



**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 |
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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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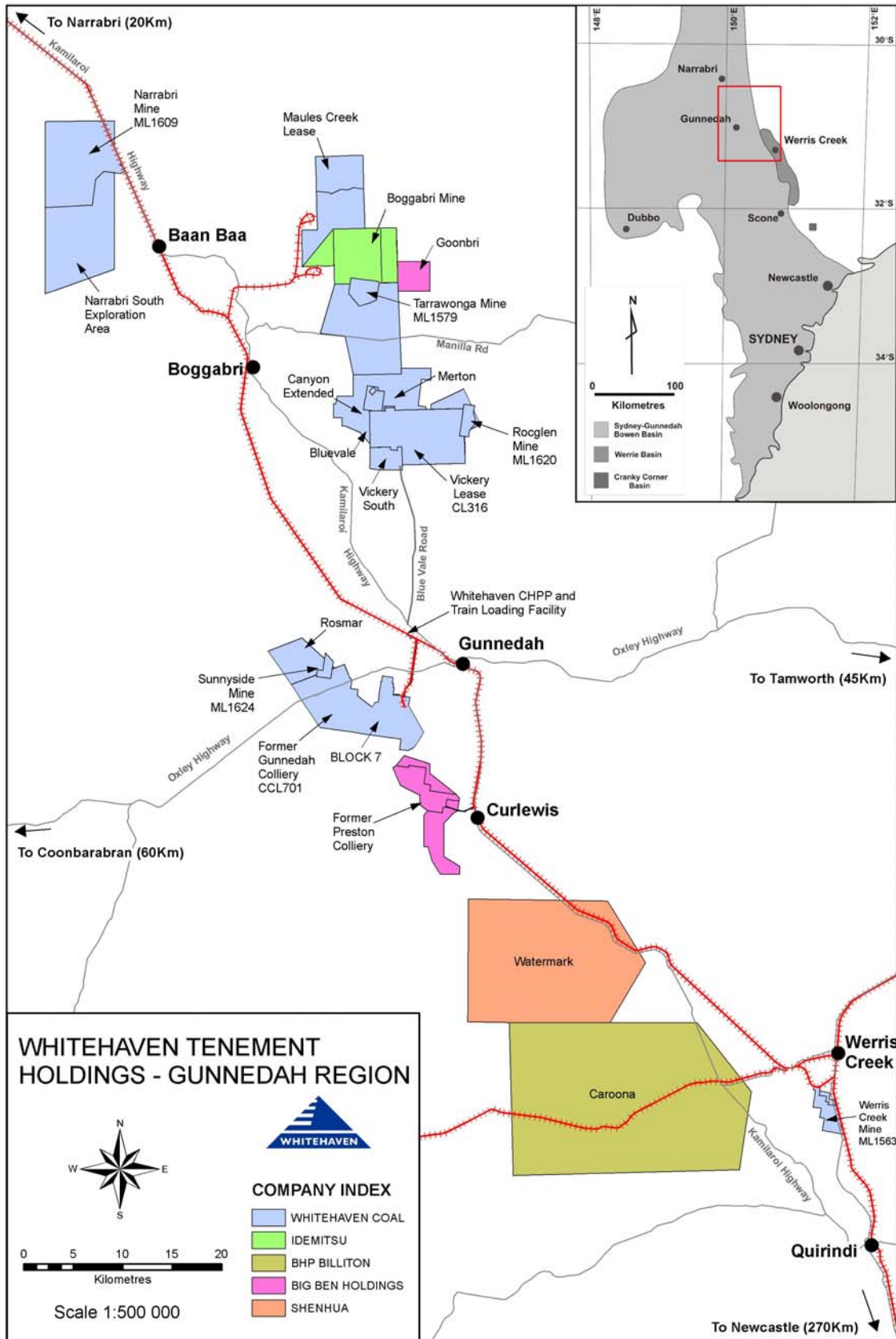


Figure 1: Narrabri Mine Location



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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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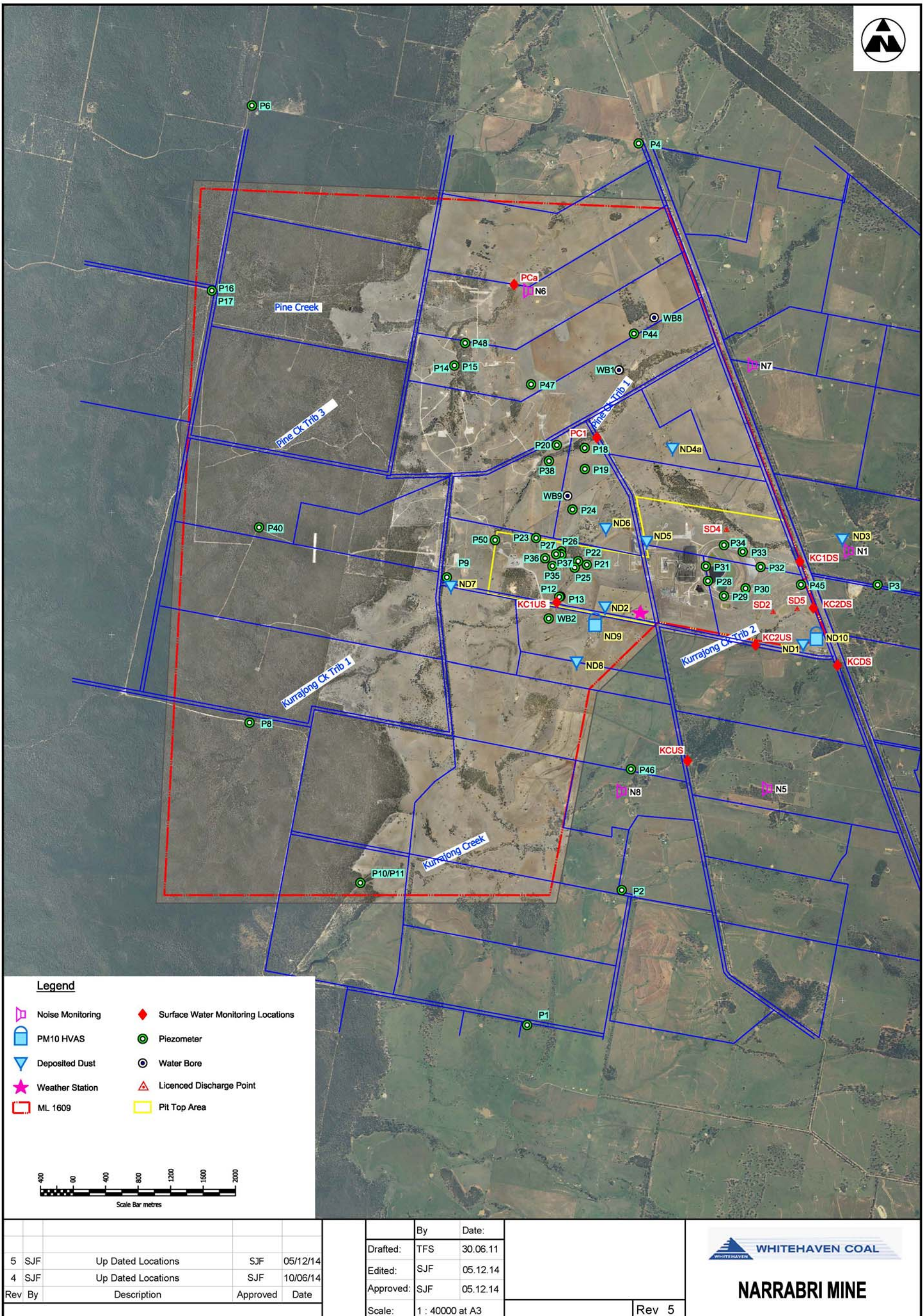


Figure 2: Current Environmental Monitoring Locations



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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.



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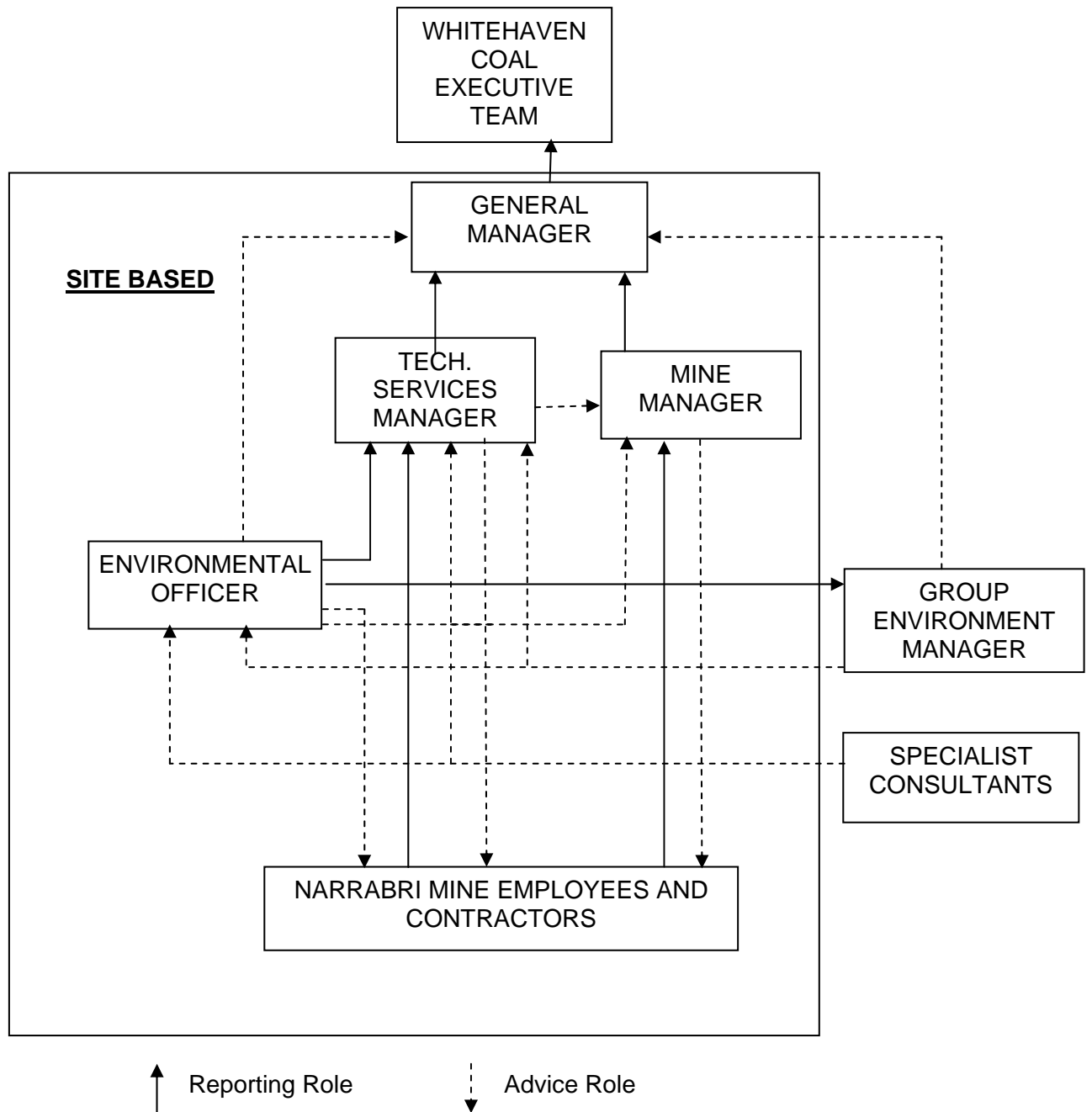


Figure 3: Environmental Management Organisational Structure

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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