NPWS access will be maintained. • TC commented that approximately 4000m3 of Acid Sulphate rock material was remaining in cut 2 to be spoiled in stockpiles. Spoil site E was dedicated for this purpose. • SG asked about water monitoring in this area. BoB replied that monitoring was undertaken regularly and results from the last lot of samples showed pH was within normal ranges with no issues noted to date. Monitoring was planned to continue currently.	SL	**Ensure rehab of spoil sites prioritised**
2.2	***MC20 (Southern Interchange off ramp)*** • SG commented to ensure water is directed to pits (which discharge to basins) as works progress through this area to avoid water ponding and flowing over batter slopes. • SG commented to repair the berm on this batter to prevent water flowing to floodplain area.	SL	**Ensure water directed to pits and repair bunds**
2.3	***Floodplain area***		

Item	Summary Minutes	Action	
		by Who	*by When*
	• SG commented to ensure that dirty water flows are directed to basins and that bunds over culverts are repaired. • Spoil site C is to become active again with some additional drainage works to alleviate flooding on an adjacent property also required. DB noted to ensure the archaeological PAD fence was replaced as it has perished, prior to works in this area. • SG commented that areas where fill has recently been placed have flat spots which are holding water and appear to be not flowing toward basins.	SL SL SL	**Ensure water directed to pits and repair bunds** **Repair PAD fence** **Advise team to ensure fills are sloped to direct water to basins or other measures taken.**
2.4	***Myall River South*** • SG commented to ensure that the area recently rehabilitated was still included on the after rainfall inspection as it is on the edge of the river bank. • SG requested that a berm or similar be constructed around the working platform fill material which has been stockpiled on the upper slopes of the levee bank. • SG noted that fill materials stored under the bridge have kept dry and thus are not a sedimentation risk. Good practice.	SL SL	**Ensure inspection include Myall River area** **Ensure bund placed around fill material**
2.5	***Wastewater Treatment Plant area Gate 6*** • SG commented that the temporary basin inlet was located at the outlet point. The inlet needs to be as far away from the outlet as possible to maximize the effectiveness of the basin. • SG commented that breaking up this catchment may assist with dirty water management.	SL	**Modify inlet where possible and break up catchment**
2.6	***Lee Street*** • SG requested that the source of dirty water in the basin be investigated to check if works to the east of the	SL	**Check source of**

Item	Summary Minutes	Action	
		by Who	*by When*
	traffic switch are entering this basin? • SL commented that the eastern area does not drain to this basin in general.		**water flow to basin.**
2.7	***Golf Club Access Road*** • All commented that sealing and works in this area were well executed and was a significant improvement from recent months. • SG commented to ensure that check structures installed were maintained regularly		
2.8	***Bombah Point Road*** • SG noted that sediment was going through controls at the edge of the culvert and needed repair or additional controls.	SL	**Review controls in this area**
2.9	***Cut 2*** • DL commented that some batter slopes are required to be reseeded. NR commented that additional seed was required for this. BoB replied that the seed has been ordered.		
2.10	***Stuart Street*** • BB commented that controls around the Stuart Street area basins need some maintenance. • SG commented that the area was in very good condition and well managed	SL	**Repair controls in this area**
3.0	**General Comments** The group commented on the huge effort put in across the site. Large areas were noted to be stabilized with hydromulching in all areas. PS noted that the team had a very positive attitude as a result of 4 weeks of good weather. DF noted that the northern interchange bridges deck pours had been completed without any issues or complaints. These pours occurred over 7 and 11 hrs from 4am in the morning.		
4.0	**Operational Management Planning** • DL highlighted that the newer consents do not have OEMP's included and that the project was looking to modify the conditions requiring these plans to be	DL	**Prepare mod.**

Item	Summary Minutes	Action	
		by Who	*by When*
	developed. • This project has several ongoing Mgt plans for key environmental aspects which would normally be part of OEMP, with other actions being considered standard and covered by existing RMS procedures. • Ongoing sub-plans which would require monitoring include: Orchids, Squirrel Gliders, ASR monitoring, town improvements and noise and vibration. • BPL have no ongoing operational actions for this project apart from structural defects • DF noted that the town improvements were likely to be complete before the project is finished and is unlikely to require any ongoing commitment as it will all be handed over to Great Lakes Council. • SG noted that consideration would need to be given to accessibility of the ongoing management as the conditions require the plan to be publicly available.	DL	**Ensure operational requirements are publicly available where required**
5.0	**POEO Act update** • DB highlighted that with changes to the POEO Act reporting requirements come into effect on 1 July 2012. • SL replied that BPL have reviewed required reporting and have a template/format prepared for uploading to BPL website with link to RMS project site.		
6.0	**Extension of work hours application** SL was asked where the application was up to? SL replied that initial comments from EPA and RMS had been addressed and the document was returned to EPA for final review prior to it being sent to DP&I for approval.	SG	**Review application and provide comment**
Next Meeting to be held on 5th July 2012 commencing at 9am. Location: BPL Compound			

Meeting closed at 2.30pm

Bulahdelah Bypass

ERG Meeting Minutes

Meeting Date	9th August 2012

Meeting Details

Project	Bulahdelah Bypass		
Day	Thursday 9am	Minutes Recorded by	David Bone
Location	BPL Compound, Bulahdelah		
Purpose	Project update, Frog fencing review, Floodplain bridges mgt, Myall River Bridges concrete cleaning proposal, Sensitive Area Lime stabilization treatments, Site inspection.		

Attendees

Name	Organisation
David Ledlin (DL)	RMS
David Bone (DB)	OSEM
James Sakker (JS)	DPI Fisheries
Chris Sheen (CS)	EPA
Tony Compton (TC)	RMS
Douglas Flemming (DF)	RMS
Nathan Russel (NR)	BPL
Bernie O'Brien (BoB)	RMS(PES)
Paul Stathis (PS)	BPL
Sam Leigh(SL)	BPL
Apologies	
Belinda Bock (BB)	RMS (PHO)
Brendon Titley (BT)	BPL
Alex Gale (AG)	BPL

Meeting Minutes/Actions Start time 9am

Item	Summary Minutes	Action

		by Who	*by When*
1.0	**Welcome and introductions:** • David Bone (ER) chaired the meeting and all parties were introduced. • Areas of interest from the draft Agenda were discussed and background on the sites to be inspected were discussed		
1.1	**Environmental Incidents** • No incidents or complaints were reported by BPL during this period • An incident raised in relation to the overfilling of a silo at the batch plant has been closed and it was confirmed that no material left site and no public complaints were received		
1.2	**OOHW approvals** • EPA confirmed that correspondence had been provided to the project supporting the proposed OOHW extension. • EPA representatives further confirmed that they agree with the process being undertaken in relation to community consultation and management of proposed OOHW.	SL/ DL	**Forward application to DP&I**
1.3	**Cut 2 Acid Sulphate Rock Management** • TC confirmed that the last blast in Cut 2 has occurred for the installation of median drainage and crushers are due to recommence in cut 2 in the next week.		
1.4	**Operational EMP** • DL updated the group on the progress on OMP modification and plan updates • DL explained that RMS proposes to utilize existing RFS management plans for most of the standard management requirements for the highway. • Other existing management sub - plans for the construction phase will be reviewed and used for management of flora and fauna where appropriate. • Plans for monitoring of ASR spoil sites and cut 2 will be prepared, as no existing sub plans cover this aspect. • JS asked about where drainage from cut went. TC explained that there are 2 drainage systems for the area, with non-acid water draining through cut 2 across		

Item	Summary Minutes	Action	
		by Who	*by When*
	Bombah Point Road to the Myall River basin. Potential acidic water from cut 2 drains to the basin at Bombah Point Road which has a limestone treatment prior to discharge. • SL reported that the current pH in this basin at the base of Cut 2 was low 6's. • The ER, EPA and DPI Fisheries representatives all agreed with the process outlined by DL for the modification of the OEMP condition.		
1.5	**MC20 Frog Fencing** • The design and installation of the frog fencing along this embankment (Southern Interchange off ramp), was reviewed in the field. • Issues were noted with the installation of shade cloth and a lack of wire bracing along the top of the fence. • Designs were reviewed and deficiencies noted to be rectified. • Deficiencies included mesh not trenched in, no caps on posts, 20mm overhanging lip on top of fence not present, water flow through fence to be reviewed. • Wire bracing along the top of the fence was noted on the drawings but was not identified as wire, with no detail on the type or strength. • Frog fence also needs detail for crossing culverts and drains • The basin in middle of interchange will likely need frog fence as it is connected to the west via a culvert allowing frog passage to the basin.	RMS	**Designs to be reviewed.**
2.0	**Site Inspection** Comments from the site inspection which occurred commencing from the south and travelling north were:		
2.1	**Cut 1** General comments on this area were to ensure that all works are completed in this area prior to traffic switches occurring. This included: toe drains, median works, false cut topsoiling and hydromulching, basin treatments.		
2.1	***Spoil Sites*** • BOB reported that current monitoring of the spoil sites		

Item	Summary Minutes	Action	
		by Who	*by When*
	showed neutral pH's		
2.2	***Floodplain Bridges area*** • JS commented that fill material should be removed to allow 100mm of water to flow/sit below bridges • This should be further reviewed when removing haul road to ensure flows maintained. DL/DB to review approvals and rehabilitation requirements. • Hydrocarbon spills and rubbish were noted around the equipment parking area by CS. No spill kit was present and the presence of hydrocarbons in the floodplain area si not good practice. *Note: SL contacted supervisor to have the spills and rubbish removed and advised that no further plant maintenance was to occur in this area. Plant maintenance was not permitted in this area under the existing arrangements for the use of this site as a parking area. The spill kit previously in this area was also to be returned to this area*	DL/ DB BPL	**Review haul road and piling platform approvals** **Toolbox on correct areas for plant servicing**
2.3	***Myall River Bridges*** NR described the process for concrete cleaning which was to be implemented for anti graffiti treatment on the bridges. • Dry sanding method with dust extractors was to be implemented for over water works. • Some stains on land based piers to be chemically cleaned. • A trial site for both methods will be setup on land to fine tune the methods • Land based piers will likely use chemical treatment depending on trials of dry method • Anit-graffiti treatment to be applied with a roller over water, spray may be used on land depending on trials. • The ERG group supported the methodology and the use of trials to determine best and safest method. • SL noted that the EWMS's for these tasks are to be on project centre • Access for local farmer is required under the bridges. RMS to determine where fencing required. Assess potential Archaeological issues in PAD area after design completed. • JS commented that the bridge areas were very well		

Item	Summary Minutes	Action	
		by Who	*by When*
	managed and the progressive rehabilitation of the banks and levee area was very good to see.		
2.4	***Sensitive area*** Discussion on the lime mixing operation in this area was undertaken • SL explained that the cut 3 material to be placed in this area was wet and required drying prior to placement • Current weather conditions (dry) have not seen this cut dry out • Mixing with lime is required to dry material to allow placement • Previous methods used on the floodplain and other wet areas where a bag was cut and an excavator and grader spread and mixed the lime is not supported in this area due to proximity of orchids and potential for lime dust drift into these areas • A 'Pulvi' mixer and lime spreader truck are proposed for this operation. • This operation is much less risky in terms of dust generation, with the truck depositing the lime in front of the Pulvi and then the Pulvi tracking over the material and combining it in a semi sealed chamber. The end product is cvlay material mixed with lime which is not dusty and can then be graded and rolled back into position • SL noted that the EWMS will be placed on Project Centre • DL commented that most orchids were located away from drainage lines so focus was on drift of dust rather than potential for high pH runoff as this was unlikely to affect orchids however water quality to be monitored also. SL commented that this method was only to be used where 100% runoff to basins could be achieved. • The ERG group identified the following points to manage: o Length of lime spread in front of Pulvi reduced to ensure no dust from lime remaining uncombined o Undertake monitoring of dust for pH change up and downwind of operation		

Item	Summary Minutes	Action	
		by Who	*by When*
	o Wind speed may be an issue. SL commented that this would be managed on site and where drift was evident, the operation would be ceased.		
3.0	**General Comments** NR noted that redundant fencing such as the blast exclusion fence was to be removed progressively as areas were completed. CS noted that spill kits around the office and other areas on site contained rubbish and that cigarette buts were becoming a common item on the ground around the office. A toolbox on rubbish and waste practices may be warranted.		
Next Meeting to be held on 6th September 2012 commencing at 9am. Location: BPL Compound			

Meeting closed at 2.30pm