



**NARRABRI MINE
ENVIRONMENTAL
MANAGEMENT SYSTEM**

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WHC_PLN_NAR_ENVIRONMENTAL MANAGEMENT STRATEGY

**ENVIRONMENTAL MANAGEMENT
STRATEGY**

FOR THE

NARRABRI MINE

Edition	Rev.	Comments	Author	Authorised By	Date
1	0	Initial document	D Young	C Burgess	December 2007
1	1	Stage 2 Revision	S Farrar	S Pegg	November 2011
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ACRONYMS USED THROUGHOUT THIS DOCUMENT

AEMR	-	Annual Environmental Management Report
AR	-	Annual Review
ACHMP	-	Aboriginal Cultural Heritage Management Plan
AQMP	-	Air Quality Monitoring Program
CHPP	-	Coal Handling and Preparation Plant
DP&E	-	Department of Planning and Environment
DTIRIS	-	Department of Trade and Investment, Regional Infrastructure and Services (includes the Division of Resources and Energy (DRE))
EA	-	Environmental Assessment
EMS	-	Environmental Management Strategy
EPA	-	Environment Protection Authority
EPBC	-	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth)
EPL	-	Environment Protection Licence
ESAP	-	Energy Savings Action Plan
LMP	-	Landscape Management Plan
Mtpa	-	Million tonnes per annum
MCP	-	Mine Closure Plan
ML	-	Mine Lease
NCOPL	-	Narrabri Coal Operations Pty Ltd
NM	-	Narrabri Mine
NSC	-	Narrabri Shire Council
NMP	-	Noise Management Plan
OEH	-	Office of Environment and Heritage (formerly Department of Environment, Climate Change and Water (DECCW))
PA	-	Project Approval
RMP	-	Rehabilitation Management Plan
SMP	-	Subsidence Management Plan
WMP	-	Water Management Plan
WCL	-	Whitehaven Coal Limited



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1. INTRODUCTION

The Narrabri Mine, operated by Narrabri Coal Operations Pty Ltd (NCOPL), is located approximately 30km south-southeast of Narrabri and 10km north-northwest of Baan Baa (Figure 1). NCOPL is a joint venture between Narrabri Coal Operations Pty Ltd (70.0%), Electric Power Development Co. Ltd (7.5%), EDF Trading (7.5%), Upper Horn Investments Ltd (7.5%), and Daewoo International Corporation and Korea Resources Corporation (7.5%). NCOPL is a 100% subsidiary company of Whitehaven Coal Limited (WCL), a publicly listed Company with several mining interests in the Gunnedah-Narrabri region of NSW.

This Environmental Management Strategy (EMS), which forms part of Narrabri Mines' Health, Safety and Environment Management System, describes the overall framework for environmental management on the mine site. The EMS also addresses the principal strategies to be adopted, including compliance management and monitoring, and the consultation / information dissemination processes.

The operations at the mine will be managed in an integrated manner:

- in accordance with PA 08_0144 MOD2, EPBC:2009/5003, leases and approvals issued by NSW Department of Trade & Investment, Regional Infrastructure and Services (DTIRIS), Narrabri Mine's Environment Protection Licence (EPL) 12789 and other licences and approvals from government agencies; and
- in a way which provides for the effective control of all aspects of the operation throughout the life of the mine, i.e. from pre-site development planning, through the site development, construction and operational phases, and culminating in the mine's decommissioning, final rehabilitation and, ultimately, lease relinquishment and/or satisfaction of long-term performance objectives or obligations.

The requirements of PA 08_0144 MOD2 with respect to the timing for submission and contents of the EMS are contained within *Condition (1) (a) – (f)* and *Condition (2) (a) – (h)* of Schedule 6. Table 1 below outlines the relevant consent conditions and where it has been addressed in this document.

Table 1: Relevant Project Approval Conditions (PA 08_0144 MOD2)

Project Approval Condition	Section of Document
Environmental Management Strategy (Schedule 6, Condition 1) The Proponent shall revise the Environmental Management Strategy for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with environmental management for the site (Stages 1 and 2) and subsequently implement this revised version of the Environmental Management Strategy to the satisfaction of the Director-General. This strategy must:	This Document
(a) be submitted to the Director-General for approval prior to 30 June 2011;	N/A
(b) provide the strategic context for environmental management of the project;	1.2



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Project Approval Condition	Section of Document
(c) identify the statutory requirements that apply to the project;	3
(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;	4.1
(e) describe the procedures that would be implemented to:	
<ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the operation and environmental performance of the project; 	4.7.1
<ul style="list-style-type: none"> • receive, handle, respond to, and record complaints; 	4.7.2
<ul style="list-style-type: none"> • resolve any disputes that may arise during the course of the project; 	4.7.4
<ul style="list-style-type: none"> • respond to any non-compliance; and 	4.8
<ul style="list-style-type: none"> • respond to emergencies; and 	4.9
(f) include a clear plan depicting all monitoring currently being carried out in the project area.	Figure 2
Management Plan Requirements (Schedule 6, Condition 2)	
The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:	This Document
(a) detailed baseline data;	1.2
(b) a description of;	
<ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant approval, licence or lease conditions); 	3
<ul style="list-style-type: none"> • any relevant limits or performance measures/criteria; 	Individual Management Plans
<ul style="list-style-type: none"> • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; 	Individual Management Plans
(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	4
(d) a program to monitor and report on the;	
<ul style="list-style-type: none"> • impacts and environmental performance of the project; 	4.4 & 5
<ul style="list-style-type: none"> • effectiveness of any management measures (see (c) above); 	4.4 & 5
(e) a contingency plan to manage any unpredicted impacts and their	5.2



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Project Approval Condition	Section of Document
consequences;	
(f) a program to investigate and implement ways to improve the environmental performance of the project over time;	4.4 & 5
(g) a protocol for managing and reporting any:	
<ul style="list-style-type: none"> • incidents; 	4.7.3
<ul style="list-style-type: none"> • complaints; 	4.7.2
<ul style="list-style-type: none"> • non-compliances with statutory requirements; and 	4.8
<ul style="list-style-type: none"> • exceedances of the impact assessment criteria and/or performance criteria; and 	Individual Management Plans
(h) a protocol for periodic review of the plan.	4.4.1-3



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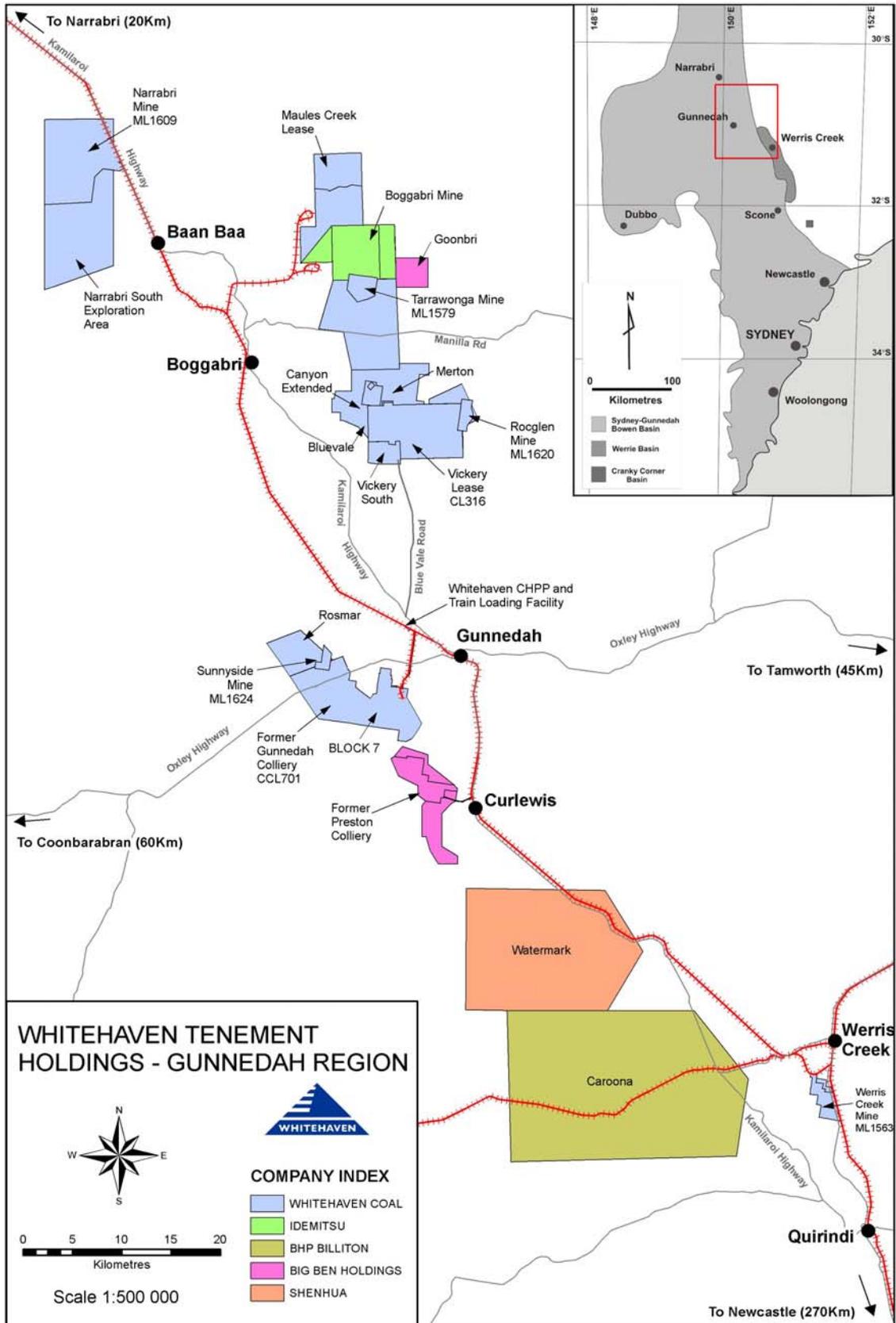


Figure 1: Narrabri Mine Location



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1.1. Project Approvals

Project Approval (PA) 05_0102 was issued for the Narrabri Mine Stage 1 Operations on 13 November 2007. A modification to this approval was sought and approved in 2010 to allow for the construction of a Coal Handling and Preparation Plant (CHPP), ventilation shaft and other long lead time items that would ultimately form part of an expanded longwall mining operation. Following detailed studies into the feasibility of Longwall mining at the Narrabri Mine, a project application was lodged under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), which was subsequently approved (PA 08_0144) by the Minister for Planning on 26 July 2010. Minor modifications to PA 08_0144 were approved by the Minister for Planning in March 2011 (an administrative modification in relation to the Extraction Plan – PA 08_0144 MOD1) and December 2011 (in relation to a one off transport of coal by road for an approximate 600 tonne bulk sample – PA 08_0144 MOD2). The Stage 2 Project Approval (PA 08_0144 MOD2) is reproduced in Appendix 1 and upon commencement of Longwall mining operations at the Narrabri Mine, the Stage 1 Operations PA 05_0102 MOD1 was relinquished. Key elements of the Stage 2 approval can be outlined as follows:

- Underground Longwall mining with an annual production rate of 8Mtpa;
- Mine ventilation and gas drainage;
- Mine dewatering;
- Emplacement of processing reject and storage of saline water;
- Construction and use of a water pipeline from the Namoi River;
- Transportation of the coal from the mine site to the Port of Newcastle via train;
- Final rehabilitation of surface disturbance following completion of the project; and
- All ancillary and related activities.

1.2. Strategic Context and Background Information

This EMS has been developed in accordance with Whitehaven Coals' Health, Safety and Environment Management System. The Whitehaven Systems and the Stage 2 Environmental Assessment (RWC, 2009) provide the strategic context for environmental management of the Narrabri Mine.

The Environmental Assessment (RWC, 2009), including the Specialist Consultant Studies Compendium's, provide the detailed background information for the Narrabri Mine on which this EMS is based.

1.3. Objectives

Narrabri Mine recognises that the success of the mine's development from a corporate, neighbour and broader community perspective will be enhanced through the achievement of the following objectives:



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- i. The development of a sense of project ownership, community membership and environmental responsibility by all Narrabri Mine and contracted personnel.
- ii. A recognition and acceptance of the physical, biological and social sensitivities of the site by all Narrabri Mine and contracted personnel.
- iii. Developing a culture of environmental awareness as an integral part of all planning and day-to-day activities. The awareness will be achieved through workforce and, to a lesser extent, community education.
- iv. Maintaining an honest and open relationship with the community members and ensuring expeditious responses to any issues which may arise.

To meet the objectives outlined above, this document outlines Narrabri Mines' approach to environmental management at the site.



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2. DESCRIPTION OF THE NARRABRI MINE

The Narrabri Mine lies within a 5,298ha area covered by mining lease ML 1609 (the “mine site”), with an indicative mining area of approximately 3,630ha, and a surface facilities area of approximately 457ha.

PA 08_0144 MOD2 approves the development and operation of the mine as an 8Mtpa underground longwall operation for a period of 21 years, although the Longwall mining method would provide for a mine life of approximately 30 years.

The mine has completed the development phase and is now in operation. Table 2 summarises the operating hours for the various activities undertaken at the Narrabri Mine.

Table 2: Approved Hours of Operations

Activity	Hours of Operation
Pit Bottom Area development	24 hours / 7 days
Underground mining	24 hours / 7 days
Gas drainage	24 hours / 7 days
Ventilation fan operation	24 hours / 7 days
Crushing, screening, washing and stockpiling	24 hours / 7 days
Rail loading and transportation	24 hours / 7 days
Surface maintenance	24 hours / 7 days
CPP reject disposal	24 hours / 7 days*
Raw materials / supply delivery	7:00am to 10:00pm / 7 days

* Reject disposal activities would generally be restricted to 7:00am to 10:00pm, 7 days per week. However, it is possible that the proportion of reject material generated by the CHPP may exceed the predicted average 5% level for short periods. To account for these periods of elevated reject production, contingent hours of operation would be 24 hours / 7 days (when inversion conditions do not prevail).

2.1. Existing Narrabri Mine Environmental Management Plans

Management plans and monitoring programs, which comprise the Narrabri Mine Environmental Management System, have been prepared and implemented for the Narrabri Mine in accordance with PA 08_0144 MOD2. As outlined in Schedule 2, Condition 11 of PA 08_0144 MOD2, certain strategies, plans and programs may be prepared and implemented on a progressive basis. Table 3 below outlines the status of management plans and monitoring programs required by the Stage 2 approval.

The environmental monitoring subject of the plans outlined below currently being undertaken at the Narrabri Mine is illustrated on Figure 2.



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Table 3: Status of Narrabri Mines' Management Plans and Monitoring Programs

Title	Stage 2 Status
Environmental Management Strategy	Approved 6 December 2011
Extraction Plan (includes Coal Resource Recovery Plan, Subsidence Monitoring Program, Built Features Management Plan, Land Management Plan, Biodiversity Management Plan, Heritage Management Plan, Water Management Plan and Public Safety Management Plan)	Extraction Plan for longwall panels (LW) 101 to 105 approved by DP&E on 27 March 2012 and DRE on 5 June 2012
Water Management Plan (includes Site Water Balance, Erosion and Sediment Control Plan, Groundwater and Surface Water Monitoring Programs, Raffinate Discharge and Transfer Control and Monitoring Plan, and Groundwater and Surface Water Response Plans)	Approved 5 April 2013 The Raffinate Discharge and Transfer Control and Monitoring Plan does not need to be produced and approved until 3 months prior to planned discharge or transfer from the site
Noise Management Plan	Approved 6 December 2011
Air Quality Monitoring Program	Approved 6 December 2011
Landscape Management Plan (includes Rehabilitation Management Plan and Mine Closure Plan)	Approved by DP&E 27 March 2012 DRE 5 June 2012, updated as part of the Extraction Plan
Aboriginal Cultural Heritage Management Plan	Approved 6 December 2011
Energy Savings Action Plan	Approved 11 August 2014
Greenhouse Gas Minimisation Plan	Approved 12 June 2012
Waste Management Plan	Approved 6 December 2011
Biodiversity Offset Strategy	Approved 11 August 2014

NOTE: Revisions to the relevant management plans occur following reviews triggered by the Project Approval and the current versions are available at www.whitehavencoal.com.au.



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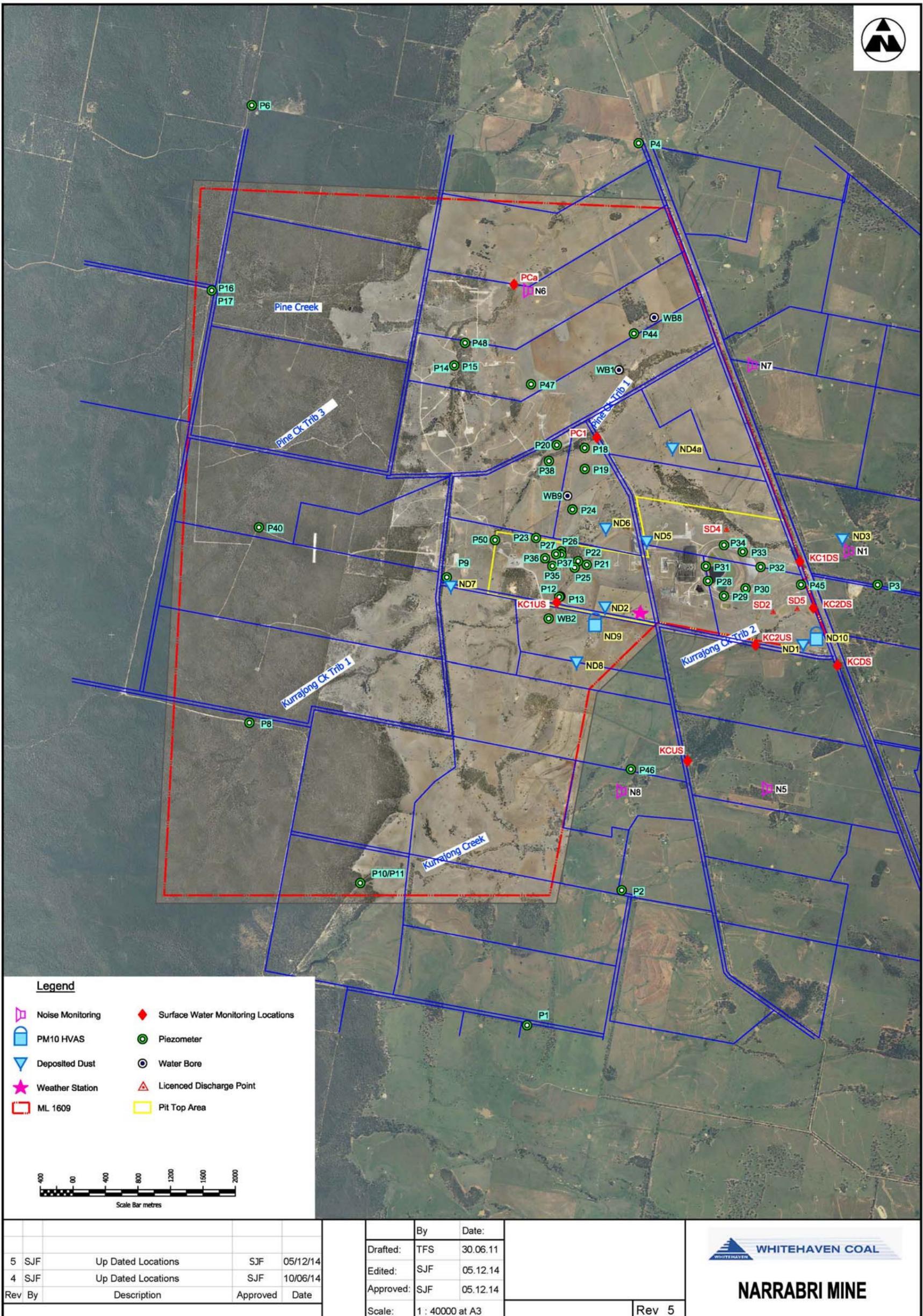


Figure 2: Current Environmental Monitoring Locations



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3. STATUTORY REQUIREMENTS

3.1. Approvals, Licences, Permits and Leases

All activities at or in association with the mine will be undertaken in accordance with the following approvals, licences, permits and leases which have been issued or have revisions pending:

- PA 08_0144 MOD2, granted by the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 21 December 2011, refer to Appendix 1.
- The conditions of Environment Protection Licence 12789 (EPL 12789) issued under the *Protection of the Environment Operations Act 1997* (POEO Act) on 24 November 2014.
- The prescribed conditions of Mining Lease (ML) 1609 issued by the Division of Resources and Energy under the *Mining Act 1992* and varied on 1 July 2014 by the Executive Director.
- EPBC: 2009/5003, granted by the Assistant Secretary pursuant to Sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* as varied on 29 October 2014.
- The prescribed conditions of Exploration Lease (EL) 6243 issued by the Department of Primary Industries under the *Mining Act 1992* on 19 October 2009 by the Minister for Mineral Resources.
- The prescribed conditions of SMP approval 10/9000 issued by the DRE under the *Mining Act 1992* on 13 April 2012.
- Water licences issued by the NSW Office of Water (NOW) under the *Water Act 1912* and the *Water Management Act 2000*.
- Road construction permits issued by Narrabri Shire Council and RTA under Section 138 of the *Roads Act 1993*.
- A licence issued by the WorkCover Authority under the *Explosives Act 2003* and *Explosive Regulation 2005* (for explosives magazines and fuel storage).
- Construction and Occupation Certificates for proposed building works issued by Narrabri Shire Council under Part 4A of the EP&A Act.
- Reject Emplacement Area approval 12/1580, granted by the Minister of Mineral Resources pursuant to Section 100 *Coal Mines Health and Safety Act 2002* on 23 November 2012.

3.2. Legislation

The key reference documents include the following Acts and their respective regulations:

- *Mining Act 1992*.



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- *Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)*
- *Explosives Act 2003.*
- *Coal Mine Health and Safety Act 2002.*
- *Work Health and Safety Act 2011.*
- *Environmental Planning and Assessment Act 1979.*
- *Protection of the Environment Operations Act 1997.*
- *National Parks and Wildlife Act 1974.*
- *Water Act 1912.*
- *Water Management Act 2000.*
- *Fisheries Management Act 1994.*
- *Roads Act 1993.*
- *Local Government Act 1993.*
- *Contaminated Land Management Act 1997.*
- *Soil Conservation Act 1938.*
- *Threatened Species Conservation Act 1995.*
- *Waste Avoidance and Resource Recovery Act 2001.*
- *Protection of the Environment Operations (Waste) Regulation 2005.*

3.3. Policies and Guidelines for Mining

The following policies and guidelines issued by the Division of Resources and Energy are, or are potentially, of relevance to the integrated Mine Management System for the mine:

- EDP11 Rehabilitation security deposit policy
- EDG01 Borehole Sealing Requirements on Land: Coal Exploration
- EDG02 Borehole Sealing Requirements on Beds of Waterbodies: Coal Exploration
- AEMR Guidelines for MOPs prepared to EDG03 requirements
- EDG10 Surface Disturbance Notice for Exploration Activities
- ESG1 Rehabilitation Cost Estimate Guidelines
- ESG2 ESG2 Environmental Impact Assessment Guidelines
- ESG3 Mining Operations Plan (MOP) Guidelines, September 2013
- MDG1006 Technical Reference for Spontaneous Combustion Management Guideline



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- MDG6001 Guidelines for the Permanent Filling and Capping of Surface Entries to Coal Seams
- ESB28 Environmental Incident Reporting Requirements

Other State and Federal Government Policies and Guidelines considered include:

- NSW Aquifer Interference Policy (NSW Office of Water, 2012);
- NSW State Groundwater Policy Framework Document (Department of Land and Water Conservation, 1997);
- National Water Quality Management Strategy (ANZECC and ARMCANZ, 1994);
- National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC, 2000);
- Managing Urban Stormwater: Soils and Construction and associated Volume 2E: Mines and Quarries (Department of Environment and Climate Change, 2008);
- Environmental Guidelines: Use of Effluent by Irrigation (Department of Environment and Conservation, 2004);
- NSW Biodiversity Offset Policy for Major Projects (Office of Environment and Heritage, 2014);
- EPBC Act Environmental Offsets Policy (Commonwealth Department of Sustainability, Environment, Water, Population and Communities, 2012);
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment and Climate Change, 2010);
- NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects (NSW Minerals Council Ltd, 2010);
- NSW Industrial Noise Policy (Environment Protection Authority, 2000);
- Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009);
- Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (Environment Protection Authority, 2007);
- Coal Mine Particulate Matter Control Best Practice – Site Specific Determination Guideline (Office of Environment and Heritage, 2011);
- National Greenhouse Accounts Factors (Commonwealth Department of Environment, 2014);
- Waste Classification Guidelines (Department of Environment and Climate Change, 2009);
- Guidelines for Energy Savings Action Plans (Department of Energy, Utilities and Sustainability, 2005);



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- Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007);
- Australian Dangerous Goods Code Edition 7.3 (Commonwealth National Transport Commission, 2014);
- Strategic Framework for Mine Closure (ANZMEC and MCA, 2000);
- Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth Department of Industry, 2006); and
- Storing and Handling Liquids: Environmental Protection – Participants Manual (Department of Environment and Climate Change, 2007).

3.4. Relevant Australian Standards

The following standards are, or are potentially, of relevance to the integrated Mine Management System for the mine. AS refers to an “Australian Standard, NZS refers to “New Zealand Standard” and ISO refers to the “International Organisation for Standardisation”:

- AS / NZS 3580.1.1:2007 – Methods for Sampling and Analysis of Ambient Air: Guide to Siting Air Monitoring Equipment.
- AS / NZS 3580.10.1:2003 (R2014) – Methods for Sampling and Analysis of Ambient Air: Determination of Particulate Matter – Deposited Matter – Gravimetric Method.
- AS / NZS 3580.9.6:2003 (R2014) - Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM(sub)10(/sub) high volume sampler with size-selective inlet - Gravimetric method.
- AS 2601:2001 – Demolition of Structures.
- AS 2187.2:2006 – Explosives: Storage and Use – Use of Explosives.
- AS 4282:1997 – Control of the Obtrusive Effects of Outdoor Lighting.
- AS 1940:2004 (incl. Amdt 1:2004; Amdt 2:2006) – The Storage and Handling of Flammable and Combustible Liquids.
- AS / NZS 1596:2014 – The Storage and Handling of LP Gas.
- AS / NZS / ISO 19011:2014 - Guidelines for Auditing Management Systems.



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4. SITE IMPLEMENTATION

4.1. Roles and Responsibilities

Ultimate responsibility for the achievement of the objectives outlined in Section 1.3 will lie with Narrabri Mine's General Manager. Overall site-based responsibility for all activities and all personnel on the mine site, including their compliance with all applicable laws, regulations, licences, approvals, the conditions of PA 08_0144 MOD2 and achievement of the desired environmental outcomes will be the responsibility of the General Manager.

Table 4 below outlines the roles responsibilities for all site personnel.

Table 4: Roles and Responsibilities

Role	Responsibilities
General Manager	<ul style="list-style-type: none"> ensure adequate people and resources are allocated to enable this EMS to be effectively implemented.
Mine Manager	<ul style="list-style-type: none"> ensuring all contractors, sub-contractors and service-personnel are appropriately qualified, competent and/or licensed to undertake the required work and have a good environmental performance record; ensuring all operations are undertaken in accordance with relevant environmental legislation and approvals; and workforce induction / training.
Group Environment Manager	<ul style="list-style-type: none"> ensure that people under their charge who have duties and responsibilities under this EMS undergo training and assessment in those duties; in consultation with the General Manager, liaise with relevant government authorities; ensure complaints are recorded and managed appropriately; and provide support and guidance to the Environmental Officer as required.
Technical Services Manager	<ul style="list-style-type: none"> ensure that people under their charge who have duties and responsibilities under this EMS undergo training and assessment in those duties; authorise this EMS; and provide support and guidance to the Environmental Officer as required.
Environmental Officer	<ul style="list-style-type: none"> implement this EMS with support and guidance from the Technical Services Manager and Group Environment Manager; monitor environmental performance at the site;



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Role	Responsibilities
	<ul style="list-style-type: none"> ensuring all operations are undertaken in accordance with relevant environmental legislation and approvals; receipt and response to complaints; co-ordination / management of monitoring programs; environmental reporting; environmental incident reporting; site rehabilitation; keeping abreast of new applicable developments in environmental research and technology as it applies to environmental management on mine sites; and post-induction education and contact with all site-based and contracted employees on environmental matters.
Site Managers	<ul style="list-style-type: none"> ensure activities under their control are undertaken in accordance with this EMS; bring to the attention of the Environmental Officer all complaints at first available opportunity; and maintain an awareness of environmental issues and report any possible non-conformances to the Environmental Officer.
Safety and Training Team	<ul style="list-style-type: none"> Maintain the Training Needs Analysis (TNA) and Training Competency Matrix's which records: name of the employee / contractor; required qualifications; and training undertaken.
Employees and Contractors	<ul style="list-style-type: none"> conduct all activities in accordance with this EMS; bring to the attention of their supervisor/manager all complaints at first available opportunity; and maintain an awareness of environmental issues and report any possible non-conformances to their supervisor/manager.

Though retaining the responsibilities identified above, the Mine Manager and Environmental Officer may, at their discretion, delegate specific tasks to suitably qualified and/or experienced operational personnel and/or consultants.

Figure 3 presents an overall environmental organisational structure for the mine.

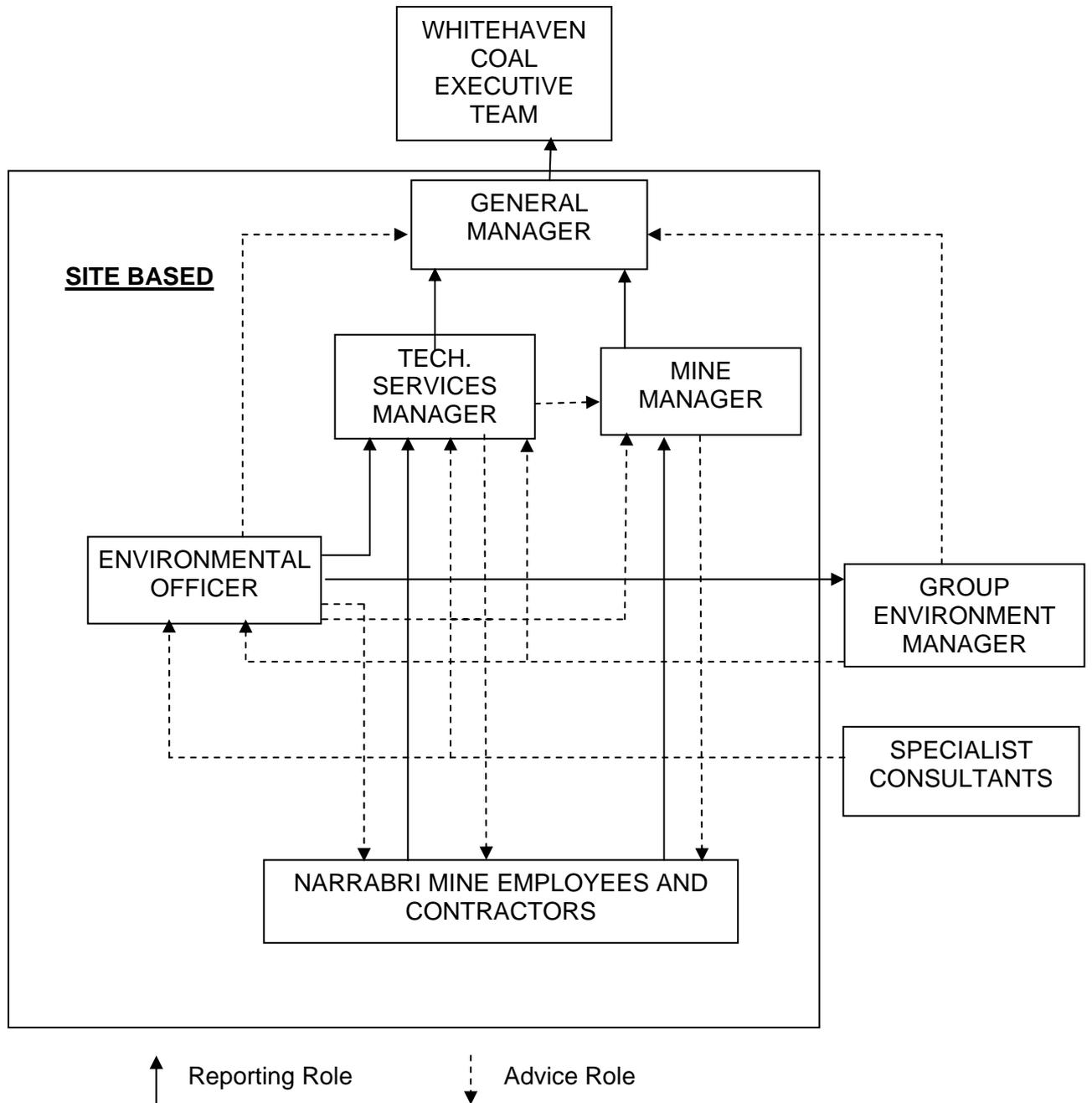


Figure 3: Environmental Management Organisational Structure

4.2. Training and Competencies

All training, competency assessment and maintenance of training records in relation to this EMS must be conducted in accordance with the requirements of the Narrabri Mine *Training and Competency Management Plan*.

The *Training and Competency Management Plan* defines the standards and procedures required and to assign responsibilities to persons to provide for the effective training, assessment and competency recognition of mine employees, contractors and visitors.



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4.3. Narrabri Mine Internal Communication

Communication of information related to this EMS must be conducted and recorded in accordance with the requirements of the Narrabri Mine *Information and Communication Arrangements Standard*.

4.4. EMS Monitoring and Corrective Action

4.4.1 Audits

The audit process and the completion and retention of audit records will be conducted in accordance with the requirements of the Narrabri Mine *Audit and Review Standard*.

The Environmental Officer will ensure that an internal audit of this EMS is conducted annually and that an external audit is carried out every three years as outlined in Project Approval 08_0144 MOD 2.

4.4.2 Reviews

Within 3 months of the submission of an Annual Review (AR), incident report, audit or any modification to the conditions of PA 08_0144 MOD 2, this EMS will be reviewed and if necessary revised. Any revisions to this document will be submitted to the Secretary for approval.

4.4.3 Plan Monitoring

In addition to the formal means of monitoring the performance of this EMS by scheduled audit and review, every person who performs a function defined by this EMS also has a responsibility to monitor the performance of this EMS and to bring to the attention of the Environmental Officer any non-conformance, deviation or potential improvement of which they may become aware.

4.4.4 Corrective Action

Where monitoring of this EMS identifies the need for corrective action to be taken, the Environmental Officer will prepare a corrective action plan. Preparation of the plan may require the assistance of internal and external specialists. Details on the preparation of the corrective action plan will be included in the relevant Annual Environmental Management Report (AEMR)/Annual Review (AR) and the site Environment Protection Licence (EPL) Annual Return, and forwarded to the relevant Government agencies prior to implementation.

4.5. Document Control

This EMS will be maintained in accordance with the mine's document control system:

- the master copy will be maintained electronically on the mine server;
- where alterations to the EMS are required, such as following formal review, the Environmental Officer will update the master copy and notify the Technical Services Manager and Group Environment Manager of the alteration; and
- the Environmental Officer will be the only person with access to the master copy for the purpose of making alterations.

Copies of the EMS printed from the mine server must be considered to be uncontrolled copies.



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4.6. Retention of Records

The Environmental Officer will ensure this EMS and associated records are retained on file at the mine for a period of at least 5 years.

4.7. Information Dissemination, Complaints and Incident Management and Dispute Resolution

4.7.1 Information Dissemination

Narrabri Mine is committed to a policy of community membership and a sense of mine ownership by employees and local community members, and will undertake a program of regular liaison / contact with local residents, landowners and the broader community to inform them of the mine's progress. Such a program will also provide an opportunity to discuss issues of "concern" which residents are reticent to register as complaints.

All such liaison / contacts / comments will be documented.

Dissemination of information to the local community and relevant agencies regarding the mining operation, its progress and environmental management performance, will be achieved by both formal and informal means including the following.

Community Consultative Committee (CCC)

The CCC includes a minimum of three representatives of the local community and one representative from Narrabri Shire Council, an independent chairperson, and a minimum of two representatives of Narrabri Mine and/or Whitehaven Coal Limited (WCL), one of which must have direct managerial responsibility for environmental management at the site. The committee will act as local focal points for the provision of information to, and receipt of comments from, community members. CCC meetings will be held at least four times per year during construction and during the first two years of operations. Beyond this period, the committee shall determine the required frequency of meetings. Narrabri Mine representatives will provide advice on the status of the mine's progress, environmental performance, monitoring results and complaints etc. The CCC meetings will also act as a forum for discussion of each of the above aspects or any other issue brought up by members of the community through the CCC representatives, or directly with the Narrabri Mine.

The minutes of the CCC meetings will be available on WCL's website (http://www.whitehavencoal.com.au/environment/narrabri_north_mine_environmental_management.cfm).

In addition to their tabling at CCC meetings, relevant environmental monitoring results pertaining to individual landholders will be provided on request, and all results will be available for public examination on the WCL website.

Narrabri Mine will provide the opportunity for the CCC and local residents, landholders, schools and community groups to visit the mine, as well as maintaining an open door policy for interested local residents, where practicable. The extent of visitation to the site will ultimately be governed by ensuring site safety standards are maintained at all times.



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Copies of all management plans / strategies or monitoring programs, together with the results of independent audits undertaken in accordance with PA 08_0144 MOD2 will also be provided to the CCC, Narrabri Shire Council,, and made publicly available on the WCL website.

Annual Environmental Management review (AEMR) / Annual Review (AR)

Each year, Narrabri Mine will prepare an AEMR/AR, which will:

- identify the standards and performance measures that apply to the development;
- include a summary of the complaints received during the past year;
- include a summary of the monitoring results on the development during the past year;
- include an analysis of the monitoring results against the relevant:
 - limits / criteria in this consent;
 - monitoring results from previous years; and
 - predictions in the Environmental Assessment;
- identify any trends in the monitoring over the life of the development;
- identify and discuss any non-compliance during the previous year; and
- describe what actions were, or are being, taken to ensure compliance.

The AEMR/AR will also address the matters identified in the DRE document entitled “Guidelines to the Mining, Rehabilitation and Environmental Management Process”.

The AEMR/AR will be provided to Narrabri Shire Council, relevant agencies and to the CCC members and also made available to the public on WCL’s website.

Other Methods

Visits by relevant government agencies, e.g. EPA, DRE and DP&E, to inspect the mine site and Narrabri Mine’s performance will be documented together with the provision of reports or information as requested.

Narrabri Mine will maintain regular formal and informal contact with relevant government agencies.

Narrabri Mine will provide reports to relevant government agencies in the event of a non-compliance or a potential non-compliance with respect to statutory criteria or guidelines.

An annual newsletter is developed for the mine, usually issued during late Summer. The newsletter includes an operations update, highlights any environmental incidents and provides contact information including listing the members of the CCC. The newsletter is delivered to the local area surrounding the mine and made available at various places in Narrabri and Baan Baa.

In addition to the above, Narrabri Mine may also utilise the local press to present feature articles on the mine’s progress.

4.7.2 Complaints Management

A complaints management protocol has been developed to ensure an appropriate and consistent level of reporting, response and follow-up is adopted by Narrabri Mine. At a minimum, the following complaints management protocol will be followed on all complaints received:



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- a publicly advertised telephone complaints line will be in place to receive complaints during operating hours and record complaints at other times.
- each complaint received will be recorded on a Complaints Register, which will include the following details:
 - the date and time of complaint;
 - any personal details the complainant wishes to provide or if no such details are provided a note to that effect;
 - the nature of the complaint;
 - the action taken by Narrabri Mine in relation to the complaint, including any follow-up contact with the complainant; and
 - if no action was taken by Narrabri Mine, the reason why no action was taken.
- the Environmental Officer will be responsible for ensuring that an initial response is provided within 24 hours of receipt of a complaint (except in the event of complaints recorded when the mine is not operational).
- the cause of the complaint and any required remedial actions identified.
- additional measures will be undertaken as required to address the complaint.
- once the identified measures are undertaken, the Environmental Officer will sign off on the relevant complaint within the Complaints Register.
- if necessary, the Environmental Officer will follow-up to confirm the source of the complaint is adequately mitigated.
- a copy of the Complaints Register will be kept by Narrabri Mine and made available to the CCC and the complainant (on request). A summary of complaints received every 12 months will be provided to DP&E, NSC, EPA, DRE and the CCC through the AEMR/AR.

Based on the nature of individual complaints, specific contingency measures may be implemented to the (reasonable) satisfaction of the complainant. The Group Environment Manager retains ultimate responsibility to ensure that complaints received are properly recorded and addressed appropriately.

4.7.3 Incident Management

In addition to the protocol for complaints management, environmental incidents at the Narrabri Mine will be managed in accordance with the sites' Emergency Management System and the mine's *Pollution Incident Response Management Plan* (PIRMP), a copy of which is available on WCLs website www.whitehavencoal.com.au. Environmental incidents will be reported using WCL's *Incident Report Form* and forwarded immediately to the Environmental Officer. Any corrective/preventative actions identified as a result of the incident will be implemented by the Environmental Officer. If notifications are required, this will be undertaken in accordance with the PIRMP and in accordance with the requirements of Schedule 6, Condition 4 of PA 08_0144 MOD 2.



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4.7.4 Dispute Resolution

In the event that any complainant does not consider the mine's response or reactions adequately address their concerns, the following procedure will be adopted:

- i. a meeting will be convened with the General Manager and/or Technical Services Manager and/or Group Environment Manager and Environmental Officer to seek resolution of the matter. The complainant will be provided with a written response from Narrabri Mine detailing the results of investigations to date and the agreed actions to be taken in respect of the measures to be implemented.
- ii. upon implementation of the nominated measures, a further meeting will be convened to seek advice of satisfaction or otherwise as to the outcomes.

If, after 21 days following Steps 1 and 2, the complainant believes the matter remains unresolved and no further agreement can be reached as to additional measures to be undertaken, the matter will be referred to the Secretary.

4.8. Response to Non-Compliances

Compliance with all approvals, plans and procedures will be the responsibility of all personnel (staff and contractors) employed on or in association with the mine, and will be developed through promotion of mine ownership under the direction of the General Manager and Environmental Officer.

The Environmental Officer and/or General Manager will undertake regular inspections, internal audits and initiate directions identifying any remediation / rectification work required, and areas of actual or potential non-compliance, with all directions provided to the relevant party in writing and/or diarised.

Any non-compliance with regulations, licences or approvals will be reported to the relevant authority, together with details of the corrective actions taken to avoid future occurrences. Areas of potential non-compliance which have the potential to cause environmental harm or result in complaints will also be reported to the relevant authority.

Non-compliances with the requirements of the mine's EPL will also be reported in each Annual Return.

A review of Narrabri Mine's compliance with all conditions of the PA 08_0144 MOD2, mining lease and all other approvals and licences will be undertaken prior to (and included within) each AEMR/AR submitted to the Director-General and DRE. The AEMR/AR will also be provided to NSC, relevant agencies, the Community Consultative Committee (CCC) and made available to the public on WCL's website. Additionally, an independent environmental audit will be undertaken a minimum of once every three years and the report submitted to the Secretary, Narrabri Shire Council, all relevant authorities and made available to the public on WCL's website. The independent audit will be undertaken by an appropriately certified auditor whose appointment has to be approved by the Secretary. A copy of all publicly available documents will be placed on WCL's website.



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4.9. Response to Emergencies

Narrabri Mine has developed a *Pollution Incident Response Management Plan* (PIRMP) as part of the requirements of the *Protection of the Environment Operations Act 1997* (POEO Act). The PIRMP provides emergency procedures for environmental incidents. Should an emergency occur the aim of any emergency procedure is take immediate action to minimise environmental harm and to mitigate the environmental impact, followed by corrective action to avoid a recurrence.

The objective of the PIRMP is to ensure the following:

- Minimise confusion by outlining a notification/communication protocol;
- Minimise damage to property and the environment by isolating the incident. This avoids further impact to the surrounding environment and preserves the area for investigation; and
- Minimise interruption to operations and preserve business assets as far as is practical.

Narrabri Mine will regularly review and, where necessary, revise its emergency preparedness and response procedures. Should an emergency incident occur, these procedures will be implemented and reviewed to ensure the response is practical and appropriate in practice.



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5. ENVIRONMENTAL PERFORMANCE

The success of Narrabri Mines' environmental performance will be assessed by way of its satisfaction of the conditions of PA 08_0144 MOD2, Conditions of Authority appended to the mining lease, and conditions within the Environment Protection Licence (EPL), other approvals, licences or leases. This, in turn, will be measured by way of achievement of key performance outcomes and satisfaction of Narrabri Mines' objectives with respect to the management of:

- Aboriginal cultural heritage;
- Flora and fauna;
- Surface and groundwater;
- Soil resources;
- Subsidence;
- Bushfire;
- Air quality;
- Noise;
- Visibility;
- Waste;
- Rehabilitation; and
- Socio-economic issues.

The assessment of performance, which may be quantitative and/or qualitative, will be reported in each relevant AEMR/AR.

Narrabri Mines' objectives and key performance outcomes with respect to each of the above areas, with the key performance outcomes being used as a means by which Narrabri Mine and others can assess progress towards the achievement of the nominated objectives. Specific monitoring programs, either those developed in satisfaction of the development consent or other leases, licences or approvals (or others developed independently by Narrabri Mine), will be progressively appended to this document and updated as warranted.

5.1. Continuous Improvement

Narrabri Mine will investigate and implement ways to improve the environmental performance of the project over time. This will be achieved by keeping abreast of best environmental management practices in the industry and reporting on environmental performance annually in the AEMR/AR. Stakeholder feedback will form an integral part of assessing environmental performance and assist in outlining measures for continuous improvement.



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5.2. Managing Unpredicted Impacts

It is considered unlikely that the operation of the Narrabri Mine will result in any unpredicted or unforeseen environmental impacts. In the event that unpredicted impacts do occur, these will be managed in accordance with the measures outlined in Section 4.7.



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6. REFERENCES

R.W. Corkery & Co Pty Ltd (RWC), 2009, *Environmental Assessment for the Narrabri Coal Mine Stage 2 Longwall Project*, Prepared on behalf of Narrabri Coal Operations Pty Ltd.



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Appendix 1: Consolidated Stage 2 Project Approval 08_0144 MOD2

(No. of pages excluding this page = 29)

Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

I approve the project referred to in schedule 1, subject to the conditions in schedules 2 to 7.

These conditions are required to:

- prevent, minimise and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

Richard Pearson
Deputy Director-General, DASP
as delegate for the Minister for Planning

Sydney

2010

SCHEDULE 1

Application No: 08_0144
Proponent: Narrabri Coal Operations Pty Limited
Approval Authority: Minister for Planning
Land: See Appendix 1
Project: Narrabri Coal Project – Stage 2

March 2011 modification in blue text
December 2011 modification in red text

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DEFINITIONS

<p>Annual Review Approved mine plan BCA Brine Built features</p> <p>CCC CMA Conditions of this approval Construction</p> <p>CPI Day</p> <p>DECCW Department Director-General Dispute resolution process EA</p> <p>Environmental consequences</p> <p>EP&A Act EP&A Regulation EPL Evening Feasible First workings</p> <p>GSC I&I NSW Incident</p> <p>km Land</p> <p>Material harm to the environment</p> <p>MSB Mining area Mining operations</p> <p>Minister Mitigation Mtpa Negligible Night</p> <p>NOW</p>	<p>The review required by Condition 6 of Schedule 6 The mine plan depicted in Figures 1 and 3 of Appendix 2 Building Code of Australia Very salty water Includes any building or work erected or constructed on land, and includes dwellings and infrastructure such as any formed road, any pipeline, water sewer, telephone, gas or other service main and communication towers Community Consultative Committee Catchment Management Authority Conditions contained in schedules 2 to 7 inclusive The demolition of buildings or works, carrying out of works and erection of buildings covered by this approval Consumer Price Index, as published by the Australian Bureau of Statistics The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays Department of Environment, Climate Change and Water Department of Planning Director-General of the Department, or delegate The independent dispute resolution process as described in Appendix 5 Environmental Assessment prepared for Narrabri Coal Pty Limited entitled <i>Stage 2 Narrabri Coal Project Environmental Assessment and Specialist Consultant Studies Compendium</i>, Volumes 1&2 (October 2009), including the <i>Response to Public and Government Agency Submissions</i> (May 2010) The environmental consequences of subsidence impacts, including: damage to built features; loss of surface flows to the subsurface; loss of standing pools; adverse water quality impacts; development of iron bacterial mats; cliff falls; rock falls; damage to Aboriginal heritage sites; impacts to aquatic ecology; ponding <i>Environmental Planning and Assessment Act 1979</i> <i>Environmental Planning and Assessment Regulation 2000</i> Environment Protection Licence issued under the POEO Act The period from 6 pm to 10 pm Feasible relates to engineering considerations and what is practical to build Development of the main headings and gate roads to establish access to the coal in the mining area Gunnedah Shire Council Industry and Investment NSW A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits of performance measures/criteria in this approval Kilometre In general, the definition of land is consistent with the definition in the EP&A Act. However, in relation to the noise and air quality conditions in Schedule 4 it means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval Harm to the environment is material if it involves actual or potential harm to the health or safety of human beings or ecosystems that is not trivial Mine Subsidence Board The area outlined by a dashed purple line on the figures in Appendix 2 The extraction, processing and transportation of coal on the site, including the formation of mine access drifts and associated surface infrastructure such as gas and water drainage facilities Minister for Planning, or delegate Activities associated with reducing the impacts of the project Million tonnes per annum Small and unimportant, such as not worth considering The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays DECCW's NSW Office of Water</p>
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NSC	Narrabri Shire Council
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency, or a mining company (or its subsidiary)
Project	The Stage 2 Narrabri Coal Project described in the EA
Proponent	Narrabri Coal Operations Pty Limited or any other person or persons who rely on this approval to carry out the project that is subject to this approval
Raffinate	Good quality water produced by a water conditioning plant, lower in salinity than the water fed to the plant. The “waste” produced by the plant is brine.
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Reasonable costs	The costs agreed between the Department and the Proponent for obtaining independent experts to review the adequacy of any aspects of the extraction plan, or where such costs cannot be agreed, the costs determined by the Dispute Resolution Process
Rehabilitation	The treatment or management of land disturbed by the project for the purpose of establishing a safe, stable and non-polluting environment including the remediation of impacts
Remediation	Activities associated with partially or fully repairing or rehabilitating the impacts of the project or controlling the environmental consequences of this impact
ROM	Run-of-mine
RTA	Roads and Traffic Authority
Second workings	Extraction of coal from longwall panels, mini-wall panels or pillar extraction
Site	All the land to which the project application applies, comprising the mining area and surface facilities area, as listed in Appendix 1 and shown in Appendix 2
Safe, serviceable & repairable	Safe means no danger to users who are present, serviceable means available for its intended use, and repairable means damaged components can be repaired economically
Stage 1 Approval	The project approval granted by the Minister Planning for the Narrabri Coal Project, dated 14 November 2007
Stage 2 Approval	This project approval, for Stage 2 of the Narrabri Coal Project which includes the introduction of longwall mining operations and increasing ROM coal production to 8.0 Mtpa
Statement of Commitments	The Proponent’s revised commitments in Appendix 3, dated May 2010
Steep slopes	An area of land having a natural gradient of between 33° and 66°
Subsidence	The totality of subsidence effects, subsidence impacts and environmental consequences of subsidence impacts
Subsidence effects	Deformation of the ground mass due to mining, including all mining-induced ground movements, such as vertical and horizontal displacement, tilt, strain and curvature
Subsidence impacts	Physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.

TERMS OF APPROVAL

2. The Proponent shall carry out the project generally in accordance with the:
 - (a) EA;
 - (b) statement of commitments (see Appendix 3);
 - (c) the modification application 08_0144 MOD 1 and accompanying letter prepared by Narrabri Coal Operations Pty Limited;
 - (d) the modification application 08_0144 MOD 2 and accompanying letter prepared by Narrabri Coal Operations Pty Limited; and
 - (e) conditions of this approval.

Note: The general layout of the project is shown in Figures 1 to 3 of Appendix 2.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent shall comply with any reasonable and feasible requirements of the Director-General arising from the Department's assessment of:
 - (a) any reports, plans, programs, strategies or correspondence that are submitted in accordance with the conditions of this approval; and
 - (b) the implementation of any actions or measures contained in these reports, plans, programs, strategies or correspondence.

LIMITS ON APPROVAL

5. The Proponent may undertake mining operations on the site for 21 years from the date of this approval.

Note: Under this Approval, the Proponent is required to rehabilitate the site and to perform additional undertakings to the satisfaction of the Director-General. Consequently, this approval will continue to apply in all other respects other than the right to conduct mining operations until the site has been rehabilitated to a satisfactory standard.

6. The Proponent shall not extract more than 8.0 million tonnes of ROM coal from the site per calendar year.
7. The Proponent shall transport all coal from the site by rail.
- 7A The Proponent may undertake a one off transport of coal by road of an approximate 600 tonne bulk sample of coal in accordance with the procedures, vehicle traffic route and transport operating hours as specified in the modification application 08_0144 MOD 2 and accompanying letter dated 12 December 2011 from Whitehaven Coal Mining Limited.
8. The Proponent shall not transport any coal reject from the site.

PLANNING AGREEMENTS

9. Within 6 months of this approval, the Proponent shall enter into planning agreements with Narrabri Shire Council (NSC), Gunnedah Shire Council (GSC) and the Minister in accordance with:
 - (a) Division 6 of Part 4 of the EP&A Act; and
 - (b) the terms of the Proponent's offers accepted at NSC's meeting of 16 February 2010, and GSC's meeting of 16 February 2010, which includes the matters set out in Appendix 4.

If there is any dispute between the Proponent and either NSC or GSC during the formal drafting of the planning agreements, then any of the parties involved may refer the matter to the Director-General for resolution.

SURRENDER OF STAGE 1 APPROVAL

10. Within 12 months of the date of this approval, the Proponent shall surrender its previous project approval for the Narrabri Coal Mine to the satisfaction of the Director-General, in accordance with section 75YA of the EP&A Act. Prior to the surrender of the Stage 1 approval, if there is any inconsistency between the Stage 1 and Stage 2 approvals, the conditions of the Stage 2 approval shall prevail to the extent of any inconsistency.

MANAGEMENT PLANS / MONITORING PROGRAMS

11. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

Note: The conditions of this approval require certain strategies, plans, and programs to be prepared for the project. They also require these documents to be reviewed and audited on a regular basis to ensure they remain effective. However, in some instances, it will not be necessary or practicable to prepare these documents for the whole project at any one time, particularly as these documents are intended to be dynamic and improved over time. Consequently, the documents may be prepared and implemented on a progressive basis, subject to the conditions of this approval. In doing this however, the Proponent will need to demonstrate that it has suitable documents in place to manage the existing operations of the project.

12. Stage 1 strategies, plans or programs continue to have effect until replaced by an equivalent approved strategy, plan or program prepared and approved under this approval.

STRUCTURAL ADEQUACY

13. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- *Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.*

DEMOLITION

14. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

OPERATION OF PLANT AND EQUIPMENT

15. The Proponent shall ensure that all plant and equipment used on site is:
 - (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS – MINING AREA

Note: These conditions should be read in conjunction with section 5 of the revised Statement of Commitments.

SUBSIDENCE IMPACT PERFORMANCE MEASURES

- The Proponent shall ensure that mine subsidence does not cause any exceedances of the performance measures in Table 1.

Table 1: Subsidence Impact Performance Measures

Water Resources	
Great Artesian Basin	The Proponent shall ensure that, within 5 years of the date of this approval, any loss of water flow into the Great Artesian Basin aquifers (equal to the maximum predicted impact, or the measured impact of the project, whichever is the greater), is managed, licensed or offset (including the possibility of injection of raffinate) to the satisfaction of NOW.
Biodiversity	
Flora and Fauna	The Proponent shall ensure that clearing and disturbance of vegetation above the mining area is minimised, to the satisfaction of the Director-General.

Note: The Proponent may be required to define other performance measures and performance indicators in management plans required under this approval (see eg condition 3 below).

Performance Measures – Built Features

- The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 2, to the satisfaction of the Director-General of I&I NSW.

Table 2: Subsidence Impact Performance Measures

Built Features	
All built features	Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repairable, and must be fully repaired or else replaced or fully compensated.
Public Safety	
Public Safety	No additional risk

Notes:

- 1) *The Proponent will be required to define more detailed performance indicators for each of these performance measures in Built Features Management Plans or Public Safety Management Plan (see condition 4 below).*
 - 2) *Requirements regarding safety or serviceability do not prevent preventative or mitigatory actions being taken prior to or during mining in order to achieve or maintain these outcomes.*
 - 3) *Compensation required under this condition includes any compensation payable under the Mine Subsidence Compensation Act 1961 and/or the Mining Act 1992.*
- Any dispute between the Proponent and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 2 is to be settled by the Director-General of I&I NSW. The Director-General of I&I NSW may seek the advice of the MSB on the matter. Any decision by the Director-General of I&I NSW shall be final and not subject to further dispute resolution under this approval.

Extraction Plan

- The Proponent shall prepare and implement Extraction Plans for any second workings to be mined to the satisfaction of the Director-General. Each Extraction Plan must:
 - be prepared by a team of suitably qualified and experienced persons whose appointment has been endorsed by the Director-General;

- (b) be approved by the Director-General before the Proponent carries out any of the second workings covered by the plan;
- (c) include detailed plans of the proposed first and second workings and any associated surface development;
- (d) include detailed performance indicators for each of the performance measures in Tables 1 and 2;
- (e) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this approval;
- (f) describe the measures that would be implemented to ensure compliance with the performance measures in Tables 1 and 2, and manage or remediate any impacts and/or environmental consequences;
- (g) include the following to the satisfaction of I&I NSW:
 - a Coal Resource Recovery Plan that demonstrates effective recovery of the available resource;
 - a Subsidence Monitoring Program to:
 - provide data to assist with the management of the risks associated with subsidence;
 - validate the subsidence predictions; and
 - analyse the relationship between the subsidence effects and impacts under the plan and any ensuing environmental consequences;
 - a Built Features Management Plan to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which:
 - addresses in appropriate detail all items of public infrastructure and all classes of other built features; and
 - has been prepared following appropriate consultation with the owner/s of potentially affected feature/s;
 - a Public Safety Management Plan to ensure public safety in the mining area; and
 - appropriate revisions to the Landscape Management Plan required under condition 3 of Schedule 5; and
- (h) include a:
 - Water Management Plan, which has been prepared in consultation with DECCW and NOW, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on surface water resources, groundwater resources and flooding, and which includes:
 - surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;
 - a program to monitor and report groundwater inflows to underground workings; and
 - a program to manage and monitor impacts on groundwater bores on privately-owned land;
 - Biodiversity Management Plan, which has been prepared in consultation with DECCW and I&I NSW, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on flora and fauna;
 - Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general;
 - Heritage Management Plan, which has been prepared in consultation with DECCW and relevant stakeholders for Aboriginal heritage, to manage the potential environmental consequences of the proposed second workings on heritage sites or values; and
- (i) include a program to collect sufficient baseline data for future Extraction Plans.

Notes:

Management plans prepared under condition 4(h) should address all potential impacts of proposed underground coal extraction on the relevant features. Other similar management plans required under this approval (eg under conditions 13 and 23 of schedule 4 or condition 3 of schedule 5) are not required to duplicate these plans or to otherwise address the impacts associated with underground coal extraction.

5. The Proponent shall ensure that the management plans required under condition 4(h) above include:
 - (a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this approval;
 - (b) a detailed description of the measures that would be implemented to remediate predicted impacts; and
 - (c) a contingency plan that expressly provides for adaptive management.

First Workings

6. The Proponent may carry out first workings within the underground mining area, other than in accordance with an approved extraction plan, provided that I&I NSW is satisfied that the first workings are designed to remain stable and non-subsiding in the long-term, except insofar as they may be impacted by approved second workings.

Note: The intent of this condition is not to require an additional approval for first workings, but to ensure that first workings are built to geotechnical and engineering standards sufficient to ensure long-term stability, with negligible resulting direct subsidence impacts.

Payment of Reasonable Costs

7. The Proponent shall pay all reasonable costs incurred by the Department to engage independent experts to review the adequacy of any aspect of an Extraction Plan.

SCHEDULE 4 SPECIFIC ENVIRONMENTAL CONDITIONS – SURFACE FACILITIES AREA AND GENERAL

NOISE

Note: These conditions should be read in conjunction with section 10 of the revised Statement of Commitments.

Impact Assessment Criteria

- The Proponent shall ensure that the noise generated by the project does not exceed the levels set out in Table 1 at any privately-owned residence.

Table 1: Impact assessment criteria dB(A)

Location	Day	Evening	Night	
	$L_{Aeq(15\text{ minute})}$	$L_{Aeq(15\text{ minute})}$	$L_{Aeq(15\text{ minute})}$	$L_{A1(1\text{ minute})}$
All privately-owned residences	35	35	35	45

Notes:

- To determine compliance with the $L_{Aeq(15\text{ minute})}$ limit, noise from the project is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECCW may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.
- These noise limits apply to applicable receivers under all meteorological conditions except for any one of the following:
 - wind speeds greater than 3 metres/second at 10 metres above ground level; or
 - temperature inversions of 1.5 - 4°C/100 metres and a source-to-receiver wind speed greater than 2 metres/second at 10 metres above ground level; or
 - temperature inversions of greater than 4°C/100 metres.
- The meteorological data to be used for determining meteorological conditions are the data recorded by the meteorological weather station to be determined in consultation with the DECCW.
- To determine compliance with the $L_{A1(1\text{ minute})}$ noise limits, noise from the project is to be measured at 1 metre from the dwelling façade. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECCW may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy).
- These limits do not apply if the Proponent has an agreement with the relevant owner/s of these residences to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

Noise Acquisition Criteria

- If the noise generated by the project exceeds the criteria in Table 2 at any residence on privately-owned land, or on more than 25% of any privately-owned land, then the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 5-7 of schedule 7.

Table 2: Noise acquisition criteria dB(A)

Location	Day	Evening	Night
	$L_{Aeq(15\text{ minute})}$	$L_{Aeq(15\text{ minute})}$	$L_{Aeq(15\text{ minute})}$
All privately-owned residences	40	40	40

Note: Noise generated by the project is to be measured in accordance with the notes presented below Table 1. For this condition to apply, the exceedances of the criteria must be systemic.

Additional Noise Mitigation Measures

3. If the noise generated by the project is equal to or exceeds the criteria in Table 3 at any residence on privately-owned land, then the Proponent shall, upon receiving a written request from the landowner, implement reasonable and feasible noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.

Table 3: Additional noise mitigation criteria

Location	Day L _{Aeq} (15 minute)	Evening L _{Aeq} (15 minute)	Night L _{Aeq} (15 minute)
All privately-owned residences	38	38	38

Note: Noise generated by the project is to be measured in accordance with the notes presented below Table 1. For this condition to apply, the exceedances of the criteria must be systemic.

Noise Management Plan

4. The Proponent shall revise the Noise Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with noise management (Stages 1 and 2) and subsequently implement this revised version of the Noise Management Plan to the satisfaction of the Director-General. This Plan shall:
 - (a) be prepared in consultation with DECCW by a suitably qualified expert whose appointment has been approved by the Director-General;
 - (b) be submitted to the Director-General for approval by 30 June 2011;
 - (c) include a Noise Monitoring Program incorporating:
 - real-time noise and temperature inversion monitoring; and
 - attended noise monitoring
 to monitor the performance of the project;
 - (d) include reactive noise control measures to manage noise impacts for sensitive receivers; and
 - (e) include a protocol to establish whether the project is complying with the noise impact assessment criteria in Table 1.

Continuous Improvement

5. The Proponent shall:
 - (a) implement all reasonable and feasible best practice noise mitigation measures;
 - (b) investigate ways to reduce the noise generated by the project, including off-site road and rail noise and maximum noise levels which may result in sleep disturbance; and
 - (c) report on these investigations and the implementation and effectiveness of these measures in the [Annual Review](#), to the satisfaction of the Director-General.

AIR QUALITY

Note: These conditions should be read in conjunction with section 11 of the revised Statement of Commitments.

Impact Assessment Criteria

6. The Proponent shall ensure that dust emissions generated by the project do not cause additional exceedances of the criteria listed in Tables 4 to 6 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.

Table 4: Long term impact assessment criteria for particulate matter

Pollutant	Averaging period	Criterion
Total suspended particulate (TSP) matter	Annual	90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	30 µg/m ³

Table 5: Short term impact assessment criteria for particulate matter

Pollutant	Averaging period	Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	50 µg/m ³

Table 6: Long term impact assessment criteria for deposited dust

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month

Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1-2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.

Air Quality Monitoring

7. The Proponent shall revise the Air Quality Monitoring Program for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with air quality (Stages 1 and 2) and subsequently implement this revised version of the Air Quality Monitoring Program to the satisfaction of the Director-General. This program must:
 - (a) be submitted to the Director-General for approval prior to 30 June 2011;
 - (b) be prepared in consultation with DECCW; and
 - (c) use a combination of high volume samplers and dust deposition gauges to monitor the performance of the project.

METEOROLOGICAL MONITORING

8. During the project, the Proponent shall ensure there is a suitable meteorological station on site that complies with the requirements in *Approved Methods for Sampling of Air Pollutants in New South Wales* (DECC, 2007), or its latest version.

WATER MANAGEMENT

Note: These conditions should be read in conjunction with sections 6 and 7 of the revised Statement of Commitments.

Groundwater Model

9. Within 2 years of the commencement of longwall coal extraction, and every 5 years thereafter, the Proponent shall undertake a transient calibration of the groundwater model presented in the EA, in consultation with NOW, and to the satisfaction of the Director-General. This re-calibration of the groundwater model must include forward impact predictions of brine re-injection to the mine's goaf at the conclusion of mining operations.

Discharges

10. Except as may be expressly provided for by an EPL, the Proponent shall not discharge any waters from the disturbed areas of the site. However, raffinate from the water conditioning plant may be transferred to water users in accordance with an approved Water Management Plan (see below).

11. Any raffinate from the water conditioning plant discharged to the Namoi River must be discharged in accordance with the conditions of an EPL and meet the following criteria:
 - (a) 50 percentile of all samples (volume based) are below 250 mg/l of Total Dissolved Solids;
 - (b) 100 percentile of all samples (volume based) are below 350 mg/l of Total Dissolved Solids; and
 - (c) pH values of all sampled water to be between 6.5 and 8.5.
12. Within 3 years of the date of this approval, or otherwise agreed by the Director-General, the Proponent must commission the water conditioning plant identified in the EA, to the satisfaction of the Director-General.

Water Management Plan

13. Prior to 30 June 2011, the Proponent shall revise the Water Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with water management (Stages 1 and 2) and subsequently implement this revised version of the Water Management Plan to the satisfaction of the Director-General. This revised plan must be produced in consultation with DECCW and NOW by suitably qualified expert/s whose appointment/s have been approved by the Director-General and include a:
 - (a) Site Water Balance;
 - (b) Erosion and Sediment Control Plan;
 - (c) Surface Water Monitoring Plan;
 - (d) Raffinate Discharge and Transfer Control and Monitoring Plan;
 - (e) Groundwater Monitoring Program; and
 - (f) Surface and Groundwater Response Plan, setting out the procedures for:
 - investigating, and if necessary mitigating, any exceedances of the surface or groundwater assessment criteria (see conditions 16(b) and 18(c)); and
 - responding to any unforeseen impacts of the project.

Note: The Raffinate Discharge and Transfer Control and Monitoring Plan does not need to be produced and approved until 3 months prior to the planned discharge or transfer of raffinate from the site.

Site Water Balance

14. The Site Water Balance must:
 - (a) include details of:
 - sources and security of water supply;
 - underground water make;
 - water use on site;
 - water management on site;
 - off-site water transfers;
 - reporting procedures;
 - (b) describe measures to minimise water use by the project; and
 - (c) be reviewed and recalculated each year in the light of the most recent water monitoring data.

Erosion and Sediment Control

15. The Erosion and Sediment Control Plan must:
 - (a) be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction* manual (Landcom, 2004), or its latest version;
 - (b) identify activities that could cause soil erosion and generate sediment;
 - (c) describe measures to minimise soil erosion and the potential for transport of sediment to downstream waters;
 - (d) describe the location, function, and capacity of erosion and sediment control structures; and
 - (e) describe what measures would be implemented to monitor and maintain the structures over time.

Surface Water Monitoring Program

16. The Surface Water Monitoring Plan must include:
 - (a) detailed baseline data on surface water flows and quality in creeks and other water bodies that could be affected by the project;
 - (b) surface water impact assessment criteria;
 - (c) a program to monitor the impact of the project on surface water flows and quality;
 - (d) procedures for reporting the results of this monitoring.

Raffinate Discharge and Transfer Control and Monitoring Plan

17. The Raffinate Discharge Control and Monitoring Plan must:
- be approved by the Director-General prior to any raffinate discharge to the Namoi River;
 - include measures for the continuous monitoring and recording of volumes of water discharged to the Namoi River;
 - contain an ambient water quality monitoring program upstream and downstream of the discharge point; and
 - contain a water quality monitoring program for discharged waters.

Groundwater Monitoring Program

18. The Groundwater Monitoring Program must include:
- further development of the regional and local groundwater model;
 - detailed baseline data to benchmark the natural variation in groundwater levels, yield and quality (including at any privately owned bores in the vicinity of the site);
 - groundwater impact assessment criteria;
 - a program to monitor the impact of the project on groundwater levels, yield and quality;
 - a program to monitor any impacts of the project on the Namoi River Alluvium;
 - a program to monitor (by the use of shallow piezometers/lysimeters), detect, and quantify any leakage/leachate from the site's evaporation/storage ponds, brine storage area or coal reject emplacement area; and
 - procedures for reporting the results of this monitoring.

Evaporation/Storage Ponds

19. The Proponent shall ensure that the integrity of the low permeability layers lining the evaporation/storage ponds is maintained and achieves a permeability of less than 1×10^{-14} m/s whenever these ponds are in use for the storage of saline waters and less than 1×10^{-9} m/s when being used to store raffinate or captured surface waters.

Brine Storage Ponds

20. The Proponent shall ensure that the integrity of the low permeability layers lining the brine storage ponds is maintained and achieves a permeability of less than 1×10^{-14} m/s whenever these storage ponds are in use.

Review of Brine Management and Beneficial Use of Water and Brine

21. Within 2 years of commissioning the water conditioning plant, and every 5 years thereafter, unless otherwise directed by the Director-General, the Proponent shall engage suitably qualified experts approved by the Director-General to review brine management and beneficial use options for raffinate, brine and minewater produced by the project. The Proponent shall implement all reasonable and feasible recommendations of these reviews, to the satisfaction of the Director-General.

HERITAGE

Note: These conditions should be read in conjunction with section 9 of the revised Statement of Commitments.

Aboriginal Cultural Heritage Management Plan

22. The Proponent shall not destroy damage or deface any known Aboriginal objects (as defined in the *National Parks and Wildlife Act 1974*) without the written approval of the Director-General.
23. The Proponent shall revise the Aboriginal Cultural Heritage Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with Aboriginal cultural heritage management for the site (Stages 1 and 2) and subsequently implement this revised version of the Aboriginal Cultural Heritage Management Plan to the satisfaction of the Director-General. This plan must:
- be submitted the Director-General by 30 June 2011;
 - be prepared in consultation with the DECCW, the Narrabri Local Aboriginal Land Council and the Narrabri Goomeroi Aboriginal Corporation;
 - include a protocol for the ongoing consultation and involvement of Aboriginal communities in the conservation and management of Aboriginal heritage on site; and

- (d) describe the measures that would be implemented to protect Aboriginal sites on the mine site, (in particular all known Aboriginal sites on lands overlying Longwalls 1-3 and sites 10b, 38, 39 and 106-112), or any new Aboriginal objects or skeletal remains that are identified during the project.
24. Prior to undertaking any activities involving surface disturbance or vegetation removal for the lands overlying Longwalls 8-26, the Proponent shall undertake a detailed Aboriginal cultural heritage survey in consultation with the local Aboriginal community and DECCW, and to the satisfaction of the Director-General. The Director-General may approve this survey being undertaken in several stages, as mining progresses.

TRANSPORT

Note: These conditions should be read in conjunction with section 13 of the revised Statement of Commitments.

Mine Access Road Intersection

25. The Proponent shall maintain the Mine Access Road Intersection with Kurrajong Creek Road and the Kamilaroi Highway in consultation with NSC and to the satisfaction of RTA.

Greylands and Scratch Roads

26. Prior to using Greylands and Scratch Roads to construct mine-related infrastructure, the Proponent shall enter into an agreement with NSC to:
- (a) construct watercourse crossings (either culverts or concrete causeways) on those sections of these roads that it uses in a manner that does not restrict fish passage, in consultation with I&I NSW (Fisheries) and to the satisfaction of NSC; and
 - (b) fund the maintenance of those sections of these roads that it uses to an all-weather unsealed road standard.

Gunnedah Traffic Management Study

27. The Proponent shall contribute, on an equitable basis with other coal project rail users, to the costs of an independent Traffic Management Study analysing the impacts of increased rail traffic on road safety and congestion due to increased closure of rail level crossings within Gunnedah, prepared to the satisfaction of GSC.

Note: This study should examine funding mechanisms to implement any recommendations to improve road safety and reduce traffic congestion associated with rail level crossings and be completed by 30 June 2011.

VISUAL

Note: These conditions should be read in conjunction with section 14 of the Statement of Commitments.

Visual Amenity

28. The Proponent shall minimise the visual impacts of the project to the satisfaction of the Director-General.

Lighting Emissions

29. The Proponent shall ensure that:
- (a) no outdoor lights shine above the horizontal; and
 - (b) all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*.

ENERGY EFFICIENCY AND GREENHOUSE GAS

Note: These conditions should be read in conjunction with section 11 of the revised Statement of Commitments.

Energy Savings Action Plan

30. The Proponent shall revise the Energy Savings Action Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with energy management for the site (Stages 1

and 2) and subsequently implement this revised version of the Energy Savings Action Plan to the satisfaction of the Director-General. This plan must:

- (a) be prepared in consultation with DECCW;
- (b) be prepared in accordance with the *Guidelines for Energy Savings Action Plans* (DEUS, 2005), or its latest version;
- (c) be submitted to the Director-General for approval prior to 30 June 2011; and
- (d) include a program to monitor the effectiveness of measures to reduce energy use on site.

Gas Drainage

31. The Proponent shall implement all reasonable and feasible measures to minimise the greenhouse gas emissions from the underground mining operations to the satisfaction of the Director-General.
32. Prior to carrying out longwall coal mining operations, the Proponent shall submit a Greenhouse Gas Minimisation Plan for the approval of the Director-General. This plan must:
 - (a) be prepared in consultation with DECCW;
 - (b) identify options for minimising greenhouse gas emissions from underground mining operations, with a particular focus on capturing and/or using these emissions;
 - (c) investigate the feasibility of implementing each option;
 - (d) propose the measures that would be implemented in the short to medium term on site; and
 - (e) include a research program to inform the continuous improvement of the greenhouse gas minimisation measures on site.

WASTE

Note: These conditions should be read in conjunction with section 3 of the revised Statement of Commitments.

Waste Minimisation

33. The Proponent shall revise the Waste Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with waste management for the site (Stages 1 and 2) and subsequently implement this revised version of the Waste Management Plan to the satisfaction of the Director-General. This plan must:
 - (a) be submitted to the Director-General for approval prior to 30 June 2011;
 - (b) identify the various waste streams of the project;
 - (c) describe what measures would be implemented to reuse, recycle, or minimise the waste generated by the project;
 - (d) ensure irrigation of treated wastewater is undertaken in accordance with *Environmental Guidelines: Use of Effluent by Irrigation* (DEC, 2004), or its latest version; and
 - (e) include a program to monitor the effectiveness of these measures.

SCHEDULE 5 REHABILITATION AND OFFSETS

REHABILITATION

Note: These conditions should be read in conjunction with sections 4, 8 and 12 of the revised Statement of Commitments and condition 3(c) of schedule 3.

Rehabilitation Objectives

1. The Proponent shall rehabilitate the site to the satisfaction of the Director-General and I&I NSW in accordance with the rehabilitation objectives in Table 1.

Table 1: Rehabilitation Objectives

Domain	Rehabilitation objective
Surface Facilities Area	Set through condition 4 below
Other land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: <ul style="list-style-type: none"> • comprised of local native plant species; with • a landform consistent with the surrounding environment
Built features	Repair/restore to pre-mining condition or equivalent
Community	Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment
	Ensure public safety

Note: The Proponent may be required to define other rehabilitation objectives in management plans or strategy required under this schedule.

Progressive Rehabilitation

2. To the extent that mining operations permit, the Proponent shall carry out rehabilitation progressively, that is, as soon as reasonably practicable following the disturbance.

Landscape Management Plan

3. The Proponent shall revise the Landscape Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with landscape management for the site (Stages 1 and 2) and subsequently implement this revised version of the Landscape Management Plan to the satisfaction of the Director-General and I&I NSW. This plan must:
 - (a) be submitted to the Director-General for approval by 30 June 2011;
 - (b) be prepared by suitably qualified expert/s whose appointment/s have been endorsed by the Director-General;
 - (c) be prepared in consultation with NOW, DECCW and NSC; and
 - (d) include a:
 - Rehabilitation Management Plan; and
 - Mine Closure Plan.

Rehabilitation Management Plan

4. The Rehabilitation Management Plan must include:
 - (a) the rehabilitation objectives for the site;
 - (b) a strategic description of how the rehabilitation of the site would be integrated with surrounding land use;
 - (c) a general description of the short and long term measures that would be implemented to rehabilitate the site;
 - (d) a detailed description of the measures that would be implemented to remediate predicted subsidence impacts under individual Extraction Plans;
 - (e) a detailed description of the measures that would be implemented to minimise environmental impacts of mining operations and to rehabilitate the site, including measures to be implemented for:
 - managing remnant vegetation and habitat on site;
 - minimising impacts on fauna;
 - minimising visual impacts;
 - conserving and reusing topsoil;

- controlling weeds, feral pests, and access;
 - managing bushfires; and
 - managing any potential conflicts between rehabilitation works and Aboriginal cultural heritage.
- (f) detailed performance and completion criteria for the rehabilitation of the site;
- (g) a detailed description of how the performance of the rehabilitation works would be monitored over time to achieve the stated objectives and against the relevant performance and completion criteria; and
- (h) details of who is responsible for monitoring, reviewing and implementing the plan.

Note: In accordance with condition 11 of schedule 2, the preparation and implementation of Rehabilitation Management Plans is likely to be staged, with each plan covering a defined area (or domain) for rehabilitation. In addition, while mining operations are being carried out, some of the proposed remediation or rehabilitation measures may be included in the detailed management plans that form part of the Extraction Plan. If this is the case, however, then the Proponent will be required to ensure that there is good cross-referencing between the various management plans.

Mine Closure Plan

5. The Mine Closure Plan must:
- (a) define the objectives and criteria for mine closure;
 - (b) investigate options for the future use of the site;
 - (c) provide a detailed methodology for decommissioning the site's evaporation/storage ponds and the treatment of any accumulated salt within or around those ponds;
 - (d) investigate ways to minimise the adverse socio-economic effects associated with mine closure, including reduction in local and regional employment levels;
 - (e) describe the measures that would be implemented to minimise or manage the on-going environmental effects of the project; and
 - (f) describe how the performance of these measures would be monitored over time.

OFFSETS

Biodiversity Offset Strategy

6. The Proponent shall provide a suitable biodiversity offset strategy to compensate for the impacts of Stages 1 and 2 of the project. This offset strategy must:
- (a) be prepared in consultation with DECCW;
 - (b) be submitted to the Director-General for approval by 31 December 2010, or as otherwise agreed by the Director-General;
 - (c) provide a detailed assessment of offset proposal/s involving the property/ies (agreed to by DECCW) adjoining Mt Kaputar National Park to confirm the ability of either of these property/ies to meet "like for like or better" and "maintain or improve" conservation outcomes;
 - (d) include and assess proposals to offset impacts to the Inland Grey Box EEC, *Bertya opposens*, and foraging habitat for the Superb Parrot;
 - (e) include proposals on offsetting both direct and indirect impacts (ie edge effects) of the project; and
 - (f) determine the best overall combination of lands to provide a suitable offset.
7. The Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas by 31 December 2011, or other date agreed by the Director-General, to the satisfaction of the Director-General.

SCHEDULE 6

ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING

Note: This schedule should be read in conjunction with sections 15, 16 and 17 of the revised Statement of Commitments.

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Proponent shall revise the Environmental Management Strategy for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with environmental management for the site (Stages 1 and 2) and subsequently implement this revised version of the Environmental Management Strategy to the satisfaction of the Director-General. This strategy must:
 - (a) be submitted to the Director-General for approval prior to 30 June 2011;
 - (b) provide the strategic context for environmental management of the project;
 - (c) identify the statutory requirements that apply to the project;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the project;
 - respond to any non-compliance; and
 - respond to emergencies; and
 - (f) include a clear plan depicting all the monitoring currently being carried out in the project area.

Management Plan Requirements

2. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria;
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - impacts and environmental performance of the project;
 - effectiveness of any management measures (see (c) above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences;
 - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
 - (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
 - (h) a protocol for periodic review of the plan.

Revision of Strategies, Plans and Programs

3. Within 3 months of the submission of an:
 - (a) audit under condition 7 of schedule 6;
 - (b) incident report under condition 4 of schedule 6; and
 - (c) annual review under condition 5 of schedule 6; and
 - (d) any modification to the conditions of this approval (unless the conditions require otherwise),the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Director-General.

Note: This is to ensure that the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project

REPORTING

Incident

4. The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.

Regular

5. The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval, and to the satisfaction of the Director-General.

Annual Review

6. Within 12 months of this approval, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Director-General. This review must:
 - (a) describe the works that were carried out in the past year, and the works that are proposed to be carried out over the next year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the EA and Extraction Plan;
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the project;
 - (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measure will be implemented over the next year to improve the environmental performance of the project.

INDEPENDENT ENVIRONMENTAL AUDIT

7. Prior to 13 September 2010, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project (Stages 1 and 2). This audit must:
 - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
 - (b) include consultation with the relevant agencies
 - (c) assess the environmental performance of the project and assess whether it is complying with the relevant requirements of this approval and any relevant mining lease or EPL (including any strategy, plan or program required under these approvals);
 - (d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate,
 - (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals.

Note: This audit team must be led by a suitably qualified auditor and include experts in the fields of subsidence, water and noise management (other than for the 2010 audit which is not required to include a subsidence expert in the audit team).

8. Within 6 weeks of the completing of this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.

COMMUNITY CONSULTATIVE COMMITTEE

9. The Proponent shall maintain a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General, in general accordance with the *Guideline for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007)*, or its latest version.

Note: The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.

ACCESS TO INFORMATION

10. The Proponent shall:
- (a) make copies of the following publicly available on its website:
 - the documents referred to in Condition 2 of Schedule 2;
 - all current statutory approvals for the project;
 - all approved strategies, plans and programs required under the conditions of this approval;
 - a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs;
 - a complaints register, updated on a monthly basis;
 - minutes of CCC meetings;
 - the annual reviews of the project;
 - any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit;
 - any other matter required by the Director-General; and
 - (b) keep this information up-to-date, to the satisfaction of the Director-General.

SCHEDULE 7 ADDITIONAL PROCEDURES FOR AIR QUALITY AND NOISE MANAGEMENT

NOTIFICATION OF LANDOWNERS

1. If the results of the monitoring required in schedule 4 identify that impacts generated by the project are greater than the relevant impact assessment criteria, except where a negotiated agreement has been entered into in relation to that impact, then the Proponent shall, within 2 weeks of obtaining the monitoring results, notify the Director-General, the affected landowners and tenants (including tenants of mine-owned properties) accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the criteria in schedule 4.
2. If the results of monitoring required in schedule 4 identify that impacts generated by the project are greater than the relevant air quality impact assessment criteria in schedule 4, then the Proponent shall send the relevant landowners and tenants (including tenants of mine-owned properties) a copy of the NSW Health fact sheet entitled "Mine Dust and You" (and associated updates) in conjunction with the notification required in condition 1.

INDEPENDENT REVIEW

3. If a landowner considers the project to be exceeding the impact assessment criteria in schedule 4, then he/she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land.

If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 2 months of the Director-General's decision:

- (a) consult with the landowner to determine his/her concerns;
 - (b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to:
 - determine whether the project is complying with the relevant impact assessment criteria in schedule 4; and
 - identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and
 - (c) give the Director-General and landowner a copy of the independent review.
4. If the independent review determines that the project is complying with the relevant impact assessment criteria in schedule 4, then the Proponent may discontinue the independent review with the approval of the Director-General.

If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 4, and that the project is primarily responsible for this non-compliance, then the Proponent shall:

- (a) take all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria and conduct further monitoring to determine whether these measures ensure compliance; or
- (b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Director-General.

If further monitoring under paragraph (a) determines that the project is complying with the relevant criteria, then the Proponent may discontinue the independent review with the approval of the Director-General.

If the independent review determines that the project is not complying with the relevant land acquisition criteria in schedule 4, then the Proponent shall offer to acquire all or part of the landowner's land in accordance with the procedures in conditions 5-7 below, to the satisfaction of the Director-General.

LAND ACQUISITION

5. Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:
 - (a) the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the project the subject of the project application, having regard to the:
 - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and

- presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of 'reasonable and feasible measures' under schedule 4 or condition 4(a) of this schedule;
- (b) the reasonable costs associated with:
- relocating within the Narrabri or Gunnedah local government areas, or to any other local government area determined by the Director-General;
 - obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and
- (c) reasonable compensation for any disturbance caused by the land acquisition process.

However, if following this period, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.

Upon receiving such a request, the Director-General shall request the President of the NSW Division of the Australian Property Institute (the API) to appoint a qualified independent valuer to:

- (a) consider submissions from both parties;
- (b) determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above;
- (c) prepare a detailed report setting out the reasons for any determination; and
- (d) provide a copy of the report to both parties and the Director-General.

Within 14 days of receiving the independent valuer's report, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.

However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Director-General for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Director-General shall determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above and the independent valuer's report. Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Director-General's determination.

If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land shall cease, unless the Director-General determines otherwise.

6. The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.
7. If the Proponent and landowner agree that only part of the land shall be acquired, then the Proponent shall also pay all reasonable costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of the plan at the Office of the Registrar-General.

**APPENDIX 1
SCHEDULE OF PROJECT LAND**

Area	Land Title Reference
<i>Pit Top Area</i>	<p>Lot 60 DP 757124, Part Lot 115 DP757124 Lot 152 DP816020, Part Lots 151 & 152 DP816020 Lots 381 & 382 DP1028753 Various Crown and Council roads.</p>
<i>Underground Mining Area</i>	<p>Lot 7 DP 757104, Part Lots 3, 7, 8, 10, 25, 67 & 68 DP757104 Part Lots 57, 58, 63 to 65 DP757114 Lot 61 DP 757124, Part Lots 81 & 83 DP757124 Lot 2 DP 811171, Part Lot 1 DP811171 Lot 1 DP254253 Lot 1 DP659899 Part Lot 152 DP 816020 Part Lot 3 DP1005608 Part Lot 2 DP1124652 Part Lot 842 DP1134385 Part Jacks Creek State Forest (Part Lot 58 DP 757114) Part Pilliga East State Forest Various Crown and Council roads.</p>
<i>Remainder of Mine Site</i>	<p>Lot 1 DP1124652, Part Lot 2 DP1124652 Lot 841 DP1134385, Part Lot 842 DP1134385 Part Lots 3, 8, 10, 25, 67 & 68 DP 757104 Part Lots 57, 63 to 65 DP 757114 Part Lots 81 & 83 DP 757124 Part Lot 1 DP798487 Part Lot 1 DP811171 Part Lots 151 & 152 DP816020 Part Lot 3 DP1005608 Part Jacks Creek State Forest (Part Lot 58 DP 757114 & Part Lot 60 DP757114) Part Pilliga East State Forest (undefined) Various Crown and Council roads.</p>
<i>Water Pipeline Route</i>	<p>Lots 60 & 89 DP757124 Lot 151 DP816020 Lots 381 & 382 DP1028753 Lot 1 DP1124652 Various Crown and Council roads.</p>

APPENDIX 2 PROJECT MAPS

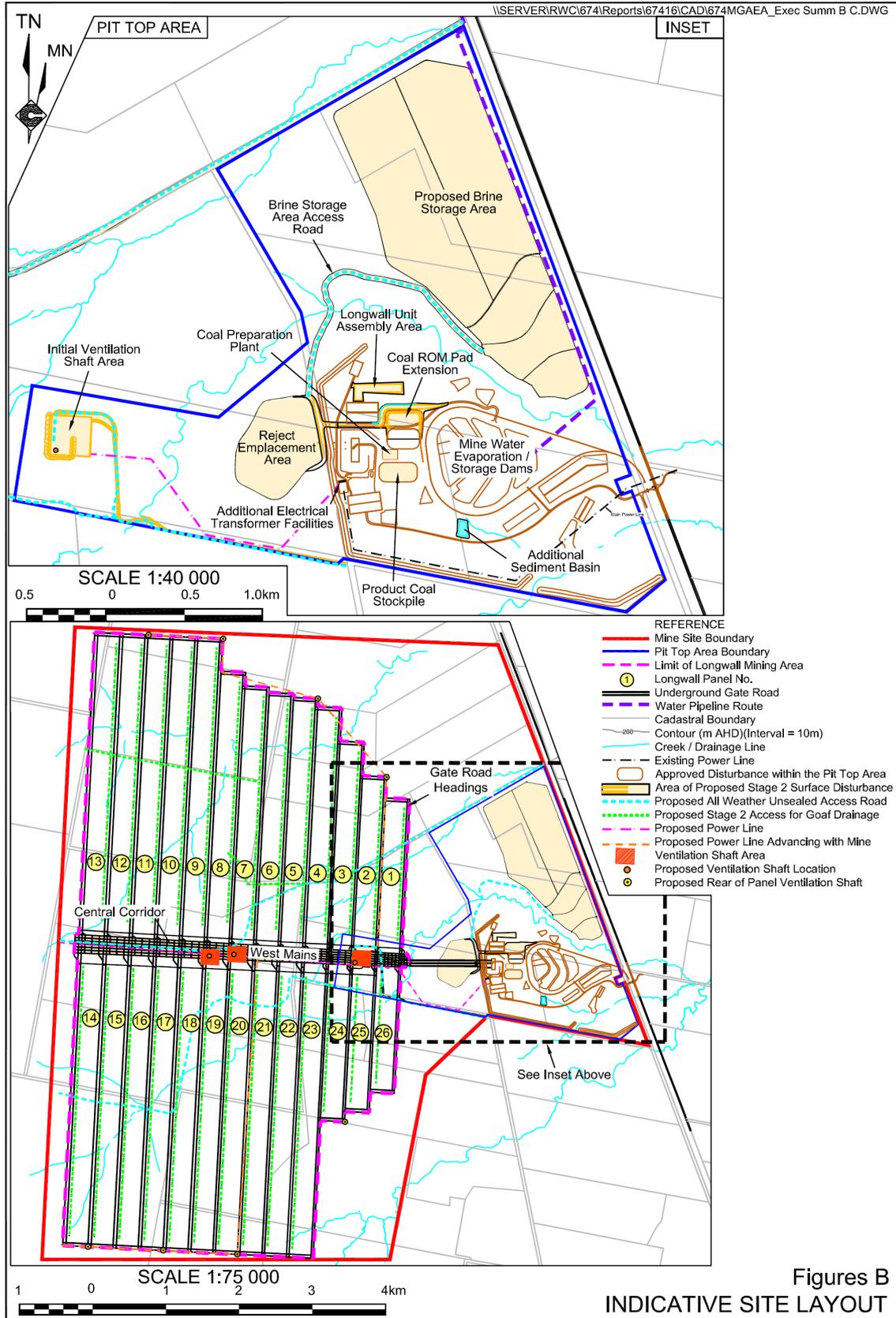


Figure 1: Project Layout

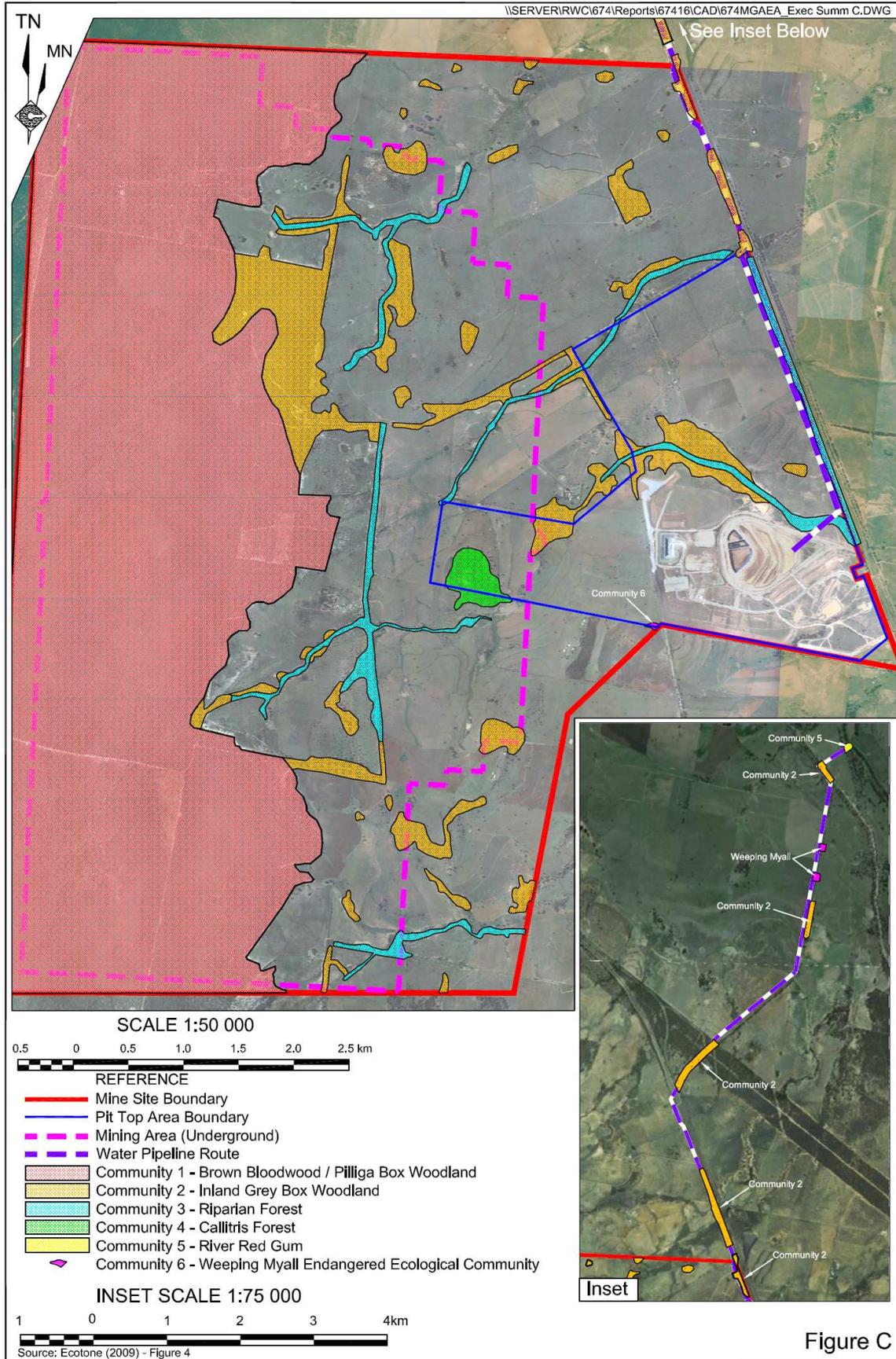
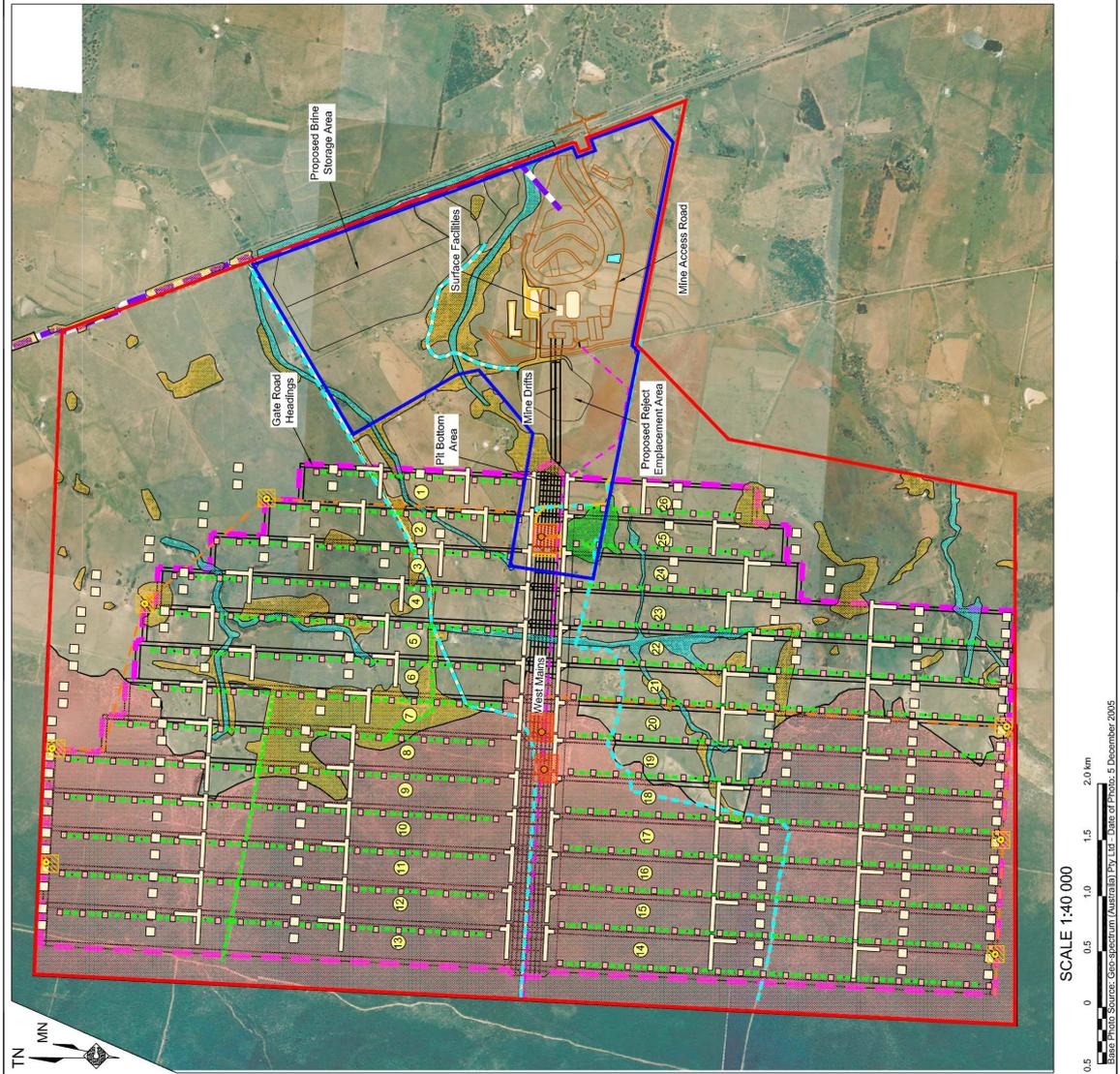


Figure 2: Vegetation communities and pipeline route



- REFERENCE**
- Mine Site Boundary
 - Pit Top Area Boundary
 - Limit of Longwall Mining Area
 - Longwall Panel No.
 - Underground Gate Road
 - Water Pipeline Route
 - Cadastral Boundary
 - Creek / Drainage Line
 - Contour (m AHD)(Interval = 10m)
 - Approved Disturbance within the Pit Top Area
 - Area of Proposed Stage 2 Surface Disturbance
 - Proposed All Weather Unsealed Access Road
 - Proposed Stage 2 Access for Goat Drainage
 - Proposed Power Line
 - Proposed Power Line Advancing with Mine
 - Ventilation Shaft Area
 - Proposed Ventilation Shaft Location* 1
 - Proposed Rear of Panel Ventilation Shaft
 - Proposed Goat Drainage Borehole Site
 - Proposed Gas Production Site
 - Proposed Pre-drainage Borehole Site
 - Community 1 - Brown Blockwood / Pilliga Box Woodland
 - Community 2 - Inland Grey Box Woodland
 - Community 3 - Riparian Forest
 - Community 4 - Calliris Forest
 - Community 5 - River Red Gum
 - Community 6 - Weeping Myall Endangered Ecological Community

Note: *1. The exact location of the additional ventilation shafts would be determined during mine operations and would be based on measured gas description rates, actual ventilation requirements and surface features

Figure 4B.29
INDICATIVE SURFACE DISTURBANCE
FOR THE LONGWALL PROJECT

**APPENDIX 4
GENERAL TERMS OF PLANNING AGREEMENTS**

Continuation of Stage 1 Planning Agreements

Funding Area	Minimum Proponent Contribution	Funding Time Frame
<u>Narrabri Shire</u> Upgrade and seal Kurrajong Creek Road, adjacent to the Project site	7.0 kilometres length of Kurrajong Creek Road to be upgraded and sealed.	Works to be completed within 12 months of Stage 1 project approval (17 November 2007).
<u>Narrabri Shire</u> Monetary Contribution – Provision of bush fire services	\$7,000	One instalment to be paid within 12 months of Stage 1 project approval (17 November 2007).
<u>Narrabri Shire</u> Community Infrastructure Contribution	\$93,000	An initial instalment of \$13,000 to be paid within 12 months of Stage 1 project approval (17 November 2007) with \$20,000 to be paid for a period of four years on the anniversary of the initial payment.
<u>Gunnedah Shire</u> Monetary Contribution – Gunnedah Urban Riverine Scheme	\$100,000	\$20,000 each year for a period of 5 years with the first instalment to be paid within 12 months of Stage 1 project approval (17 November 2007).

Notes:

- The Gunnedah Urban Riverine Scheme Contributions must be reviewed and adjusted to take into account any increase in the CPI over time, in accordance with the Planning Agreement between the Proponent and Gunnedah Shire Council required under this approval.
- The Community Infrastructure Contribution must be reviewed and adjusted to take into account any increase in the CPI over time, in accordance with the Planning Agreement and Narrabri Shire Council required under this approval.

Stage 2 Planning Agreements

Funding Area	Minimum Proponent Contribution	Funding Time Frame
<u>Narrabri Shire</u> Narrabri Swimming Complex	\$1,500,000	First contribution of \$750,000 to be made in conjunction with the 2010 Stage 1 community enhancement contribution. Second contribution of \$750,000 to be paid in conjunction with the 2011 Stage 1 community enhancement contribution.
<u>Gunnedah Shire</u> Monetary Contribution	\$100,000	\$20,000 each year for a period of 5 years with the first instalment to be paid in conjunction with the 2010 Stage 1 community enhancement contribution.

Notes: The notes for Stage 1 Community Enhancement Program contributions apply to Stage 2 Community Enhancement contributions.

APPENDIX 5
INDEPENDENT DISPUTE RESOLUTION PROCEDURE

**Independent Dispute Resolution Process
(Indicative only)**

