



Narrabri Mine

Conditions of Approval Independent Environmental Audit

Whitehaven Coal Limited

October 2017

0368701_RP02

www.erm.com

Whitehaven Coal

Narrabri Mine
Conditions of Approval
Independent Environmental
Audit

October 2017

Reference: 0368701_RP02

**Environmental Resources Management
Australia Pty Ltd**
Level 1, 60 Leichhardt Street
Spring Hill, QLD 4000
Telephone +61 7 3839 8393
Facsimile +61 7 3839 8381
www.erm.com

Document Control:					
0368701 – Narrabri Mine: Conditions of Approval Independent Environmental Audit					
Version	Revision	Author	Reviewed by	ERM Approval to Issue	
				Name	Date
Draft	A	Will Weir	Michael Gaggin	Michael Gaggin	20 June 2017
Final	1	Will Weir	Michael Gaggin	Michael Gaggin	2 August 2017
Final	2	Will Weir	Michael Gaggin	Michael Gaggin	24 October 2017

Narrabri Mine

Conditions of Approval Independent Environmental Audit

Prepared by:	Will Weir
Position:	Project Manager
Signed:	
Date:	24 October 2017
Approved by:	Michael Gaggin
Position:	Partner
Signed:	
Date:	24 October 2017

Whitehaven Coal Limited

October 2017

0368701_RP02 Final

www.erm.com

This disclaimer, together with any limitations specified in the report, apply to use of this report. This report was prepared in accordance with the contracted scope of services for the specific purpose stated and subject to the applicable cost, time and other constraints. In preparing this report, ERM relied on: (a) client/third party information which was not verified by ERM except to the extent required by the scope of services, and ERM does not accept responsibility for omissions or inaccuracies in the client/third party information; and (b) information taken at or under the particular times and conditions specified, and ERM does not accept responsibility for any subsequent changes. This report has been prepared solely for use by, and is confidential to, the client and ERM accepts no responsibility for its use by other persons. This report is subject to copyright protection and the copyright owner reserves its rights. This report does not constitute legal advice.

CONTENTS

EXECUTIVE SUMMARY

INDEPENDENT ENVIRONMENTAL AUDIT CERTIFICATION FORM

1	INTRODUCTION	
1.1	MINE HISTORY & APPROVALS	1
1.2	OVERVIEW OF OPERATIONS	2
1.2.1	DESCRIPTION OF PRIMARY PROCESSES UNDERTAKEN DURING THE AUDIT PERIOD	2
1.3	AUDIT OBJECTIVES	5
1.4	AUDIT SCOPE	5
1.5	AUDIT CRITERIA	6
1.6	LIMITATIONS OF THIS REPORT	7
2	AUDIT METHODOLOGY	
2.1	METHODOLOGY AND PROCESS	8
2.2	AGENCY AND COMMUNITY CONSULTATION	9
2.2.1	SUMMARY OF CONSULTATION	9
2.3	CLASSIFICATION OF AUDIT FINDINGS	11
3	AUDIT FINDINGS	
3.1	PREVIOUS AUDIT FOLLOW – UP	13
3.2	COMPLAINTS SUMMARY	37
3.3	ENVIRONMENTAL MONITORING PERFORMANCE	37
3.3.1	NOISE	37
3.3.2	BLASTING	38
3.3.3	AIR QUALITY	38
3.3.4	WATER MANAGEMENT	39
3.3.5	SUBSIDENCE	39
3.3.6	REHABILITATION	39
3.4	COMPLIANCE WITH REGULATORY INSTRUMENTS	40
3.5	REVIEW OF MANAGEMENT PLANS IMPLEMENTATION	55
4	CONCLUSION	

ANNEXURES

ANNEX A	AUDIT TABLE A.1 COMPLAINTS WITH MINISTERS CONDITIONS OF APPROVAL
ANNEX B	AUDIT TABLE B.1 COMPLAINTS WITH ENVIRONMENTAL PROTECTION LICENCE
ANNEX C	AUDIT TABLE C.1 COMPLIANCE ASSESSMENT OF MINING LEASE
ANNEX D	AUDIT TABLE D.1 SUBSIDENCE AUDIT REPORT
ANNEX E	DEPARTMENTAL CORRESPONDENCE
ANNEX F	COMPLAINTS SUMMARIES

EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned to perform an independent environmental audit of the Narrabri Mine located 28 km south of Narrabri, NSW (via Kamilaroi Hwy) on behalf of Whitehaven Coal Limited (herein referred to as Whitehaven Coal). The primary purpose of the audit was to satisfy the Department of Planning and Environment (DP&E) Ministers' Conditions of Approval (MCoA) Development Consent number PA 08_0144 (Mod 5), which requires completion of an independent audit every three years from the date of the approval. An audit site inspection, interviews with key personnel and review of records and other related documentation was undertaken over the period 5 – 7 December 2016.

The audit included a review of:

- *DP&E, Ministers Conditions of Approval PA 08_0144 (Modification 5 issued December 2015);*
- *Environment Protection Licence 12789;*
- *Mining Lease 1609; and*
- *implementation of Management Plans developed as part of the Ministers Conditions of Approval.*

This is the third independent audit period for the Narrabri Mine site under the current Project Approval and covers the period beginning 1 October 2013 (the date the last independent environmental audit was completed) through 30 November 2016.


Overall, a high level conformance was achieved with the audit documents that were reviewed. A qualitative risk assessment was also completed on the findings, consistent with AS/NZS 4360:2004 Risk management and HB 436:2004 Risk Management Guidelines Companion to AS/NZS 4360:2004 and as described in the Department of Planning & Environment publication "Independent Audit Guidelines" issued October 2015. The number of non-conformances with the statutory conditions and implementation of the management plans is summarised in Table below:

Summary of Audit Findings

Non conformances	Administrative Non - conformances	Observations	Not Verifiable	Not Triggered
<i>Statutory Instruments</i>				
11 (5 duplicates)	6	4	2	35
<i>Implementation of Plans</i>				
2 (2 duplicates)	2 (2 duplicates)	1		
13 (7 duplicates)	8 (2 duplicates)	5	2	35

An action response table has been developed by Whitehaven Coal addressing all audit findings and will be submitted separately to this report.

INDEPENDENT ENVIRONMENTAL AUDIT CERTIFICATION FORM

Independent Environmental Audit Certification Form	
Development Name	Narrabri Mine
Development Consent No.	Project Approval 08_0144 (Modification 5) December 2015
Description of Development	Narrabri Mine is located within Mining Lease 1609 and is 5,298 hectares in size. Narrabri Mine is a joint venture between major stakeholder and operator Narrabri Coal Operations Pty Ltd (NCOPL) and several other stakeholders. NCOPL (a wholly owned subsidiary of Whitehaven) manages the Narrabri Mine on behalf of the Narrabri Mine Joint Venture (NMJV). In addition to the extraction of ROM coal using underground longwall mining methods, the mine's approval also allows for the crushing, washing and screening of ROM coal at Narrabri Mine, prior to transport to the port of Newcastle by rail.
Development Address	28 km south of Narrabri, NSW (via Kamilaroi Hwy)
Operator	Narrabri Coal Operations Pty Ltd
Operator Address	10 Kurrajong Creek Road, Baan Baa NSW 2390
Independent Audit	
Title of Audit	Narrabri Mine - Conditions of Approval Independent Environmental Audit
<p><i>I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report and to the best of my knowledge:</i></p> <ul style="list-style-type: none"> • <i>The audit has been undertaken in accordance with relevant approval condition(s) and in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits</i> • <i>The findings of the audit are reported truthfully, accurately and completely;</i> • <i>I have exercised due diligence and professional judgement in conducting the audit;</i> • <i>I have acted professionally, in an unbiased manner and did not allow undue influence to limit or override objectivity in conducting the audit;</i> • <i>I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;</i> • <i>I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);</i> • <i>Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and</i> • <i>I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</i> <p><i>Note.</i></p> <p><i>a) The Independent Audit is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p><i>b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Signature	
Name of Lead / Principal Auditor	William Weir
Address	Level 4, 201 Leichhardt St, Spring Hill QLD 4004
Email Address	William.weir@erm.com
Auditor Certification (if relevant)	N/A
Date	24 October 2017

ABBREVIATIONS AND GLOSSARY

Term	Description
AEMR (AR)	Annual Environmental Management Report (Annual Review)
ANC	Administrative Non Compliance – audit finding
C	Compliant - audit finding
CCC	Community Consultative Committee
CHPP	Coal handling and preparation plant
DP&E	Department of Planning and Environment (formerly Department of Planning & Infrastructure)
DP&I	Department of Planning and Infrastructure (now Department of Planning & Environment)
DPI (Water)	Department of Primary Industries (Water) formerly NSW Office of Water
DRE	Department of Industry (Division of Resources and Energy)
DSEWPac (now DoEE)	Department of Sustainability, Environment, Water, Population and Communities (now Department of Environment and Energy)
EMS	Environment Management Strategy
EP&A Act	Environment & Planning Act
EPA	Environment Protection Authority
EPL	Environment Protection Licence
EPBC	Environment Protection and Biodiversity Conservation Act 1999
ERM	Environmental Resources Management Australia Pty Ltd
IEA	Independent Environmental Audit
MCoA	Ministers Conditions of Approval
mAHD	metres Above Height Datum
ML	Mining Lease
MOP	Mining Operations Plan
Mtpa	Million tonnes per annum
NC	Non-compliant - audit finding
NCOPL	Narrabri Coal Operation Pty Ltd
NOW	New South Wales Office of Water
NSC	Narrabri Shire Council
NT	Not triggered – audit finding
NV	Not Verified – audit finding
O	Observation – audit finding
RMP	Rehabilitation Monitoring Program
ROM	Run-of-Mine
SWL	Standing Water Level

INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned Narrabri Coal Operations Pty Ltd (NCOPL) to perform an Independent Environmental Audit (IEA) of the Narrabri Mine located approximately 28 km south of Narrabri, NSW (via Kamilaroi Hwy) on behalf of Whitehaven Coal Limited (herein referred to as Whitehaven Coal). The primary purpose of the audit was to satisfy the Department of Planning and Environment (DP&E) Ministers' Condition of Approval (MCoA) number 7 of Schedule 6 of the Narrabri Mine Development Consent number 08_0144 (Mod 5), which requires the commissioning of an independent audit by the 13th of September 2010, and every 3 years thereafter, unless the Director General directs otherwise. The audit period assessed in this IEA is 1 October 2013 through 30 November 2016, and the audit must:

- (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
- (b) include consultation with the relevant agencies;
- (c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);
- (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and
- (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.

Within six weeks of the completion of this audit review, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

1.1

MINE HISTORY & APPROVALS

Narrabri Mine was originally approved as Stage 1 continuous coal mining operation on 13 November 2007 (PA 05_0102) providing for the extraction of 2.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal. Approval for Stage 2 underground longwall operation was granted on 26 July 2010 (PA 08_0144, as modified) and subsequently the Stage 1 approval was surrendered on 2 August 2011.

Several modifications have since been sought and approved or withdrawn, with PA 08_0144 (Mod 5) being approved in December 2015 allowing for the extraction of up to 11 Mtpa of ROM coal using longwall mining methods. ROM coal is crushed, washed (where required) and screened on-site and is transported off-site by rail.

The most recent IEA was conducted on-site in October 2013 (2014 IEA) in accordance with Condition of Consent 7 (Schedule 6) of the Project Approval.

1.2

OVERVIEW OF OPERATIONS

Narrabri Mine is located within Mining Lease 1609 which is issued to Narrabri Coal Pty Ltd (NCPL) and is 5,298 hectares in size.

Narrabri Mine is reported (Narrabri Mine 2015-2016 AEMR) to be a joint venture between: NCPL (a company 100% owned by Whitehaven Coal Limited [Whitehaven]) (70%); Upper Horn Investments (Australia) Pty Ltd (7.5%); EDF Trading Australia Pty Limited (7.5%); J-Power Australia Pty Ltd (7.5%); and Daewoo International Narrabri Investment Pty Ltd & Kores Narrabri Pty Limited (7.5%). Narrabri Coal Operations Pty Ltd (NCOPL) (a wholly owned subsidiary of Whitehaven) manages the Narrabri Mine on behalf of the Narrabri Mine Joint Venture (NMJV).

In addition to the extraction of ROM coal using longwall mining methods, the approval also allows for the crushing, washing and screening of ROM coal at Narrabri Mine, prior to transport to the port of Newcastle by rail.

1.2.1

Description of primary processes undertaken during the audit period

Current activities at the site include the following:

Construction and Demolition

The ROM coal stockpile was expended during the 2015-2016 annual review reporting period including the addition of a new dam (SB4). Dam SB3 was enlarged from 11 ML to 22M ML during the 2014-2015 annual review reporting period. Construction activities during the 2013-2014 annual review reporting period included gas drainage infrastructure and construction and commissioning of the bypass crusher, noting these works fall outside of the IEA audit period.

Mining operations used other existing built infrastructure and facilities with no demolition completed during the audit period.

Exploration

Exploration drilling was undertaken as required within the mining lease for coal quality, geotechnical and/or hydrogeological evaluation purposes. Where possible, access to exploration sites utilised existing farm tracks. A detailed review against the Exploration Licence (EL 6243) has not been undertaken for this IEA as most aspects are considered in the subject approvals, EPL and management plans.

Land Preparation – Vegetation Clearing

Land preparation and clearing activities during the reporting period limited to minor clearing of previously grazed/cultivated areas and minor clearing of woodland for exploration and gas drainage activities. These works were undertaken in accordance with the MOP and Stage 2 Environmental Assessment.

Land Preparation – Soil Stripping and Stockpiling

Soil stripping was completed in the areas discussed above for vegetation clearing.

Mining Operations

NCOPL operations consist of Stage 2 underground longwall mining using a longwall mining unit and continuous miners, supported by shuttle cars and feeder breakers, to support ongoing development of underground roadways, ventilation overcast and belt chambers. The Stage 2 approval allows for development and mining of longwall panels 1 to 20.

Surface features include access tracks, ventilation shaft and Goaf gas drainage sites and associated power and water infrastructure, and a Water Conditioning Plant. A longwall assembly site and mining supplies storage area is located the north of the box-cut Pit Top Area.

Coal Processing and Transport

ROM coal is stockpiled at the surface for coal handling preparation. The coal conveyor and stacking system includes a washing circuit for larger sized coal (>16mm) and by-pass system for smaller sized coal (<16mm). Product coal is stockpiled before being loaded to rail for transport to Newcastle Port. Coarse reject material is transferred to a managed Reject Emplacement Area.

Maintenance/Workshop Areas

Underground mining equipment and other surface mobile plant are maintained in the on-site maintenance workshop. The workshop has associated fuel storage, and washdown bay and associated oily water management infrastructure.

Smaller fixed plant workshops and hot works areas are also present. A store department services these workshops and the mining operation with service parts and other mining consumables, including dangerous goods and other chemicals.

Waste Management

Production wastes include rock and spoil from mine development, coarse reject from the CHPP and mine affected waters.

Non-production wastes include general domestic wastes from on-site building and routine maintenance consumables, oils and greases including potentially contaminated water from the maintenance workshop, equipment washdown pad and fuel storage areas. Waste recycling, disposal and off-site transportation is managed by a licenced waste contractor. Toilet and ablution facilities are maintained with sewer disposed via a self-irrigating eco-cycle septic sewage system, which has been approved by Narrabri Shire Council (NSC).

Water Management

Mine affected and process water is managed in a closed system of ponds located within the rail loop with water drawn from some ponds for operational purposes.

Sediment basins collect dirty and contaminated runoff from the stockpiling and crushing/sizing area. A series of sediment dams collect from the southern section of the Pit Top Area and other disturbed areas.

A Water Conditioning Plant treats dewatered groundwater from the mine to a sufficient water quality for mine use and potential for off-site use.

Subsidence Management

A subsidence assessment has been undertaken for the Stage 2 longwall development. This indicates that subsidence impacts are largely limited to the mining area, the majority of which is owned by NCOPL. Potential and actual impacts include, groundwater, surface cracking, drainage line ponding, erosion and slope stability, on Aboriginal site/artefacts, and on some local residents. Management measures are outlined in the mine's Extraction Plan.

Rehabilitation

Progressive rehabilitation activities have occurred during the audit period limited generally to small areas disturbed by exploration activities and ongoing maintenance of subsidence impacts.

1.3

AUDIT OBJECTIVES

The primary objectives of the audit included:

- assessment of the environmental performance of the site, and its effects on the surrounding environment and sensitive receivers;
- assessment of whether the site is complying with the requirements in the Project Approval (PA 08_0144 (Mod 5)), EPL 12789, Mining Lease 1609 and relevant Water Access Licences (including any assessment, plan or program required under these approvals);
- review of the adequacy of any approved strategy, plan, or program required under the abovementioned consents/approvals; and
- recommendation of measures or actions to improve the environmental performance of Narrabri Mine, and/or any strategy/plan/program required under these consents/approvals.

1.4

AUDIT SCOPE

The audit scope includes:

- the audit to be completed in accordance with DP&E's Guidelines for Independent Audits (Oct 2015);
- the audit to also be completed in accordance with AS/NZS ISO 19011:2003: Guidelines for quality and/or environmental management systems auditing;
- review of compliance against the documentation identified in the MCoA (as it relates to the current activities) which will include:
 - document review of compliance against the MCoA, and any other relevant consents/approvals;
 - site inspection to assess compliance against field implementation of active MCoA;
 - review of supporting plans developed as part of the MCoA and assessment of their adequacy towards effective environmental performance;
- review of monitoring results and trends with comparison of monitoring results against regulatory limits and MCoA limits (where applicable);
- consider if any additional monitoring required for identified trends;
- community complaints with review completed for any trends and identifying the source of an established trend;

- review of any regulatory actions including any letters, penalty notices and prosecutions;
- review of previous Independent Environment Audit (issued 2014) report to verify close-out of actions;
- consultation with the relevant agencies such as Department of Planning and Environment (DP&E), Environment Protection Agency (EPA), NSW Department of Industry (Division of Resource and Energy (DRE)) and DPI – Water and Narrabri Shire Council (NSC);
- draft report with results of compliance assessment to be issued for comment to Whitehaven Coal; and
- final report issued for submission to the DP&E.

The audit covers the period 1 October 2013 through 30 November 2016. The Site inspection was conducted Monday 5th to Wednesday 7th December 2016.

1.5

AUDIT CRITERIA

The audit covered the following specifications and standards, with a particular focus on activities associated with the current stages of operation. The documents relevant to this audit included:

- Conditions of consent PA 08_0144 (Mod 5) including consideration of EA Statement of Commitments
- EPL 12789
- Mining Leases 1609
- Management plans - the commitments in the management plans developed as part of the MCoA have been implemented including:
 - Mining Operations Plan
 - Extraction Plans
 - Air Quality Management Plan
 - Water Management Plan
 - Aboriginal Cultural Heritage Management Plan
 - Greenhouse Gas Minimisation Plan
 - Energy Savings Action Plan
 - Waste Management Plan

- Landscape Management Plan
- Rehabilitation Management Plan
- Mine Closure Plan
- Biodiversity Offset Strategy
- Environmental Management Strategy

1.6

LIMITATIONS OF THIS REPORT

This disclaimer, together with any limitations specified in the report, applies to this report and its use.

This report was prepared in accordance with the contracted scope of services for the specific purpose stated and subject to the applicable cost, time and other constraints. In preparing this report, ERM relied on:

- a) client/third party information which was not verified by ERM except to the extent required by the scope of services, and ERM do not accept responsibility for omissions or inaccuracies in the client/third party information; and
- b) information taken at or under the particular times and conditions specified, and ERM do not accept responsibility for any subsequent changes.

This report is subject to copyright protection and the copyright owner reserves its rights. This report does not constitute legal or financial advice.

2.1***METHODOLOGY AND PROCESS***

The audit comprised a site inspection, interviews with key personnel and review of site held records and other related documentation over the period – 5 - 7 December 2016. The audit process included the following primary components:

- development of a Terms of Reference developed which included:
 - audit scope and objectives;
 - date and location of audit;
 - members of audit team;
 - list of people to be audited; and
 - list of reference documents and audit criteria.
- a project inception meeting was held on 26 October 2016 to confirm details of the Terms of Reference, site inspection logistics and request for documentation required prior to the site inspection component of the audit;
- an opening meeting was held on 5 December 2016 at site to confirm the audit objectives and scope for the site inspection. Attendees included:
 - William Weir (ERM Lead Auditor);
 - Robert Smith (ERM Support Auditor);
 - Tony Dwyer (WHC Group Superintendent - Environment (Compliance));
 - Steven Farrar - Environmental Superintendent;
 - Owen Salisbury – Technical Services Superintendent;
- site inspections were undertaken between 5 and 7 December 2016;
- any identified gaps/issues were documented and followed up with site personnel and additional information was requested as required;
- two debrief / closeout meetings were held on 6 and 7 December 2016 to discuss initial findings and recommendations. Attendees included:
 - William Weir (ERM Lead Auditor);

- Robert Smith (ERM Support Auditor);
- James Barbato (MSEC Mine Subsidence Specialist/ Auditor);
- Steven Farrar - Environmental Superintendent;
- Steve Bow – General Manager;
- Chris Bedggood – Engineering and Surface Operations Manager;
- Owen Salisbury – Technical Services Superintendent;
- David Ellwood – Technical Services Superintendent;
- preparation of draft audit report (this report);
- response to comments developed by NCOPL; and
- preparation of an audit report.

2.2 AGENCY AND COMMUNITY CONSULTATION

As part of this audit, ERM and NCOPL consulted with the following agencies and stakeholders:

- Department of Planning and Environment (DP&E);
- NSW Environment Protection Agency (EPA);
- NSW Department of Industry (Division of Resource and Energy (DRE));
- Office of Environment and Heritage (OEH); and
- Narrabri Shire Council (NSC)

2.2.1 Summary of Consultation

The Terms of Reference were submitted to the DP&E on 6 September 2016 and EPA, DRE, OEH and NSC on 25 November 2016, prior to the site inspection to obtain feedback and draw attention to any key issues, within the agreed scope of the audit. In each case an email was sent to representatives of each agency requesting feedback on those issues considered most relevant by their department at the time of the audit.

At the time of reporting responses had been received from DP&E and DRE.

The DP&E – Northern Region requested the IEA address the following:

- *Effectiveness and adequacy of environmental monitoring (air and noise) locations, particularly in relation to the location of private receivers*
 - refer Section 3.3.1 and Section 3.3.3

- *Review of environmental monitoring (air and noise) results for the audit period, identification of trends in monitoring data and comparison with EA predictions*
 - refer Section 3.3.1 and Section 3.3.3
- *Review of complaints management systems and adequacy of responses*
 - refer Section 3.2 and Annexe F
- *Review of TARPs and reporting procedures (air and noise)*
 - refer Section 3.3.1 and Section 3.3.3
- *Effectiveness and health of rehabilitation*
 - refer Section 3.3.6
- *Effectiveness of current measures to minimise visual impacts (including vegetation screening)*
 - refer Section 3.3.6, T3.2 Sch4. C29, T3.3 RMP

The DRE's Environmental Sustainability Unit requested the IEA address the following:

Audit Component - Desktop

- *Is there a current Mining Operations Plan (MOP) in place and has it been approved by DRE?*
 - refer Annex D, Mining Operations Plan for the Stage 2 Longwall Project of the Narrabri Coal Mine for the Period Ending 31 December 2017 submitted for the Narrabri Coal Mine following the approval of a modification to Project Approval (PA) 08_0144 MOD 4 by the Minister for Planning.
- *Has the MOP been prepared in consultation with the relevant agencies as outlined in the Project Approval?*
 - the MOP reports that requisite relevant agencies were consulted in preparation Stage 2 MOP, including for modifications.
- *Is the rehabilitation strategy as outlined in the MOP consistent with the Project Approval in terms of progressive rehabilitation schedule;*
 - *and proposed final land use(s)?* – refer Section 3.3.6 and Table 3.3 RMP
- *Has the rehabilitation objectives and completion criteria as outlined in the MOP been developed in accordance with the proposed final land(s) as outlined in the Project Approval?* – refer Section 3.3.6 and Table 3.3 RMP
- *Has a rehabilitation monitoring program been developed and implemented to assess performance against the nominated objectives and completion criteria?*
 - – verified by reviewing monitoring reports and rehabilitation inspection records. – refer Section 3.3.6 and Table 3.3 RMP
- *Has a rehabilitation care and maintenance program been developed and implemented based on the outcomes of monitoring program?* – verified by reviewing Annual Rehabilitation Programs or similar documentation
 - refer Section 3.3.6 and Table 3.3 RMP

Audit Component - Site Inspection

- *Are mining operations being conducted in accordance with the approved MOP (production, mining sequence etc.), including within the designated MOP approval boundary? – to be verified by site plans and site inspection*
 - refer Annex D
- *Is rehabilitation progress consistent with the approved MOP as verified by site plans and a site inspection? This should include an evaluation against rehabilitation targets and whether the final landform is being developed in accordance with conceptual final landform in Project Approval*
 - refer Section 3.3.6 and Table 3.3 RMP
- *Based on a visual inspection, are there any rehabilitation areas that appear to have failed or that have incurred an issue that may result in a delay in achieving the successful rehabilitation?*
 - refer Section 3.3.6 and Table 3.3 RMP

The above aspects have been considered in the IEA as they apply to the relevant approval, license and mining lease conditions.

No response had been obtained from EPA, OEH and NSC by the time that this report was completed.

The Community Consultative Committee (CCC) for Narrabri Mine meets on a quarterly basis and last met in September 2016. The CCC was not consulted prior to this audit. It is recommended that the final audit report is tabled at the next Narrabri Mine CCC meeting.

Refer to *Annex E* for copies of correspondence completed as part of the consultation process.

2.3

CLASSIFICATION OF AUDIT FINDINGS

Findings resulting from an assessment of audit evidence were divided into six categories as follows:

- **Compliant (C):** the intent and all elements of the audit criteria requirements have been complied with within the scope of the audit.
- **Not Verified (NV):** insufficient verifiable evidence to demonstrate that the intent and all elements of the audit criteria have been complied with within the scope of the audit.
- **Non-compliant (NC):** the intent of one or more specific elements of the regulatory approval/licenses have not been complied with within the scope of the audit.

- **Administrative Non-compliance (ANC):** technical non-conformance with audit requirements that would not impact on performance and is considered minor in nature (e.g. report submitted but not on the due date, failed monitor or late monitoring session). This would not apply to performance-related aspects (e.g. exceedance of a noise limit) or where a requirement had not been met at all (e.g. noise management plan not prepared and submitted for approval).
- **Observation (O):** Observations are recorded where the audit identified issues of concern which do not strictly relate to the scope of the audit or assessment of compliance.
- **Not Triggered (NT)** – A regulatory approval requirement has an activation or timing trigger that had not been met at the time of the audit inspection, and therefore a determination of compliance could not be made.
- **Note:** A statement or fact, where no assessment of compliance is required.

A qualitative risk assessment was also completed on the findings, consistent with AS/NZS 4360:2004 Risk management and HB 436:2004 Risk Management Guidelines Companion to AS/NZS 4360:2004 and as described in the DP&E publication “Independent Audit Guidelines” October 2015.

The overall level of risk was estimated by combining the likelihood of harm occurring with the estimated level of harm associated with each finding. Risk levels have been assigned as follows:

- **High:** Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence;
- **Medium:** Non-compliance with:
 - potential for serious environmental consequences, but is unlikely to occur; or
 - potential for moderate environmental consequences, but is likely to occur;
- **Low:** Non-compliance with:
 - potential for moderate environmental consequences, but is unlikely to occur; or
 - potential for low environmental consequences, but is likely to occur
- **Administrative non-compliance:** Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions).

3.1**PREVIOUS AUDIT FOLLOW – UP**

An IEA report was completed in June 2014 with site inspection completed 15 - 16 October 2013. The 2013 audit reported on the audit actions from the audit completed in February 2011, noting that this audit considered both Stage 1 and Stage 2 approvals. The 2013 audit identified that all actions had been completed with the exception of two exceedance of monitoring criteria relating to the Stage 1 approval. Actions against these were considered appropriate by the 2014 audit, noting that the requirement has also carried over to Stage 2.

A summary of the previous IEA non-compliances and their status is summarised below in *Table 3.1*.

Table 3.1 Previous Audit Findings: Summary of Actions

Assessment Requirement	Finding	NCOPL Response To Audit Finding
PA 08_01144 (Mod 5) – Schedule 2, Condition 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.	<p>Five incidents have occurred at the Narrabri Mine since November 2011. These are:</p> <ul style="list-style-type: none"> • two discharges from SB3, located at the REA, during heavy rain in Nov 2011 and Feb 2012; • two discharges from SB2, located at the coal processing and stockpile areas, during heavy rain in Nov 2011 and Feb 2012; • a discharge of coal impacted water from VPW 26, used for pre-drainage of water and gas from the underground coal workings in Feb 2012. <p>These incidents resulted in the following Penalty Infringement Notices (PINs) being issued by EPA:</p> <ul style="list-style-type: none"> • SB3 discharge on 25/11/2011 – two PINS, one for pollution of waters (contravene POEO Act) and one for not maintaining equipment (pump taken from dam and placed in box cut) (contravened condition O1.1 of licence, i.e. not undertaking activities in a competent manner); • SB2 discharge (coal impacted water) – two PINS (25/11/2011 & 1/02/2012) as contravened condition O1.1 of licence (not undertaking activities in a competent manner), i.e. dams undersized; and • VPW26 discharge on 10/02/2012 – two PINS, one for pollution of waters (contravene POEO Act) and one for not maintaining equipment (contravened condition O1.1 of licence, i.e. not undertaking activities in a competent manner). <p>No PINS were issued for February 2012 discharge from SB3.</p> <p>Additionally, the issue of tree death along the sections of Greylands Road and Pine Creek Tributary 1 above LW101 is most likely related to unplanned subsidence impacts. NCOPL has initiated investigations into the cause of the tree death.</p>	Narrabri Mine has implemented actions to address the unlicensed discharges and minimise the potential for any future unplanned discharges. This includes: expanding dams SB1 and SB2; modifying the catchment of SB3 and removing the by-wash from SB3. As such no further action is considered to be required.
PA 08_01144 (Mod 5) – Schedule 2, Condition 2: (a) EA	<p>The site inspection and discussions with site staff identified some changes to operations to that described in the EA.</p> <p>Goaf gas drainage plants were proposed to be located at 200 metre spacings. During the mining of LW01, it was necessary to increase the number of gas drainage plants which were now observed to be</p>	Narrabri Mine is currently reviewing the disturbance footprint for the mine. The current plan is to reduce surface drilling operations by increasing the underground drilling programme –

Assessment Requirement	Finding	NCOPL Response To Audit Finding
	spaced at 50 metre intervals. It is understood that NCOPL is investigating alternate spacings, however, if 50 metre spacings will be required for future longwall panels, this is unlikely to be considered as generally in accordance with the EA. Discussions with site staff also identified that the plant on site appears to be noisier than that originally envisaged in the EA.	ongoing.
PA 08_01144 (Mod 5) – Schedule 2, Condition 2: (e) conditions of this approval.	Non-compliances with conditions identified.	Refer above and below.
PA 08_01144 (Mod 5) – Schedule 2, Condition 7: The Proponent shall transport all coal from the site by rail.	Due to a train derailment on the Gunnedah rail line in November 2012, NCOPL undertook a trial of transporting coal from Narrabri to the Gunnedah CHPP by road. It is understood that the trial only lasted 1.5 days. DP&I issued a letter advising that the trucking of coal was in breach of the Project Approval. The trial was stopped and no further transport of coal by road has occurred.	No further action.
PA 08_01144 (Mod 5) – Schedule 2, Condition 12	Stage 1 management plans were in effect at the last audit and NCOPL advised that they remained in effect until the Stage 2 plans were approved by DP&I. It was noted that a Biodiversity Offset Strategy was not required under the conditions of the Stage 1 project approval, hence there is currently no Biodiversity Offset Strategy in place as the Stage 2 plan is currently still in draft form.	The Stage 2 Offset Strategy has been approved and this will be reflected in the next Independent Audit.
PA 08_01144 (Mod 5) – Schedule 3, Condition 1	Water Management Plan (URS 2013) It was observed that a number of large trees appeared to have died off along Greylands Road and Pine Creek Tributary 1 following the mining of longwall panel LW01. NCOPL are currently investigating this issue to ascertain if it was related to subsidence - if so, this would not be considered to be minimising the disturbance of vegetation above the mining area, as these impacts were not predicted to occur.	Narrabri Mine is currently investigating potential causes for the tree death above LW101. Works include tree root investigation, shallow GW investigations in LW103 and mine site soils across the site – completed and ongoing monitoring.
PA 08_01144 (Mod 5) – Schedule 3, Condition 10: Except as may be expressly provided for by an EPL, the	Five incidents have occurred at the Narrabri Mine since November 2011. These are: <ul style="list-style-type: none"> • two discharges from SB3, located at the REA, during heavy rain in Nov 2011 and Feb 2012; • two discharges from SB2, located at the coal processing and stockpile areas, during heavy rain in 	Narrabri Mine has implemented actions to address the unlicensed discharges and minimise the potential for any future

Assessment Requirement	Finding	NCOPL Response To Audit Finding
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).	<p>Nov 2011 and Feb 2012;</p> <ul style="list-style-type: none"> • a discharge of coal impacted water from VPW 26, used for pre-drainage of water and gas from the underground coal workings in Feb 2012. <p>These incidents resulted in the following Penalty Infringement Notices (PINs) being issued by EPA:</p> <ul style="list-style-type: none"> • SB3 discharge on 25/11/2011 – two PINS, one for pollution of waters (contravene POEO Act) and one for not maintaining equipment (pump taken from dam and placed in box cut) (contravened condition O1.1 of licence, i.e. not undertaking activities in a competent manner); • SB2 discharge (coal impacted water) – two PINS (25/11/2011 & 1/02/2012) as contravened condition O1.1 of licence (not undertaking activities in a competent manner), i.e. dams undersized; and • VPW26 discharge on 10/02/2012 – two PINS, one for pollution of waters (contravene POEO Act) and one for not maintaining equipment (contravened condition O1.1 of licence, i.e. not undertaking activities in a competent manner). <p>No PINS were issued for February 2012 discharge from SB3.</p>	unplanned discharges. This includes: expanding dams SB1 and SB2; modifying the catchment of SB3 and removing the by-wash from SB3. As such no further action is considered to be required.

Assessment Requirement	Finding	NCOPL Response To Audit Finding
PA 08_01144 (Mod 5) – Schedule 4, Condition 4 (d) include reactive noise control measures to manage noise impacts for sensitive receivers; and	It was noted that the NMP includes the use reactive noise control measures. The current real-time noise monitoring unit is mobile and is moved from monitoring site to monitoring site on an as-needs basis to assess concerns regarding actual or perceived noise levels. To support reactive noise control, the real-time noise monitoring system needs to have consistency in the monitoring through the use of at least one fixed unit.	Narrabri Mine will review the NMP utilising a noise expert. During this review the use of a fixed unit will be reviewed. Completed
PA 08_01144 (Mod 5) – Schedule 4, Condition 5 (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.	Minimal information in the Annual Reviews	Narrabri Mine will review the NMP utilising a noise expert. During this review additional ways to reduce noise impacts will be investigated. Completed
PA 08_01144 (Mod 5) – Schedule 4, Condition 5 (c) report on these investigations and the implementation and effectiveness of these measures in the Annual Review;	Minimal information in the Annual Reviews	Narrabri Mine will review the NMP utilising a noise expert. During this review additional ways to reduce noise impacts will be investigated and summarised in the corresponding AEMR/AR report. Completed
PA 08_01144 (Mod 5) – Schedule 4, Condition 6 The Proponent shall ensure that dust emissions generated	No exceedances in PM10. Individual exceedances of 4g/m2 but annual averages for gauges below 4. Due to a monitor malfunction, PM10 results were not recorded for the period 20 May to 13 June 2012. A review of monitoring data also identified other incidents where a run cycle has not been completed, either due to monitor malfunction or power outage.	No exceedances of the relevant data has been identified to date and while the HVAS units have been reported down during the audit period, the available

Assessment Requirement	Finding	NCOPL Response To Audit Finding
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.		data for the ND9 unit was 94% and 97% for the ND10 unit. Should power supply become an issue for both ND9 and ND10 then alternate power supplies will be utilised. Ongoing
<p>PA 08_01144 (Mod 5) – Schedule 4, Condition 10</p> <p>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).</p>	<p>Five incidents have occurred at the Narrabri Mine since November 2011. These are:</p> <ul style="list-style-type: none"> • two discharges from SB3, located at the REA, during heavy rain in Nov 2011 and Feb 2012; • two discharges from SB2, located at the coal processing and stockpile areas, during heavy rain in Nov 2011 and Feb 2012; • a discharge of coal impacted water from VPW 26, used for pre-drainage of water and gas from the underground coal workings in Feb 2012. <p>These incidents resulted in the following Penalty Infringement Notices (PINs) being issued by EPA:</p> <ul style="list-style-type: none"> • SB3 discharge on 25/11/2011 – two PINS, one for pollution of waters (contravene POEO Act) and one for not maintaining equipment (pump taken from dam and placed in box cut) (contravened condition O1.1 of licence, i.e. not undertaking activities in a competent manner); • SB2 discharge (coal impacted water) – two PINS (25/11/2011 & 1/02/2012) as contravened condition O1.1 of licence (not undertaking activities in a competent manner), i.e. dams undersized; and • VPW26 discharge on 10/02/2012 – two PINS, one for pollution of waters (contravene POEO Act) and one for not maintaining equipment (contravened condition O1.1 of licence, i.e. not undertaking activities in a competent manner). <p>No PINS were issued for February 2012 discharge from SB3.</p>	<p>Narrabri Mine has implemented actions to address the unlicensed discharges and minimise the potential for any future unplanned discharges. This includes: expanding dams SB1 and SB2; modifying the catchment of SB3 and removing the by-wash from SB3. As such no further action is considered to be required.</p> <p>Completed</p>

Assessment Requirement	Finding	NCOPL Response To Audit Finding
PA 08_01144 (Mod 5) – Schedule 4, Condition 18	The Groundwater Monitoring Program must include: (g) procedures for reporting the results of this monitoring.	During the next review of the WMP this will be included. Completed
PA 08_01144 (Mod 5) – Schedule 4, Condition 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.	Section 7.4 of the WMP An "As Constructed" report was prepared for the ponds upon commissioning, however there does not appear to be any confirmation of permeability of membranes / lining and how these permeabilities are to be maintained during the life of the ponds.	Narrabri Mine will commission an investigation into the adequacy of the lining in terms of permeability and also include measures for maintenance of the lining. An investigation into water in the monitoring bores in the rail loop has been undertaken which concluded that the water in the bores surrounding the rail loop was of a different chemical composition to the water stored in the rail loop ponds and hence the two were not considered to be connected. Completed
PA 08_01144 (Mod 5) – Schedule 4, Condition 25 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	As above	As above

Assessment Requirement	Finding	NCOPL Response To Audit Finding
storage ponds are in use.		
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.	The intersection was observed to be in good condition at the time of the audit site inspection, however, no evidence was sighted to indicate how the intersection is to be maintained.	Narrabri Mine will liaise with RMS and NSC in relation to a maintenance program for the intersection. Completed
PA 08_01144 (Mod 5) – Schedule 4, Condition 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	Narrabri Mine is currently in negotiations with Narrabri Shire Council to close and purchase Greylands Road where it traverses the mining lease. Sighted copy of letter from NSC dated 3/9/13 re closure of SR186-Greylands Road.	Narrabri Mine has applied to Crown Lands NSW to purchase Greylands Rd. No indication from Crown Lands has been received in relation to timeframes for processing the pending application. The Greylands Road Management Plan developed as part of the Extraction Plan and signed by NSC outlines that purchasing this road is the mine's long-term management strategy. Completed
PA 08_01144 (Mod 5) – Schedule 4, Condition 30: The Proponent shall revise the	Plan was submitted 11 August 2011 beyond the timeframe specified in the condition. It was subsequently approved by DP&I on 6/12/11 (letter sighted).	Completed

Assessment Requirement	Finding	NCOPL Response To Audit Finding
<p>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:(c) be submitted to the Director-General for approval prior to 30 June 2011; and</p>		
<p>PA 08_01144 (Mod 5) – Schedule 4, Condition 32</p> <p>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:</p> <p>(d) propose the measures that</p>	<p>Energy savings opportunities for reducing electricity usage on site have been described in Section 4.2 of the Plan. Whilst a research program has been described for the CMM emissions, there does not appear to be any measures proposed to minimise emissions from CMM in the short to medium term.</p>	<p>An updated ESAP has subsequently been submitted outlining more detail on the CMM emissions and options for mitigation. This will be reviewed in the next audit period.</p> <p>Completed</p>

Assessment Requirement	Finding	NCOPL Response To Audit Finding
would be implemented in the short to medium term on site; and		
<p>PA 08_01144 (Mod 5) – Schedule 4, Condition 33</p> <p>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 be:</p> <p>(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</p>	<p>Described in Section 4.6 and Table 1 of Plan.</p> <p>It was observed during the audit site inspection that there appears to be evidence of ponding/waterlogging within the effluent irrigation area.</p>	<p>Narrabri Mine will implement the recommendations as outlined by the Auditor.</p> <p>Completed</p>
PA 08_01144 (Mod 5) –	The area around the vent fan site was inspected as part of the audit. It was noted that rehabilitation	Narrabri Mine is currently investigating

Assessment Requirement	Finding	NCOPL Response To Audit Finding
Schedule 5, Condition 1 The Proponent shall rehabilitate the site to the satisfaction of the Director-General and DII in accordance with the rehabilitation objectives in Table 1.	works had commenced in this area now that works have been completed. The audit site inspection also included the areas above longwall 1, where ripping of the paddocks has occurred and rehabilitation of Greylands Road has been undertaken.	potential causes for the tree death above LW101. Works include tree root investigation, shallow GW investigations in LW103 and mine site soils across the site. Completed - ongoing
PA 08_01144 (Mod 5) – Schedule 5, Condition 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;	The Biodiversity Offset Strategy had not been submitted for approval at the time of the audit and was in draft form. It is understood that the draft Plan has now (post audit) been submitted for approval. The strategy has been worded so that the long-term security issue is not yet resolved, however NCOPL has requested DP&I/SEWPaC approve the strategy with this pending.	The Offset Strategy has subsequently been approved outside of the audit period and will be covered in the next audit period. DP&E have extended the timeframe for securing the offsets to 30 June 2015. The EPBC approval has also been modified so that the management plans and offset strategy can be approved, which occurred outside of the reporting period, by separating the management plan and security into two separate conditions where previously they were the same condition. Completed
PA 08_01144 (Mod 5) – Schedule 5, Condition 7 The Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas by	NCOPL has proposed the use of a restrictive covenant under Section 88B of the Conveyancing Act. Whilst this has been accepted in principle by the Commonwealth as a measure for long term security of the offset area, it has not been accepted by either OEH or DP&I and is currently subject to further negotiation. Evidence was sighted to indicate that NCOPL has sought and obtained extensions to this timeframe such that the arrangements are now due to be in place by 31 December 2013.	The Offset Strategy has subsequently been approved outside of the audit period and will be covered in the next audit period. DP&E have extended the timeframe for securing the offsets to 30 June 2015. The EPBC approval has also

Assessment Requirement	Finding	NCOPL Response To Audit Finding
31 December 2011, or other date agreed by the Director-General, to the satisfaction of the Director-General.		been modified so that the management plans and offset strategy can be approved, which occurred outside of the reporting period, by separating the management plan and security into two separate conditions where previously they were the same condition. Completed
<p>PA 08_01144 (Mod 5) – Schedule 6, Condition 1</p> <p>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 :</p> <p>(c) identify the statutory requirements that apply to the project;</p>	Whilst Section 3.1 of EMS references the approvals etc that were in place at the time the EMS was prepared, it does not include the EPBC approval, the Subsidence Management Plan approvals or any changes to conditions as a result of MODs 1 and 2.	<p>All management plans are due for review in 2014 including the EMS and as such all of the Auditors recommendations will be included in this review.</p> <p>Completed</p>

Assessment Requirement	Finding	NCOPL Response To Audit Finding
<p>PA 08_01144 (Mod 5) – Schedule 6, Condition 2</p> <p>The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <p>(h) a protocol for periodic review of the plan</p>	<p>Whilst mine staff advised that management plans were reviewed as described in the Plans, the revision status of the plans is only updated if amendments are made. There is no system in place to document a review of the plan if the review concludes that no amendments are required. This makes it difficult to verify if periodic reviews are implemented as required.</p>	<p>Narrabri Mine will implement a review process whereby the all reviews are documented.</p> <p>Completed</p>
<p>PA 08_01144 (Mod 5) – Schedule 6, Condition 3</p> <p>Within 3 months of the submission of an:</p> <p>(b) incident report under condition 4 of schedule 6; and</p> <p>(c) annual review under condition 5 of schedule 6,</p> <p>(d) any modification to the conditions of this approval (unless the conditions require otherwise);</p>	<p>Whilst mine staff advised that management plans were reviewed as required, the revision status of the plans is only updated if amendments are made. There is no system in place to document a review of the plan if the review concludes that no amendments are required. This makes it difficult to verify if this condition has been adequately implemented.</p>	<p>As above</p>

Assessment Requirement	Finding	NCOPL Response To Audit Finding
the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Director General		
<p>PA 08_01144 (Mod 5) – Schedule 6, Condition 10:</p> <p>The Proponent shall:</p> <p>(a) make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> • the documents referred to in Condition 2 of Schedule 2; • all current statutory approvals for the project; 	<p>Copies of the EA and the consolidated conditions of approval were noted to be available on the mine's website. However, it was noted that the documentation for MODs 1 and 2 were not available on the website.</p> <p>Whilst the Project Approval, EPL, Mining Lease and EPBC Approval are available on the website, it was noted that the Subsidence Management Plan approvals are not available on the website.</p>	<p>Copies of the information stated by the Auditor will be added to the Whitehaven Coal website, www.whitehavencoal.com.au</p> <p>Completed</p>
<p>PA 08_01144 (Mod 5) – Schedule 6, Condition 10:</p> <p>(b) keep this information up-to-date;</p>	<p>With the exception of the Subsidence Management Plan approvals, the information on the website was observed to be up-to-date.</p>	<p>Ongoing updates of SMP, current SMP on website.</p>

<p>EPL 12789 – L1.1: Except as may be expressly provided in any other condition of this license, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997</p>	<p>Five incidents have occurred at the Narrabri Mine since November 2011. These are:</p> <ul style="list-style-type: none"> • a discharge from SB3, located at the Reject Emplacement Area (REA), during heavy rain in November 2011; • a discharge from SB3, located at the Reject Emplacement Area (REA), during heavy rain in February 2012; • a discharge from SB2, located at the coal processing and stockpile areas, during heavy rain in November 2011; • a discharge from SB2, located at the coal processing and stockpile areas, during heavy rain in February 2012; and • a discharge of coal impacted water from Vertical Production Well (VPW) 26, used for pre-drainage of water and gas from the underground coal workings in February 2012. <p>The SB3 discharge on November 25, 2011, and the VPW26 discharge on October 10, 2012, resulted in two Penalty Infringement Notices (PINs) being issued by EPA for contravening the POEO Act.</p> <p>It is understood that the November discharge from SB3 occurred during a period of heavy rain at a time when SB3 was collecting water from the Reject Emplacement Area, which was not receiving rejects at the time.</p> <p>Following the October discharge from VPW26, NCOPL commissioned a vegetation assessment of the impacted area and also revised the procedure for accessing well heads. Vegetation assessments of the impacted area have shown that no long- term impacts have occurred. No further action is considered to be required.</p>	<p>Narrabri Mine has implemented actions to address the unlicensed discharges and minimise the potential for any future unplanned discharges. This includes: expanding dams SB1 and SB2; modifying the catchment of SB3 and removing the by-wash from SB3. As such no further action is considered to be required.</p> <p>Completed</p>
<p>EPL 12789 – L3.3: To determine compliance: a) with the Leq(15 minute) noise limits in the Noise Limits table, the noise measurement equipment must be located: i) approximately on the</p>	<p>Monitoring reports reviewed during the audit identified that monitoring is generally undertaken in accordance with this condition. However, it is understood that access is limited to at least one location and so the monitoring results are extrapolated from a representative location, and monitoring at Belah Park, due to a change in ownership, is now carried out at the residence at Merriman.</p>	<p>Narrabri Mine is undertaking the monitoring programme as approved but circumstances beyond the control of the mine have meant some locations are monitored at alternate locations.</p> <p>Ongoing</p>

<p>property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or</p> <p>ii) within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable</p> <p>iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.</p> <p>b) with the LA1(1 minute) noise limits in the Noise Limits table, the noise measurement equipment must be located within 1 metre of a dwelling façade.</p> <p>c) with the noise limits in the Noise Limits table, the noise measurement equipment must be located:</p> <p>i) at the most affected point at a location where there is no</p>		
---	--	--

dwelling at the location; or ii) at the most affected point within an area at a location prescribed by part (a) or part (b) of this condition.		
---	--	--

<p>EPL 12789 – O1.1: Licensed activities must be carried out in a competent manner.</p>	<p>As above.</p> <p>These incidents resulted in four Penalty Infringement Notices (PINs) being issued by EPA for contravening condition O1.1:</p> <ul style="list-style-type: none"> • SB3 discharge on 25/11/2011 – ono PIN issued for not maintaining equipment (pump taken from dam and placed in box cut) (contravened condition O1.1 of licence, i.e. not undertaking activities in a competent manner); • SB2 discharge (coal impacted water) – two PINs (25/11/2011 & 1/02/2012) as contravened condition O1.1 of licence (not undertaking activities in a competent manner), i.e. dams undersized; and • VPW26 discharge on 10/02/2012 – one PIN issued for not maintaining equipment (contravened condition O1.1 of licence, i.e. not undertaking activities in a competent manner). 	<p>As Above</p>
<p>EPL 12789 – O1.1:</p> <p>(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and</p>	<p>Whilst bunding and spill management was generally observed to be well implemented, there were areas around the workshop where pallets of new drums of oils and greases were not stored within bunded areas as the existing bunded container lacked sufficient capacity for the volumes of oils and greases required to be stored.</p>	<p>Narrabri Mine is investigating the establishment of an additional permanent bunded area for hydrocarbon management on the site.</p> <p>Completed</p>
<p>EPL 12789 – O1.1:</p> <p>(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.</p>	<p>Waste management systems were observed to have been generally well implemented in most areas. An area of concern, where wastes were observed to be stored haphazardly, was the longwall assembly pad. This area now appears to be used as a hard stand or storage area, however, it lacks appropriate housekeeping practices and contains a mixture of disused parts, wastes, and other materials.</p>	<p>Narrabri Mine has since assigned areas of responsibility on the longwall pad to ensure the area is kept tidy and free of any waste materials.</p> <p>Completed - ongoing</p>
<p>EPL 12789 – O3.1: All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.</p>	<p>Dust was observed to be visible from the site on the day of the audit. A review of the complaints register for the site shows that dust has been an ongoing issue for the operations.</p>	<p>Narrabri Mine has subsequently completed the requirements added to the site's EPL. New dust pollution conditions have also been added and this will be covered in the next Independent Audit period. The new items include: automated spray system for coal stockpiles and tripper chute redesign.</p>

<p>EPL 12789 – M3.6:</p> <p>For the purpose of this condition, the noise monitoring locations are described as:</p>	<p>Monitoring data and noise reports reviewed identified that monitoring is generally being undertaken at the locations specified. It is understood that access is limited to at least one location and so the monitoring results are extrapolated from a representative location, and monitoring at Belah Park, due to a change in ownership, is now carried out at the residence at Merriman.</p>	<p>Narrabri Mine is undertaking the monitoring programme as approved but circumstances beyond the control of the mine have meant some locations are monitored at alternate locations.</p> <p>Ongoing</p>
<p>EPL 12789 – M7.1:</p> <p>To assess compliance with the noise limits presented in the Noise Limits table, attended noise monitoring must be undertaken in accordance with the condition titled</p> <p>Determining Compliance, outlined above, and:</p> <p>a) at each one of the locations listed in the Noise Limits table</p>	<p>To assess compliance with the noise limits presented in the Noise Limits table, attended noise monitoring must be undertaken in accordance with the condition titled</p> <p>Determining Compliance, outlined above, and:</p> <p>a) at each one of the locations listed in the Noise Limits table</p>	<p>As above</p>

<p>Mining Lease No: 1609 – Condition 2: 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 development.</p>	<p>Refer EPL 12789 – L1.1 and O1.1 above.</p>	<p>As per EPL 12789 – L1.1 above.</p>
<p>Mining Lease No: 1609 – Condition 3:</p> <p>(a) Mining operations must not be carried out otherwise than in accordance with a Mining Operations Plan (MOP) which has been approved by the Director-General of the Department of Primary Industries.</p>	<p>Current MOP : Mining Operations Plan for the Stage 2 Longwall Project of the Narrabri Mine for the period ending 31 December 2017.</p> <p>Goaf gas drainage plants were proposed to be located at 200 metre spacings as described in Section 3.3.5 of the MOP. During the mining of LW01, it was necessary to increase the number of gas drainage plants which were now observed to be spaced at 50 metre intervals. It is understood that NCOPL is investigating alternate spacings, however, if 50 metre spacings will be required for future longwall panels, this is unlikely to be considered as generally in accordance with the approved MOP.</p>	<p>Narrabri Mine is currently reviewing the disturbance footprint for the mine. The current plan is to reduce surface drilling operations by increasing the underground drilling programme.</p> <p>Ongoing</p>
<p>Mining Lease No: 1609 – Condition 8:</p> <p>(c) The lease holder must not commence or undertake Underground mining operations that will potentially lead to subsidence other than in accordance with a Subsidence Management Plan</p>	<p>It was observed that a number of large trees appeared to have died off along Greylands Road and Pine Creek Tributary 1 following the mining of longwall panel LW01. NCOPL are currently investigating this issue to ascertain if it was related to subsidence - if so, this would not be considered to be minimising the disturbance of vegetation above the mining area, as these impacts were not predicted to occur.</p>	<p>Narrabri Mine is currently investigating potential causes for the tree death above LW101. Works include tree root investigation, shallow GW investigations in LW103 and mine site soils across the site.</p> <p>Completed</p>

<p>approved by the Director-General, an approval under the Coal Mine Health and Safety Act 2002, or the document New Subsidence Management Plan Approval Process - Transitional Provisions (EDP09).</p>		
<p>Mining Lease No: 1609 – Condition 8:</p> <p>(d) Subsidence Management Plans as approved shall form part of the Mining Operations required under Condition 2 and will be subject to the Annual Environmental Management Report process as set out under Condition 3. The SMP is also subject to the requirements for subsidence monitoring and reporting set out in the document New Approval Process for Management of Coal Mining Subsidence - Policy.</p>	<p>The issue of trees dying over LW01 was not initially raised as an issue with DRE. Condition 16 of the Subsidence Management Plan Approval for Longwalls 101-105 requires the Leaseholder to report within 24 hours of any exceedance of predicted impacts on groundwater resources or the natural environment that may have been caused (either partly or wholly) by subsidence. It was noted, however, that the issue was reported in the 2013 AEMR which was submitted to the Department.</p>	<p>As above</p>

<p>Mining Lease No: 1609 – Condition 18: Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, waterbody or groundwaters.</p> <p>The lease holder must observe and perform any instructions given by the Director-General in this regard.</p>	<p>As outlined in Condition 2 above, five incidents occurred at Narrabri Mine since November 2011. Of these incidents, two unlicensed offsite water discharges from the mine site resulted in two PINs being issued by the EPA for pollution of waters during the period covered by the audit.</p>	<p>As per EPL 12789 – L1.1 above.</p>
--	--	---------------------------------------

<p>Mining Lease No: 1609 – Condition 22:</p> <p>Access tracks must be kept to a minimum and be positioned so that they do not cause any unnecessary damage to the land. Temporary access tracks must be ripped, topsoiled and revegetated as soon as possible after they are no longer required for mining operations. The design and construction of access tracks must be in accordance with specifications fixed by the Department of Climate Change and Environment.</p>	<p>Narrabri Mine will continue to limit access tracks within the mining lease and rehabilitate tracks that will not be required for future agricultural activity.</p> <p>Ongoing</p>
---	--

<p>Mining Lease No: 1609 – Condition 23:</p> <p>(b) The lease holder must not cut, destroy, ringbark or remove any timber or other vegetative cover on the lease area except such as directly obstructs or prevents the carrying on of operations. Any clearing not authorised under the Mining Act 1992 must comply with the provisions of the Native Vegetation Act 2003.</p>	<p>It was observed that a number of large trees appeared to have died off along Greylands Road and Pine Creek Tributary 1 following the mining of longwall panel LW01. NCOPL are currently investigating this issue.</p>	<p>As above</p>
--	--	-----------------

3.2

COMPLAINTS SUMMARY

Complaints received over the auditing period include:

- A total of 19 complaints were recorded during the 2016 up until the time of the audit. 10 of these complaints were in relation to noise, with the rest in relation to dust, while one complaint was recorded for both noise and dust.
- A total of 17 complaints were recorded during 2015 reporting period. 13 of these were in relation to noise, while the remainder were in relation to dust with the exception of one complaint relating light emissions from the mine.
- A total of 39 complaints were received in 2014 with the majority pertaining to noise and dust. Three specific complaints related to concerns regarding behaviours of residents of a mine owned house, light emissions from the CHPP and regarding open/closure of farm gates.
- A total of 8 complaints toward the end of 2013 within the IEA reporting reported all in relation to noise or dust.

The detailed summaries as prepared by NCOPL are provided on the Whitehaven Coal website and included as *Annex F* to this report.

3.3

ENVIRONMENTAL MONITORING PERFORMANCE

3.3.1

Noise

Three instances of exceedances of the EPL noise criteria occurred on:

- September 2014 - quarterly monitoring event at Bow Hills (R1) (3 dB(A) exceedance);
- June 2015 - quarterly monitoring event at Merriman (R16) (3 dB(A) exceedance) and Oakleigh (R4) (5 dB(A) exceedance); and
- September 2016 quarterly monitoring event at Oakleigh (R4) 8 dB(A) exceedance.

Since these exceedances, a private agreement has been entered into with Bow Hills; and Merriman and Oakleigh have entered into negotiations to be purchased. If the acquisition of these sites is successful, no further noise issues are anticipated.

NCOPL is continuing to implement noise mitigation measures to reduce noise impact to the surrounding environment e.g. noise mitigation on dozer tracks. The auditor was advised that NCOPL is currently in negotiation to acquire a property as a result of noise concerns. Monitoring indicated non-systemic exceedance, however this was not a trigger for acquisition rights. This however was self-determined by NCOPL to be in exceedance following

complaints. Community concern has resulted in NCOPL adopting conservative determination of exceedance of acquisition criteria.

Upon notifying EPA during 2015-2016 reporting period of a Noise exceedance it was noted the inversion conditions were not determined at the time. Meteorological conditions must be determined by the onsite weather station. NCOPL has implemented a Trigger Action Response Plans (TARP) including an automated alarm system, the criteria of which are set to the requisite meteorological conditions. NCOPL has also installed meteorological equipment to track temperature inversion conditions.

3.3.2 *Blasting*

No blasting was undertaken during the audit period.

3.3.3 *Air Quality*

Air Quality monitoring was conducted in accordance with the AQMP and EPL requirements. There were no exceedances of dust monitoring criteria during the audit period.

The 2013-2014 EPL Annual Return reported that one of twelve required samples (in January 2014) for monitoring location ND3 was not analysed due to the dust gauge bottle being broken in transit to the laboratory. This was self-reported as a non-compliance with this condition.

Monitoring data for reported in the Annual Review 2015/2016 shows that Total Insoluble Solids data at all monitoring locations was reported to be below the annual average criteria, with the exception on ND2 which was impacted by ash content, hence not attributed to NCOPL operations. NCOPL measures PM10 levels by two High Volume Air Samplers (HVAS) for a 24 hour period every 6 days. Total Suspended Particulates (TSP) is taken at a ratio 1:2 from the recorded PM10 data. Monitoring undertaken at NCOPL HVAS's report that PM₁₀ annual averages are well below the applicable criteria, also confirming TSP limits are within criteria as per the approved method for determining concentrations.

The AEMR 2014/2015 reported consistent data with above, with three locations (ND1, ND2 and ND5) reporting impacts from organic matter. HVAS data was well within the assessment criteria.

The AEMR 2013/2014 reported consistent results with above with location ND5 reporting impacts from organic matter, while HVAS data was reported to be within the assessment criteria.

3.3.4 *Water Management*

Monitoring of surface water discharges off-site indicated that no material environmental harm has occurred (i.e. all discharges are within EPL limits). Similarly, groundwater monitoring has not identified any significant on-site or off-site trends which would indicate any material environmental harm has been caused by the mine.

An opportunity for improvement relating to wastewater management surrounding the workshop was identified while on-site, whereby oily water is discharging to ground and then to on-site drainage ditches. However, as noted above, there was no evidence that any associated contamination has migrated off-site.

In addition, some isolated instances of inappropriate segregation of Dangerous Goods were observed in the Hot Works area on the mine. Finally, there is an opportunity to formalise the management of the Bioremediation Cell to minimise the potential for contaminated run-off reporting to the site's water management system. It is noted however that any overflow would report to on-site storage SB3, and as such remain contained within the mine's water management system.

3.3.5 *Subsidence*

A review of mine subsidence aspects and relevant conditions was undertaken by MSEC (refer *Annex D*). No non-conformances were identified in relation to the surface subsidence component of the audit. The MSEC auditor was of the opinion that subsidence management plans and procedures are adequate and monitoring measures were implemented as required during the audit period.

3.3.6 *Rehabilitation*

Progressive rehabilitation of land impacted by subsidence cracking was observed, along with areas previously sown with pasture grasses in accordance with Short-term goals. The latter including former drill sites were observed in the field. A stand of large trees was observed to have died over LW101 and LW102, previously reported as likely result of subsidence impacts as was addressed in previous IEA. Trees over LW103 – LW105 were reported to show no signs of subsidence impacts. No obvious further tree impacts were observed during the audit inspection.

At the time of reporting, only LW101 had exceeded its predicted subsidence criteria. The 2016 Biodiversity Monitoring Report indicates that monitoring in LW101 and LW102 suggests recruitment of trees is occurring and that individual trees recorded in previous years continue to grow. Ponding in LW105 was reported to have occurred requiring management in accordance with the Rehabilitation Management Plan. Areas of ponding were observed

and the auditor was advised of plans being considered/reviewed to divert and drain water in some instances to establish natural flow patterns.

Rehabilitation performance is reported in the AR / AEMR and demonstrates general conformance with completion criteria contained in the Landscape Management Plan.

3.4

COMPLIANCE WITH REGULATORY INSTRUMENTS

A compliance check of the MCoA, EPL, MLs and water access licence conditions has been completed. Non-compliances and observations for each component are summarised in *Table 3.2*.

A full review and audit findings for each component are under the following Annexures:

- *Annex A* - MCoA PA 08_0144 (Mod 5)
- *Annex B* - EPL 12789
- *Annex C* - Mining Leases 1609
- *Annex D* – Subsidence Report

The Environmental Assessment for the Narrabri Mine Stage 2 Longwall Project - Statement of Commitments are generally reflected in the Approval Condition and Management Plans and as such are not addressed separately in this IEA report.

As discussed in *Section 2.3*, a qualitative risk assessment was also completed on the findings as follows:

- non-compliance assessed as 'high' have been colour coded **red**;
 - non-compliance assessed as 'moderate' have been colour coded **orange**;
 - non-compliance assessed as 'low' have been colour coded **yellow**; and
- administrative non-conformances have been colour coded **blue**.

Table 3.2 Summary of Audit Findings

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
<i>Minister's Conditions of Approval PA 08_0144 (Mod 5)</i>				
Sch.2, C1	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation or rehabilitation of the project.	NCOPL has exceeded noise criteria on two occasions during the audit period, and has received a Penalty Notice for disturbance of Aboriginal Cultural artefacts. The latter is considered to be of higher level of significance and hence subsequent risk classification than the noise exceedances.	NC	Refer to relevant conditions in Schedule 4 below.
Sch.2, C2	The Proponent shall carry out the project generally in accordance with the: (a) EA; and (b) conditions of this approval.	As above	NC	As above.
Sch.4, C 1	The Proponent shall ensure that the noise generated by the project does not exceed the levels set out in Table 1.	Noise exceedances were recorded during the last three EPL reporting periods and were notified as required by the Noise Management Plan. Refer comments and recommendation for EPL L3.1 in relation to exceedance on noise criteria.	NC	NCOPL should continue to implement the Noise Management Plan and identify improvement opportunities where necessary to prevent noise impacts.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
Sch.4, C4	<p>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 Secretary. This Plan shall:</p> <p>(a) be prepared in consultation with EPA by a suitably qualified expert whose appointment has been approved by the Secretary;</p> <p>(b) be submitted to the Secretary for approval by 30 June 2011;</p> <p>(c) include a Noise Monitoring Program incorporating:</p> <ul style="list-style-type: none"> • real-time noise and temperature inversion monitoring; and • attended noise monitoring to monitor the performance of the project; <p>(d) include reactive noise control measures to manage noise impacts for sensitive receivers; and</p> <p>(e) include a protocol to establish whether the project is complying with the noise impact assessment criteria in Table 1.</p>	<p>Initial submission of the Noise Management Plan was verified by the previous IEA.</p> <p>The current revision of the Noise Management Plan and its implementation generally meet the requirements of this condition.</p> <p>However, a number of exceedances of noise criteria have occurred over the audit period as reported against EPL condition L3.1. In one instance meteorological conditions were not determined as required by the NMP (refer EPL L3.5)</p> <p>Refer also Sch. 4 Condition 1 above.</p> <p>The above noise exceedances and not determining meteorological conditions can be attributed to not adequately implementing the NMP.</p>	NC	Refer comments and recommendation for EPL L3.1 and L3.5 in relation to exceedance of noise criteria and determination of meteorological conditions.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
Sch.4, C21	Within 2 years of commissioning the water conditioning plant, and every 5 years thereafter, unless otherwise directed by the Secretary, the Proponent shall engage suitably qualified experts approved by the Secretary 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 Secretary.	The brine management review was not commissioned or completed within 2 years of commissioning the water conditioning plant. The auditor was advised that the brine management report is in Draft status.	ANC	NCOPL should complete the final brine management report.
Sch.4, C22	The Proponent shall not destroy damage or deface any known Aboriginal objects (as defined in the <i>National Parks and Wildlife Act 1974</i>) without the written approval of the Secretary.	NCOPL received a Penalty Notice for an incident involving the disturbance of an Aboriginal heritage site, identified on 14 October 2014. NCOPL undertook further training of personnel in Cultural Awareness and the requirements of the Aboriginal Cultural Heritage Management Plan in response to incidents.	NC	NCOPL should continue to address Cultural Awareness and the requirements of the Aboriginal Cultural Heritage Management Plan as part of ongoing induction training and other communication opportunities with site personnel.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
Sch.4, C23	<p>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 Secretary. This plan must:</p> <p>(a) be submitted the Secretary by 30 June 2011;</p> <p>(b) be prepared in consultation with the OEH, the Narrabri Local Aboriginal Land Council and the Narrabri Goomeroi Aboriginal Corporation;</p> <p>(c) include a protocol for the ongoing consultation and involvement of Aboriginal communities in the conservation and management of Aboriginal heritage on site; and</p> <p>(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</p>	<p>Preparation and submission of the Aboriginal Cultural Heritage Management Plan verified in previous IEA.</p> <p>NCOPL received a Penalty Notice for an incident involving the disturbance of an Aboriginal heritage site, identified on 14 October 2014.</p> <p>NCOPL also reported an unauthorised access to an identified Aboriginal Cultural Heritage Site (Sites 38-40) on 4 June 2015. The incident was investigated with behavioural factors identified as the event cause. Controls required by the Aboriginal Cultural Heritage Management Plan were reported to be in place at the time of the incident.</p> <p>The above incidents can be attributed in part to not adequately implementing the ACHMP.</p>	NC	As above.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
Sch.4, C25	The Proponent shall maintain the Mine Access Road Intersection with PA 4-26-1 WHC_PLN_NAR_Greylands Road Management Plan v2 and the Kamilaroi Highway in consultation with NSC and to the satisfaction of RMS.	No evidence of requisite consultation. Intersection requires maintenance work, on basis of ongoing assessment.	ANC	NCOPL should ensure NSC is consulted where required (ie. to the satisfaction of the RMS) in relation to any ongoing maintenance of the Mine Access Road Intersection.
Sch.4, C29	The Proponent shall ensure that: (a) no outdoor lights shine above the horizontal; and (b) all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting</i> .	The auditors viewed site lighting from the surface operational areas on the evening of Tuesday 6 December 2016 at approximately 9pm from surrounding vantage points near the site boundary. No outdoor lighting was observed to obviously shine above the horizontal. The 2014-2015 Annual Review states that all lighting is designed in accordance with AS4282 (INT) 1995. The scope of this IEA did not include a detailed audit of lighting installations against AS4282 (INT) 1995. However, based on the above observations the Lead Auditor is satisfied that NCOPL is generally complying with the intent of this condition. NCOPL did receive two complaints during the audit period (12/01/2014 and 19/5/2015) in relation to light emanating from the mine. These were attributed to the placement of	O	NCOPL should continue to proactively monitor the positioning of mobile lighting plant to limit any potential light pollution impacts.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
		mobile lighting towers and upon receiving complaints they were acted upon immediately. The auditor does not consider this constitutes non-compliance with this condition as they represent isolated instances that appear were responded to appropriately.		
Sch.4, C31	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 Secretary.	<p>Gas continues to be extracted and vented to air. Mostly carbon dioxide and smaller amounts of methane.</p> <p>The auditor was advised that it was not considered feasible to install Ventilation Air Methane VAM oxidising units due to the gas make-up from the mine.</p> <p>No specific evidence was provided in relation assessment of the final feasibility of VAM oxidising units.</p>	ANC	NCOPL should demonstrate and document the feasibility or otherwise of VAM oxidising units in order to confirm compliance with this condition.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
Sch.4 C32	<p>Prior to carrying out longwall coal mining operations, the Proponent shall submit a Greenhouse Gas Minimisation Plan for the approval of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH;</p> <p>(b) identify options for minimising greenhouse gas emissions from underground mining operations, with a particular focus on capturing and/or using these emissions;</p> <p>(c) investigate the feasibility of implementing each option;</p> <p>(d) propose the measures that would be implemented in the short to medium term on site; and</p> <p>(e) include a research program to inform the continuous improvement of the greenhouse gas minimisation measures on site.</p>	<p>Submission of plan verified in previous IEA.</p> <p>A level 3 Energy Audit was proposed to be undertaken following Stage 2 Commencement. The DP&E approval of the GHG MP stipulated its expectation that the Level Energy Audit be completed by the end of June 2013.</p> <p>The auditor has reviewed the Energy Saving Action Plan (Rev 4, Final), dated 11 August 2014, which adequately addresses the requirements of this condition. The Level 3 audit was commissioned prior to the stipulated date of completion however finalisation of this report does not appear to meet the stipulated timeframe.</p>	O	No further action required.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
<i>EPL 12789</i>				
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	<p>Monitoring of surface water discharges off-site indicated that no material environmental harm has occurred (i.e. all discharges are within EPL limits). Similarly, groundwater monitoring has not identified any significant on-site or off-site trends which would indicate material environmental harm has been caused by the mine.</p> <p>An opportunity for improvement relating to wastewater management surrounding the workshop was identified while on-site, whereby oily water is discharging to ground and then to on-site drainage ditches. However, as noted above, there was no evidence that any associated contamination has migrated off-site.</p> <p>In addition, some isolated instances of inappropriate segregation of Dangerous Goods were observed in the Hot Works area on the mine.</p> <p>Finally, there is an opportunity to formalise the management of the Bioremediation Cell to minimise the potential for contaminated run-off reporting to the site's water management</p>	O	It is recommended that NCOPL consider opportunities for improvement in relation to wastewater management surrounding the workshop, Dangerous good storage/segregation and Bioremediation Cell management to reduce contaminant load to the mine's water management system.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
		system. It is noted however that any overflow would report to storage SB3, and as such remain contained within the mine's water management system.		
L3.1	Noise generated at the premises must not exceed the noise limits in the table below. [Table]	<p>Three instances of exceedances of the criteria in the Table in condition L3.1 have occurred on:</p> <ul style="list-style-type: none"> September 2014 quarterly monitoring event at Bow Hills (R1) (3 dB(A) exceedance); June 2015 quarterly monitoring event at Merriman (R16) (3 dB(A) exceedance) and Oakleigh (R4) 5 dB(A) exceedance; and September 2016 quarterly monitoring event at Oakleigh (R4) 8 dB(A) exceedance. <p>Since these exceedances, a private agreement has been entered into with Bow Hills; and Merriman and Oakleigh have entered into negotiations to be purchased. If the acquisition of these sites is successful, no further noise issues are anticipated.</p> <p>NCOPL is continuing to implement noise mitigation measures to reduce noise impact to the surrounding environment e.g. noise</p>	NC	If property sales do progress then the EPA/DP&E should be advised accordingly and the EPL and NMP can be modified to reflect the new arrangement/s.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
		mitigation on dozer tracks.		
L3.5	<p>The noise limits set out in the Noise Limits table apply under all meteorological conditions except for the following:</p> <p>a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or</p> <p>b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or</p> <p>c) Stability category G temperature inversion conditions.</p> <p>For the purposes of this condition:</p> <p>a) Data recorded by the meteorological station identified as EPA Identification Point(s) W1 must be used to determine meteorological conditions; and</p> <p>b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.</p>	<p>Regarding the exceptions (parts a to c) and the monitoring criteria regarding the weather station W1 (parts a to b)), this information is noted.</p> <p>Upon notifying EPA during the 2015-2016 reporting period of Noise exceedance it was noted the inversion conditions were not determined at the time. Meteorological conditions must be determined by the onsite weather station.</p> <p>NCOPL has implemented a Trigger Action Response Plans (TARP) including an automated alarm system, the criteria of which are set to the requisite meteorological conditions.</p> <p>NCOPL has installed meteorological equipment to track temperature inversion conditions.</p> <p>Monitoring reports reviewed reference the relevant conditions.</p>	NC	No further action required.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
O4.1	The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions, fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment.	Review of the PIRMP for the site indicates that it covers all legislative requirements and considers the major pollution risks across the facility. The PIRMP was tested within a 12 month AR period but not within 12 months of the previous test. Requirements for timing of test have been clarified and test will be conducted within 12 months of previous test.	ANC	No further action required.
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Monitoring records are retained in excel spreadsheets with supporting lab reports linked to each line item. NCOPL's records management system requires retention of records for four years, however, management reported that in practice, records are retained indefinitely. All of the records required by M1.3 are maintained either in the lab reports; or excel spreadsheet. The name of person who collected the sample and time of sample collection is not recorded in the spreadsheet for all data (e.g. wet weather monitoring). These are however recorded on field monitoring sheets.	O	NCOPL should consider including the name of the person collecting samples and the time at which samples are collected in the excel spreadsheets.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
M2.2	Air Monitoring Requirements Point 3 [Table]	<p>A review of monitoring data indicates that the sampling frequency and methodology aligns with the requirements in M2.2.</p> <p>The 2013-2014 EPL Annual Return reported that one of twelve required samples (in January 2014) for monitoring location ND3 was not analysed due to the dust gauge bottle being broken in transit to the laboratory. This was self-reported as a non-compliance with this condition.</p>	ANC	No further action is required.
M2.5	For the purposes of the table(s) above Special Frequency 2 means the collection of samples quarterly (in the event of flow during the quarter) at a time when there is flow and as soon as practicable after each wet weather discharge from points 11, 12, 13 or 18 commences and in any case not more than 12 hours after each discharge commences.	<p>Typically data was available within 12 hours of a discharge point overflowing.</p> <p>In March 2014 overflows from SD4 and SD5 occurred on 28th March 2014. However, monitoring was only undertaken at points 14, 15, 16, 17, 19, 20, 21 and 22 during the previous three days. It is noted that all water quality sampling results were below the relevant discharge criteria.</p> <p>This represented an isolated contractor management incident and is not considered to be a systemic issue.</p>	NC	NCOPL should continue to ensure samples are collected after each wet weather discharge from the prescribed sampling points.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
R4.1	<p>A noise compliance assessment report must be submitted to the EPA within thirty (30) days of the completion of the quarterly noise monitoring. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:</p> <p>a) an assessment of compliance with noise limits detailed in the limit conditions of this licence; and</p> <p>b) an outline of any management actions taken within the monitoring period to address any exceedances of the limits detailed in the limit conditions of this licence.</p>	<p>Records (correspondence between NCOPL and the EPA) of quarterly submission of noise monitoring reports was reviewed between 2013 and the present day.</p> <p>The noise report for September 15 was received by the NCOPL on 16 September 2015 but was not provided to the EPA until 11 November 2015.</p>	ANC	The mine should endeavour to submit future reports on time.
E1.2	<p>Noise impacts where wind speed exceeds 3 metres per second at 10 metres above the ground must be addressed by:</p> <p>a) documenting noise complaints received to identify any higher level of impacts or wind patterns; where levels of noise complaints indicated a higher level of impact then actions to quantify and ameliorate any enhanced impacts where wind speed exceeds 3 metres per second at 10 metres above the ground should be developed and implemented.</p>	<p>NCOPL had not at the time of the audit incorporated a mechanism in their management systems to trigger this condition in the event that these meteorological conditions are triggered.</p>	NC	<p>It is recommended that NCOPL undertake analysis of historical complaints and meteorological conditions to determine whether any higher level of impact has been occurring at sensitive receivers when wind direction is aligned with these receivers and wind speed exceeds 3 metres per second at 10 metres above the ground.</p> <p>Amend management systems to include trigger to quantify and</p>

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
				ameliorate any enhanced impacts where wind speed exceeds 3 metres per second at 10 metres above the ground towards an impacted receptor where complaints are being received.
<i>Mining Lease 1609</i>				
2	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 development.	NCOPL received a Penalty Notice for an incident involving the disturbance of an Aboriginal heritage site, identified on 14 October 2014.	NC	Duplicate Finding – refer Sc4. C22 above.

A review of commitments made in the management plans developed as part of the statutory instruments for the site was completed. Non-conformances and observations for each commitment in the plans are summarised by exception in *Table 3.3*.

As discussed in *Section 2.3*, a qualitative risk assessment was also completed on the findings as follows:

- non-compliance assessed as 'high' have been colour coded **red**;
 - non-compliance assessed as 'moderate' have been colour coded **orange**;
 - non-compliance assessed as 'low' have been colour coded **yellow**; and
- administrative non-conformances have been colour coded **blue**.

Table 3.3 Summary of Plan Implementation Review Findings

Assessment Requirement	Comment	Audit Classification
Proponent shall prepare and implement an Extraction Plan for first and second workings within each longwall mining domain to the satisfaction of the Secretary.	Extraction Plan is prepared in consultation with appropriate regulatory authority, inclusive of the required components and is well implemented in the operation of the mine.	C
<p>Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>a) be prepared in consultation with EPA by a suitably qualified expert whose appointment has been approved by the Secretary;</p> <p>(b) be submitted to the Secretary for approval by 30 June 2011;</p> <p>(c) include a Noise Monitoring Program incorporating:</p> <ul style="list-style-type: none"> • real-time noise and temperature inversion monitoring; and • attended noise monitoring to monitor the performance of the project; <p>(d) include reactive noise control measures to manage noise impacts for sensitive receivers; and</p> <p>(e) include a protocol to establish whether the project is complying with the noise impact assessment criteria in Table 1.</p>	<p>Initial submission of the Noise Management Plan was verified by the previous IEA.</p> <p>The current revision of the Noise Management Plan and its implementation generally meet the requirements of this condition.</p> <p>However, a number of exceedances of noise criteria have occurred over the audit period as reported against EPL noise criteria. Upon notifying EPA during 2015-2016 reporting period of Noise exceedance it was noted the inversion conditions were not determined at the time. Meteorological conditions must be determined by the onsite weather station.</p> <p>NCOPL has responded to these with review and implementation of ongoing improvement opportunities in relation to operational plant, land agreements and acquisitions and a TARP.</p> <p>The above noise exceedances and not determining meteorological conditions can be attributed to not adequately implementing the NMP.</p>	NC

Assessment Requirement	Comment	Audit Classification
<p>Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with the EPA, and be submitted to the Secretary for approval prior to 30 December 2015, unless otherwise agreed with the Secretary;</p> <p>(b) describe the measures that would be implemented to ensure compliance with relevant air quality criteria and operating conditions of this approval;</p> <p>(c) describe the proposed air quality management system; and</p> <p>(d) include an air quality monitoring program that:</p> <ul style="list-style-type: none"> adequately supports the proactive and reactive air quality management system; evaluates and reports on: <ul style="list-style-type: none"> the effectiveness of the air quality management system; and compliance with the air quality operating conditions; and defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents. 	<p>The consultation (EPA), content and approval of the original plan was verified by previous IEA. The Air Quality Monitoring Program (AQMP) was reviewed and updated since. The plan adequately addresses the requirements of the conditions of approval and appears to be well implemented with current revision status dated 26 May 2015. There has been no recorded exceedance of dust monitoring criteria during the audit period. The auditor sighted the operational water cannon network for coal stockpiles and ROM areas. A water cart is actively used on the internal road network. Non-operational areas appeared to be well stabilised.</p>	C
<p>Water Management Plan, which has been prepared in consultation with OEH, DRE, DP&E which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on watercourses and aquifers, including:</p> <ul style="list-style-type: none"> Site Water Balance; Erosion and Sediment Control Plan; Surface Water Monitoring Plan; 	<p>A Water Management Plan was prepared and approved in 2011. A revised WMP was submitted and approved in 2013. The revised WMP meets the requirements of the relevant approval conditions. NCOPL is generally implementing the WMP adequately.</p> <p>A brine management report is in Draft status requiring finalisation. NCOPL should complete the final brine management report.</p> <p>Improvement opportunities were identified during the audit inspection with regard to managing potential impacted runoff from the workshop areas and an</p>	ANC/O

Assessment Requirement	Comment	Audit Classification
<ul style="list-style-type: none"> Raffinate Discharge and Transfer Control and Monitoring Plan; Groundwater Monitoring Program; and Surface and Groundwater Response Plan, setting out the procedures for: <ul style="list-style-type: none"> 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. 	<p>opportunity to formalise the management of the Bioremediation Cell to minimise the potential for contaminated run-off reporting to the site's water management system. It is noted however that any overflow would report to storage SB3, and as such remain contained within the mine's water management system.</p>	
<p>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 Secretary. This plan must:</p> <p>(a) be submitted the Secretary by 30 June 2011;</p> <p>(b) be prepared in consultation with the OEH, the Narrabri Local Aboriginal Land Council and the Narrabri Goomeroi Aboriginal Corporation;</p> <p>(c) include a protocol for the ongoing consultation and involvement of Aboriginal communities in the conservation and management of Aboriginal heritage on site; and</p> <p>(d) describe the measures that would be implemented to</p>	<p>Preparation and submission of the Aboriginal Cultural Heritage Management Plan verified in previous IEA and was prepared in consultation with appropriate regulatory authorities. The plan adequately addresses the requirements of the conditions of approval and appears to be well implemented.</p> <p>NCOPL received a Penalty Notice for an incident involving the disturbance of an Aboriginal heritage site, identified on 14 October 2014.</p> <p>NCOPL also reported an unauthorised access to an identified Aboriginal Cultural Heritage Site (Sites 38-40) on 4 June 2015. The incident was investigated with behavioural factors identified as the event cause. Controls required by the Aboriginal Cultural Heritage Management Plan were reported to be in place at the time of the incident.</p> <p>The above incidents can be attributed in part to not adequately implementing the ACHMP.</p>	NC

Assessment Requirement	Comment	Audit Classification
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.		
<p>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 Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with OEH; (b) be prepared in accordance with the Guidelines for Energy Savings Action Plans (DEUS, 2005), or its latest version; (c) be submitted to the Secretary for approval prior to 30 June 2011; and (d) include a program to monitor the effectiveness of measures to reduce energy use on site. 	Energy Saving Action Plan (Rev 4, Final), dated 11 August 2014, which adequately addresses the requirements of this condition. The Level 3 audit was commissioned prior to the stipulated date of completion however finalisation of this report does not appear to meet the stipulated timeframe.	ANC

Assessment Requirement	Comment	Audit Classification
<p>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 Secretary. This plan must:</p> <p>(a) be submitted to the Secretary for approval prior to 30 June 2011; (b) identify the various waste streams of the project;</p> <p>(c) describe what measures would be implemented to reuse, recycle, or minimise the waste generated by the project;</p> <p>(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</p> <p>(e) include a program to monitor the effectiveness of these measures.</p>	<p>Submission of the Waste management Plan verified in previous IEA.</p> <p>NCOPL actively segregates waste streams for recycling where possible, or for appropriate disposal as general or regulated waste. Waste generation is reported in the AR / AEMR. No evidence of ponding of treated wastewater was observed during the audit inspection. NCOPL is adequately implementing the Waste Management Plan.</p>	C
<p>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 Secretary and DRE. This plan must:</p> <p>(a) be submitted to the Secretary for approval by 30 June 2011;</p> <p>(b) be prepared by suitably qualified expert/s whose appointment/s have been endorsed by the Secretary;</p> <p>(c) be prepared in consultation with DPI Water, OEH and NSC; and</p> <p>(d) include a:</p> <ul style="list-style-type: none"> • Rehabilitation Management Plan; and • Mine Closure Plan. 	<p>A revised LMP was submitted in 2015 to include longwall panel LW106. The current LMP is dated 18 May 2016. The revised LMP adequately addresses the requirements of this condition and is being well implemented by NCOPL.</p>	C

Assessment Requirement	Comment	Audit Classification
<p>The Rehabilitation Management Plan must include: (a) the rehabilitation objectives for the site;</p> <p>(b) a strategic description of how the rehabilitation of the site would be integrated with surrounding land use;</p> <p>(c) a general description of the short and long term measures that would be implemented to rehabilitate the site;</p> <p>(d) a detailed description of the measures that would be implemented to remediate predicted subsidence impacts under individual Extraction Plans;</p> <p>(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:</p> <ul style="list-style-type: none"> managing remnant vegetation and habitat on site; minimising impacts on fauna; minimising visual impacts; conserving and reusing topsoil; <p>controlling weeds, feral pests, and access;</p> <ul style="list-style-type: none"> managing bushfires; and managing any potential conflicts between rehabilitation works and Aboriginal cultural heritage. <p>(f) detailed performance and completion criteria for the rehabilitation of the site;</p> <p>(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</p> <p>(h) details of who is responsible for monitoring, reviewing and implementing the plan.</p>	<p>A revised RMP was submitted with the LMP above in 2015 to include longwall panel LW106. The current RMP dated 18 May 2016. The revised RMP adequately addresses the requirements of this condition and is being actively implemented by NCOPL.</p> <p>Progressive rehabilitation of land impacted by subsidence cracking was observed, along with areas previously sewn with pasture grasses in accordance with Short-term goals. The latter including former drill sites were observed in the field. A stand of large trees was observed to have died as likely result of subsidence impacts as was addressed in previous IEA.</p> <p>No impacts to built features reported during the audit period.</p> <p>Areas of ponding were observed and the auditor was advised of plans being considered/reviewed to divert and drain water in some instances to establish natural flow patterns.</p> <p>Non-operational areas, spoil stockpiles and drainage lines were observed to be generally well stabilised.</p> <p>Rehabilitation performance is reported in the AR / AEMR and demonstrates general conformance with completion criteria contained in the Landscape Management Plan.</p>	C

Assessment Requirement	Comment	Audit Classification
<p>The Mine Closure Plan must:</p> <p>(a) define the objectives and criteria for mine closure; (b) investigate options for the future use of the site;</p> <p>(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;</p> <p>(d) investigate ways to minimise the adverse socio-economic effects associated with mine closure, including reduction in local and regional employment levels;</p> <p>(e) describe the measures that would be implemented to minimise or manage the on-going environmental effects of the project; and</p> <p>(f) describe how the performance of these measures would be monitored over time.</p>	<p>A revised Conceptual Mine Closure Plane (CMCP) was submitted with the LMP above in 2015 to include longwall panel LW106. The current CMCP is dated 18 May 2016. The current CMCP adequately addresses the requirements of approval condition. The plan states that the Mine Closure Plan will be reviewed and updated over the life of the mine. A Detail Mine Closure Plan is to be prepared when the mine is within 5 years of closure.</p>	C
<p>Biodiversity Management Plan, which has been prepared in consultation with OEH and DRE, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on flora and fauna.</p>	<p>The Biodiversity Management Plan was prepared in consultation with OEH and DRE and adequately addresses the requirements of the approval condition, and is currently implemented at NCOPL.</p>	C

Assessment Requirement	Comment	Audit Classification
<p>Biodiversity Offset Strategy to compensate for the impacts of Stages 1 and 2 of the project. This offset strategy must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with OEH; (b) be submitted to the Secretary for approval by 31 December 2010, or as otherwise agreed by the Secretary; (c) provide a detailed assessment of offset proposal/s involving the property/ies (agreed to by OEH) 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, <i>Bertya oppositifolia</i>, 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. 	<p>The biodiversity offset strategy was prepared in consultation with OEH and approved within the stipulated timeframe. The strategy has undergone subsequent revision to meet EPBC requirements. The Revised Final strategy was last submitted to DSEWPaC in April 2014 and meets the requirements of this condition.</p>	
<p>Environmental Management Strategy for the development to the satisfaction of the Director-General.</p>	<p>The Strategy was prepared to satisfy the requirements of Condition 1, Schedule 6 as per the audit findings of the 2014 IEA. It was later revised in 2015 and meets the requirements of the approval conditions. The Strategy is being implemented by NCOPL.</p>	C

CONCLUSION

An audit of MCoA conditions has been completed as well as a check against commitments made in the management plans developed as part of MCoA conditions for the site.

Overall, conformance was achieved with the audit documents that were reviewed. The number of non-conformances with the statutory conditions and implementation of the management plans is summarised in *Table 4.1* below:

Table 4.1 *Summary of Audit Findings*

Non conformances	Administrative Non - conformances	Observations	Not Verifiable	Not Triggered
<i>Statutory Instruments</i>				
11 (5 duplicates)	6	4	2	35
<i>Implementation of Plans</i>				
2 (2 duplicates)	2 (2 duplicates)	1		
13 (7 duplicates)	8 (2 duplicates)	5	2	35

An action response table has been developed by Whitehaven Coal addressing all audit findings and will be submitted separately to this report.

Annex A

AUDIT TABLE A.1 COMPLAINTS WITH MINISTERS CONDITIONS OF APPROVAL

Table A.1: Compliance with Ministers Conditions of Approval PA 08_0144 (Modification 5 issued December 2015)

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
SCHEDULE 2 – ADMINISTRATIVE CONDITIONS					
Obligation to Minimise Harm to the Environment					
1	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation or rehabilitation of the project.	This IEA	<p>NCOPL has exceeded noise criteria on two occasions during the audit period and has received a Penalty Notice for disturbance of Aboriginal Cultural artefacts.</p> <p>The latter is considered to be of higher level of significance and hence subsequent risk classification than the noise exceedances.</p>	NC	Refer to relevant conditions in Schedule 4 below.
Terms of Approval					
2	<p>The Proponent shall carry out the project generally in accordance with the:</p> <p>(a) EA; and</p> <p>(b) conditions of this approval.</p>	Narrabri Project Environmental Assessment	As above	NC	As above.

3	If there is any inconsistency between the above documents, the latter document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency	2014 IEA	As previously identified in the 2014 IEA there is some inconsistency between the MCoA and Statement of Commitments. As such the MCoA have been taken to prevail over these inconsistent requirements.	Noted	
4	The Proponent shall comply with any reasonable and feasible requirements of the Secretary 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.		NCOPL has undertaken revisions of plans/reports for submission and approval of the Department during the audit period. The audit of these plans against the conditions of this approval and their implementation demonstrate general compliance with the requirements of approved plans and other relevant documents/requests.	C	

Limits On Approval					
<p><i>Note: Under this Approval, the Proponent is required to rehabilitate the site to the satisfaction of the Secretary. 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.</i></p>					
5	The Proponent may undertake mining operations on the site for 21 years from the date of this approval.			C	
6	The Proponent shall not extract more than 11 million tonnes of ROM coal a year from the site.	PA 2-1-1 Coal figs adj.xlsx	FY13-15 – 7.7Mt FY14-15 - 7.7Mt FY15-16 - 9.8Mt FF16-17 (YTD) – 3.1Mt	C	
7	The Proponent shall transport all coal from the site by rail	http://www.whitehavencoal.com.au/operations/narrabri_north_mine.cfm Interview – Environmental Superintendent	All coal is transported off-site by rail. No coal is transported via the road network.	C	
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	Previous 2014 IEA	Completed and verified in previous IEA period.	C	

	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.	Interview – Environmental Superintendent PA 2-8-1 RE Reject Hauling.pdf	No coal reject is transported off-site. Rejects are taken to on-site emplacement area.	C	
PLANNING AGREEMENTS					
9	<p>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:</p> <p>(a) Division 6 of Part 4 of the EP&A Act; and</p> <p>(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.</p> <p>If there is any dispute between the Proponent and either NSC or GSC during</p>	2011 IEA	Verified in previous 2011 Audit.	C	

	the formal drafting of the planning agreements, then any of the parties involved may refer the matter to the Secretary 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 Secretary, 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.	PA 2-10-2 Surrender approval from DPE		C	

MANAGEMENT PLANS / MONITORING PROGRAMS					
11	With the approval of the Secretary, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.		The site has submitted reviewed and updated management plans and studies on a progressive basis.	Noted	
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.	Review of strategies, plans and programs.	Stage 2 approved strategies, plans and programs now in place. Stage 1 consent has been surrendered.	C	
STRUCTURAL ADEQUACY					
13	<p>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.</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> • 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. 	Interview Environmental Superintendent -	No new buildings or structures constructed during the audit period	NT	

Demolition					
14	<p>The Proponent shall ensure that all demolition work is carried out in accordance with <i>Australian Standard AS 2601-2001: The Demolition of Structures</i>, or its latest version.</p>	<p>Interview Environmental Superintendent</p>	<p>– No demolition works undertaken during the audit period.</p>	NT	
Operation Of Plant And Equipment					
15	<p>The Proponent shall ensure that all the plant and equipment used on site, or to transport coal from the site, is:</p> <p>(a) maintained in a proper and efficient condition; and</p> <p>(b) operated in a proper and efficient manner.</p>	<p>PA 2-15-1 NCO Weekly Operations Plans WS 20161202</p> <p>PA 2-15-2 WHC_FRM_NAR_S MV_Weekly</p> <p>Sample of daily pre-start inspections.</p> <p>CoalTrak</p> <p>Sample:</p> <p>Interviews - CCPP Controller, CHPP Mechanical, Supervisor and Pulse Administrators</p>	<p>The auditor sighted Pulse – Maintenance Scheduling</p> <p>CHPP – Monthly shut down for scheduled maintenance.</p> <p>Event Reporter</p> <p>CoalTrak – alarms for inversions – noise travel conditions. Response levels – eg. to limit operation of Dozers etc.</p>	C	

SCHEDULE 3 – ENVIRONMENTAL CONDITIONS – MINING AREA

SUBSIDENCE IMPACT PERFORMANCE MEASURES

1	<p>The Proponent shall ensure that mine subsidence does not cause any exceedances of the performance measures in Table 1.</p>	<p>Narrabri Coal Mine – Review of subsidence management plans and procedures for the compliance audit (surface subsidence component), MSEC 2016</p>	<p>Refer Annex D - Subsidence Audit Report</p>	C	
<p><i>Table 1: Subsidence Impact Performance Measures</i></p>					
<p>Water Resources</p>					
<p>Great Artesian Basin</p>		<p>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 DPI Water.</p>			
<p>Biodiversity</p>					
<p>Flora and Fauna</p>		<p>The Proponent shall ensure that clearing and disturbance of vegetation above the mining area is minimised, to the satisfaction of the Secretary.</p>			
<p><i>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).</i></p>					

Performance Measures – Built Features

2	<p>The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 2, to the satisfaction of DRE.</p> <p><i>Table 2: Subsidence Impact Performance Measures</i></p> <table><tr><th colspan="2">Built Features</th></tr><tr><td>All built features</td><td>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.</td></tr><tr><th colspan="2">Public Safety</th></tr><tr><td>Public Safety</td><td>No additional risk</td></tr></table> <p>Notes</p> <p>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).</p> <p>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.</p> <p>3) Compensation required under this condition includes</p>	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	<p>Narrabri Coal Mine – Review of subsidence management plans and procedures for the compliance audit (surface subsidence component), MSEC 2016</p>	<p>Refer Annex D - Subsidence Audit Report</p>	C	.
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												

	<i>any compensation payable under the Mine Subsidence Compensation Act 1961 and/or the Mining Act 1992.</i>				
3	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 DRE. DRE may seek the advice of the MSB on the matter. Any decision by DRE shall be final and not subject to further dispute resolution under this approval.	Interview Environmental Superintendent –	The auditor was advised that there were no disputes recorded during the audit period in relation built features.	NT	
Extraction Plan					
4	<p>The Proponent shall prepare and implement Extraction Plans for any second workings to be mined to the satisfaction of the Secretary. Each Extraction Plan must:</p> <p>(a) be prepared by a team of suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;</p> <p>be approved by the Secretary before the Proponent carries out any of the second workings covered by the plan;</p> <p>(c) include detailed plans of the proposed first and second workings and any</p>	<p>Narrabri Coal Mine – Review of subsidence management plans and procedures for the compliance audit (surface subsidence component), MSEC 2016</p> <p>Management Plans Biodiversity Management Plan – Narrabri Mine (LW 101-106), Narrabri Mine, dated 18 May</p>	<p>Refer Annex D - Subsidence Audit Report</p> <p>(h) the requisite Management Plans were reviewed against associated separate conditions of the approval and were found to generally meet the requirements of this condition.</p> <p>The Biodiversity Management Plan was prepared in consultation with OEH and DRE and adequately addresses the requirements of this condition.</p>	C	

	<p>associated surface development;</p> <p>(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;</p> <p>(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;</p> <p>(g) include the following to the satisfaction of DRE:</p> <ul style="list-style-type: none"> • a Coal Resource Recovery Plan that demonstrates effective recovery of the available resource; • a Subsidence Monitoring Program to: <ul style="list-style-type: none"> - provide data to assist with the management of the risks associated with subsidence; - validate the subsidence predictions; and 	2016			
--	---	------	--	--	--

<p>- analyse the relationship between the subsidence effects and impacts under the plan</p> <p>and any ensuing environmental consequences;</p> <ul style="list-style-type: none"> • a Built Features Management Plan to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which: <p>- addresses in appropriate detail all items of public infrastructure and all classes of other built features; and</p> <p>- has been prepared following appropriate consultation with the owner/s of potentially affected feature/s;</p> <ul style="list-style-type: none"> • 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 <p>(h) include a:</p> <ul style="list-style-type: none"> • Water Management Plan, which has been prepared in consultation with EPA and DPI Water, which provides for the management of the potential impacts and/or environmental consequences of the 				
--	--	--	--	--

<p>proposed second workings on surface water resources, groundwater resources and flooding, and which includes:</p> <ul style="list-style-type: none"> – 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 OEI and DRE, 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 				
--	--	--	--	--

	<p>been prepared in consultation with OEH and relevant stakeholders for Aboriginal heritage, to manage the potential environmental consequences of the proposed second workings on heritage sites or values; and</p> <p>(i) include a program to collect sufficient baseline data for future Extraction Plans.</p> <p><i>Notes:</i></p> <p><i>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 extractions</i></p>				
5	<p>The Proponent shall ensure that the management plans required under condition 4(h) above include:</p> <p>(a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this approval;</p> <p>(b) a detailed description of the measures that would be implemented to remediate predicted impacts; and</p>	<p>Narrabri Coal Mine – Review of subsidence management plans and procedures for the compliance audit (surface subsidence component), MSEC 2016</p>	<p>Refer Annex D - Subsidence Audit Report</p>	C	

	(c) a contingency plan that expressly provides for adaptive management.				
First Workings					
6	<p>The Proponent may carry out first workings within the underground mining area, other than in accordance with an approved extraction plan, provided that DRE 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.</p> <p><i>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.</i></p>	Narrabri Coal Mine – Review of subsidence management plans and procedures for the compliance audit (surface subsidence component), MSEC 2016	Refer Annex D - Subsidence Audit Report	C	
Payable 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.	<p>PA 3-7-1 Jim Galvin PO and Payment.pdf</p> <p>Narrabri Coal Mine - Review of subsidence management plans and procedures for the compliance audit (surface subsidence</p>	Refer Annex D - Subsidence Audit Report	C	

		component), 2016	MSEC			
--	--	---------------------	------	--	--	--

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

1	<p>The Proponent shall ensure that the noise generated by the project does not exceed the levels set out in Table 1.</p>	<p>PA 4-1-3 sf20150713_Brown Notification re Noise Exceedance June 15</p> <p>EPL 6-R1.1-1 Annual Returns</p> <p>Annual Review 2015-2016</p>	<p>Noise exceedances were recorded during the last three EPL reporting periods and were notified as required by the Noise Management Plan.</p> <p>Refer comments and recommendation for EPL L3.1 in relation to exceedance on noise criteria.</p>	NC	<p>NCOPL should continue to implement the Noise Management Plan and identify improvement opportunities where necessary to prevent noise impacts.</p>														
<p>Table 1: Impact assessment criteria dB(A)</p> <table><tr><th rowspan="2">Location</th><th>Day</th><th>Evening</th><th colspan="2">Night</th></tr><tr><th>L_{Aeq}(15 minute)</th><th>L_{Aeq}(15 minute)</th><th>L_{Aeq}(15 minute)</th><th>L_{A1}(1 minute)</th></tr><tr><td>All privately-owned residences</td><td>35</td><td>35</td><td>35</td><td>45</td></tr></table>						Location	Day	Evening	Night		L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)	All privately-owned residences	35	35	35	45
Location	Day	Evening	Night																
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)															
All privately-owned residences	35	35	35	45															
<p>Notes:</p> <ul style="list-style-type: none">To determine compliance with the L_{Aeq}(15 minute) limit, noise from the project is to be measured at the most affected point within the residential boundary, or at the most																			

<p>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 EPA 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.</p> <ul style="list-style-type: none"> • These noise limits apply to applicable receivers under all meteorological conditions except for any one of the following: <ul style="list-style-type: none"> o wind speeds greater than 3 metres/second at 10 metres above ground level; or o stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or o stability category G temperature inversion conditions. • Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological weather station located in the vicinity of the site, or as otherwise agreed by the Secretary. • To determine compliance with the LA1(1 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 EPA 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													
2	<p>If the noise generated by the project exceeds the criteria in Table 2 at any residence on 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.</p> <p><i>Table 2: Noise acquisition criteria dB(A)</i></p> <table><tr><th>Location</th><th>Day L_{Aeq}(15 minute)</th><th>Evening L_{Aeq}(15 minute)</th><th>Night L_{Aeq}(15 minute)</th></tr><tr><td>All privately-owned residences</td><td>40</td><td>40</td><td>40</td></tr></table> <p><i>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</i></p>	Location	Day L _{Aeq} (15 minute)	Evening L _{Aeq} (15 minute)	Night L _{Aeq} (15 minute)	All privately-owned residences	40	40	40	<p>PA 7-5-2 2015-03-18 Letter of offer Merriman Property</p> <p>Interview – Environmental Superintendent</p>	<p>19/12/14 – Merriman property acquired.</p> <p>The auditor was advised that NCOPL is currently in negotiation to acquire a property as a result of noise concerns. Monitoring indicated non-systemic exceedance, however this was not a trigger for acquisition rights. This however was self-determined by NCOPL to be in exceedance following complaints. Community concern has resulted in NCOPL adopting conservative determination of exceedance of acquisition criteria.</p>	C	
Location	Day L _{Aeq} (15 minute)	Evening L _{Aeq} (15 minute)	Night L _{Aeq} (15 minute)										
All privately-owned residences	40	40	40										
Additional Noise Mitigation Measures													
3	<p>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</p>	<p>PA 4-3-1 Bow Hills Private Agreement _March 2015</p>	<p>Private agreement in place with one landholder – also a licensed dust gauge location.</p>	C									

	<p>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 Secretary for resolution.</p> <p><i>Table 3: Additional noise mitigation criteria</i></p> <table><tr><th>Location</th><th>Day L_{Aeq}(15 minute)</th><th>Evening L_{Aeq}(15 minute)</th><th>Night L_{Aeq}(15 minute)</th></tr><tr><td>All privately-owned residences</td><td>38</td><td>38</td><td>38</td></tr></table> <p><i>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.</i></p>	Location	Day L _{Aeq} (15 minute)	Evening L _{Aeq} (15 minute)	Night L _{Aeq} (15 minute)	All privately-owned residences	38	38	38				
Location	Day L _{Aeq} (15 minute)	Evening L _{Aeq} (15 minute)	Night L _{Aeq} (15 minute)										
All privately-owned residences	38	38	38										
Noise Management Plan													
4	<p>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 Secretary. This Plan shall:</p> <p>(a) be prepared in consultation with EPA by a suitably qualified expert whose</p>	<p>PA 4-4-6 WHC_PLN_NAR_Noise Management Plan_Rv4</p> <p>PA 4-4-4 Real-time Noise Unit Information</p> <p>PA 4-1-1 Noise reports_Oct 2013-Mar</p>	<p>Initial submission of the Noise Management Plan was verified by the previous IEA.</p> <p>The current revision of the Noise Management Plan and its implementation generally meet the requirements of this condition.</p> <p>However, a number of exceedances of noise criteria have occurred over</p>	NC	<p>Refer comments and recommendation for EPL L3.1 and L3.5 in relation to exceedance of noise criteria and determination of meteorological conditions.</p>								

	<p>appointment has been approved by the Secretary;</p> <p>(b) be submitted to the Secretary for approval by 30 June 2011;</p> <p>(c) include a Noise Monitoring Program incorporating:</p> <ul style="list-style-type: none"> • real-time noise and temperature inversion monitoring; and • attended noise monitoring to monitor the performance of the project; <p>(d) include reactive noise control measures to manage noise impacts for sensitive receivers; and</p> <p>(e) include a protocol to establish whether the project is complying with the noise impact assessment criteria in Table 1.</p>	<p>2016</p> <p>Previous IEA</p>	<p>the audit period as reported against EPL condition L3.1. In one instance meteorological conditions were not determined as required by the NMP (refer EPL L3.5)</p> <p>Refer also Sch. 4 Condition 1 above.</p>		
Continuous Improvement					
5	<p>The Proponent shall:</p> <p>(a) implement all reasonable and feasible best practice noise mitigation measures;</p> <p>(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</p> <p>(c) report on these investigations and the implementation and effectiveness of these measures in the Annual Review, to the satisfaction of the Secretary.</p>	<p>PA 4-4-6 WHC_PLN_NAR_Noise Management Plan_Rv4</p> <p>PA 4-5-1 SPL Measurements</p> <p>PA 4-5-2 Delivery Times into NCO.pdf</p> <p>PA 4-5-3 150424 - Whitehaven (Narrabri) Inspection</p>	<p>The auditor was advised of an ongoing review of options/opportunities to improve dozer tracks and dozer operation to reduce "track slap" noise generation.</p> <p>Sound power level measurements/assessments for operating plant sighted.</p> <p>Numerous site initiatives were reviewed, including dozer track studies, and TARP that</p>	C	

		<p>Report_Example.pdf</p> <p>PA 4-5-4 WHC_NAR_TARP_N OISE ALARMS AND TEMPERATURE INVERSION CONDITIONS_A4.pdf</p> <p>PA 4-5-5 Photo of speed limit onsite_example.JPG</p> <p>PA 4-5-6 05 Surface Induction Mar 16.pptx</p> <p>Interview – Mechanical Maintenance Coordinator</p> <p>AEMR 2013 – 2014</p> <p>AR 2014 – 2015</p> <p>AR 2015-2016</p>	<p>demonstrate NCOPL is taking proactive efforts to review and improve performance.</p> <p>Improvement opportunities and their implementation are discussed in Annual Returns.</p>		
--	--	---	--	--	--

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

AEMR 2013 – 2014
AR 2014 – 2015
AR 2015-2016
EPL 6-R1.1-1 Annual Returns

Table 4: Long term impact assessment criteria for particulate matter

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

Table 5: Short term impact assessment criteria for particulate matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 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
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Notes to Tables 4-6

- ^a Total impact (i.e. incremental increase in

No exceedance of the listed criteria during the audit period.

The 2013-2014 EPL Annual Return reported that one of twelve required samples (in January 2014) for monitoring location ND3 was not analysed due to the dust gauge bottle being broken in transit to the laboratory. This was self-reported as a non-compliance with this condition.

Monitoring data for reported in the Annual Review 2015/2016 shows that Total Insoluble Solids data at all monitoring locations was reported to be below the annual average criteria, which the exception on ND2 which was impacted by ash content, hence not attributed to NCOPL operations. NCOPL measures PM10 levels by two High Volume Air Samplers

C

	<p>concentrations due to the project plus background concentrations due to all other sources);</p> <ul style="list-style-type: none"> • <i>b Incremental impact (i.e. incremental increase in concentrations due to the project on its own);</i> • <i>c Deposited dust is to be 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 Particulate Matter - Deposited Matter - Gravimetric Method; and</i> • <i>d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity agreed by the Secretary.</i> 		<p>(HVAS) for a 24 hour period every 6 days. Total Suspended Particulates (TSP) is taken at a ratio 1:2 from the recorded PM10 data. Monitoring undertaken at NCOPL HVAS's report that PM10 annual averages are well below the applicable criteria, also confirming TSP limits are within criteria as per the approved method for determining concentrations.</p> <p>The AEMR 2014/2015 reported consistent data with above, with three locations (ND1, ND2 and ND5) reporting impacts from organic matter. HVAS data was well within the assessment criteria.</p> <p>The AEMR 2013/2014 reported consistent results with above with location ND5 reporting impacts from organic matter, while HVAS data was reported to be within the assessment criteria.</p>		
Operating Conditions					
7	<p>The Proponent shall:</p> <p>(a) implement all reasonable and feasible measures to minimise the:</p> <ul style="list-style-type: none"> • odour, fume and dust emissions of the 	<p>EPL 12789</p> <p>EPL 6-R1.1-1 Annual</p>	<p>EPL Annual Returns for the audit period indicate no exceedance of dust criteria during the reporting</p>	C	

	<p>project; and</p> <ul style="list-style-type: none"> • release of greenhouse gas emissions from the project; <p>(b) operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting and real-time air quality monitoring data to guide the day to day planning of operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this approval;</p> <p>(c) minimise any visible air pollution; and</p> <p>(d) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d to Tables 4-6 above).</p> <p>to the satisfaction of the Secretary.</p>	<p>Returns</p> <p>PA 4-7A-4 EPL PRPs and Updates</p> <p>PA 4-7A-1 WHC_NAR_TARP_D UST FROM SURFACE ACTIVITIES_A4.pdf</p> <p>WHC_REP_NAR_Implementation of PBM Practices Dust Mitigation.pdf</p> <p>PA 4-7A-1 WHC_NAR_TARP_D UST FROM SURFACE ACTIVITIES_A4.pdf</p> <p>Interview – CHPP Control Room operator</p> <p>Site observations</p>	<p>period.</p> <p>NCOPL has addressed Pollution Reduction Program (PRP) studies and implementation of improvement measures, as required by the EPL. The mine also has a number of activity specific procedures and specifications for dust control including a Tactical Action Response Plan (TARP) for surface activities dust management.</p> <p>The auditor sighted the operational water cannon network for coal stockpiles and ROM areas. A water cart is actively used on the internal road network.</p> <p>Non-operational areas appeared to be well stabilised.</p> <p>No excessive dust generation was observed during the IEA site inspection.</p> <p>Discussion with CHPP Control Room operator verified implementation of the dust TARP.</p>		
--	---	--	--	--	--

Air Quality Management Plans					
7A	<p>The Proponent shall prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. This program must:</p> <p>(a) be prepared in consultation with the EPA, and be submitted to the Secretary for approval prior to 30 December 2015, unless otherwise agreed with the Secretary;</p> <p>(b) describe the measures that would be implemented to ensure compliance with relevant air quality criteria and operating conditions of this approval;</p> <p>(c) describe the proposed air quality management system; and</p> <p>(d) include an air quality monitoring program that:</p> <ul style="list-style-type: none"> adequately supports the proactive and reactive air quality management system; evaluates and reports on: <ul style="list-style-type: none"> the effectiveness of the air quality management system; and compliance with the air quality operating conditions; and defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents. 	<p>PA 4-7-1 WHC_PLN_NAR_Air Quality Monitoring Program_Rv2.pdf (opens as GHG MP)</p> <p>air-quality- monitoring- program27093623.pdf</p>	<p>The Air Quality Monitoring Program (AQMP) was initially prepared in 2007 and later revised in 2011. At this time the DECCW (EPA) were consulted to confirm the EPA's previously stated position that it supports the development such plan, but does not approve/endorse plans. The EPA responded to confirm this with the email communication provided as an annex to the AQMP.</p> <p>The AQMP was reviewed with current revision status dated 26 May 2015. The EPA was advised accordingly and indicated that it did not require submission of the plan for review.</p> <p>The AQMP adequately meets the requirements of this condition.</p>	C	

METEOROLOGICAL MONITORING					
8	<p>For the life of the project, the Proponent shall ensure that there is a meteorological station in the vicinity of the site that:</p> <p>(a) complies with the requirements in <i>Approved Methods for Sampling of Air Pollutants in New South Wales</i> (DECC, 2007), or its latest version; and</p> <p>(b) is capable of real-time measurement of temperature lapse rate in accordance with the <i>NSW Industrial Noise Policy</i>, unless a suitable alternative is approved by the Secretary following consultation with the EPA.</p>	<p>Sighted Sentinex Repository for meteorological data</p> <p>Sighted meteorological station (EPL Point W1) in field.</p>	Meteorological station W1 sighted along with meteorological data.	C	

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 DPI Water, and to the satisfaction of the Secretary. 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.	PA 4-9-1 sf150602_Narrabri Mine Groundwater Calibration Report_DP&E	NCOPL Groundwater Calibration Report adequately addresses the requirements of this condition.	C	
---	---	---	---	---	--

Water Supply

9A	<p>The Proponent shall ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations on site to match its available water supply.</p> <p><i>Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development.</i></p>	<p>ML 3-1 Narrabri Mine MOP Stage 2 Amdt B_FINAL.pdfPA 4-13- 5 43207396 Revised WMP F5</p> <p>Interview – Environmental Superintendent</p>	<p>The site water balance for the mine as outlined in the current MOP indicates sufficient water resources are available for Stage 2 operation.</p> <p>NCOPL hold requisite licenses to account for groundwater inflow into the mine.</p>	C	
----	--	--	---	---	--

Compensatory Water Supply

9B	<p>The Proponent shall provide a compensatory water supply to any landowner of privately-owned land whose water supply is adversely and directly impacted as a result of the project (other than an impact that is minor or negligible), in consultation with DPI Water, and to the satisfaction of the Secretary.</p> <p>The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributable to the project. Equivalent water supply should be provided (at least on an interim basis) as soon as practicable from the loss being identified, unless otherwise agreed with the landowner.</p> <p>If 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 Secretary for resolution.</p> <p>If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent shall provide alternative</p>	Interview Environmental Superintendent	–	The auditor was advised that there has been no requirement during the audit period to provide compensatory water.	NT	
----	---	--	---	---	----	--

	compensation to the satisfaction of the Secretary.				
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).	PA 4-13-5 43207396 Revised WMP F5 EPL 6-R1.1-1 Annual Returns Previous 2014 IEA AEMR 2013 – 2014 AR 2014 – 2015 AR 2015-2016 Interview – Environmental Superintendent	No reported discharges of any waters from the disturbed areas of the site during the audit period. Raffinate water is not currently transferred to water users and has not been transferred during the audit period.	C	
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	Interview – Environmental Superintendent PA 4-13-5 43207396 Revised WMP F5 Previous IEAEPL	Raffinate water is not currently discharged to the Namoi River and has not been discharged during the audio period.	NT	

	(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 Secretary, the Proponent must commission the water conditioning plant identified in the EA, to the satisfaction of the Secretary.	Previous 2014 IEA Site Inspection	Verified in previous IEA. The plant was sighted during the site inspection for this audit.	C	
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 Secretary. This revised plan must be produced in consultation with EPA and DPI Water by suitably qualified expert/s whose appointment/s have been approved by the Secretary 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	PA 4-13-5 43207396 Revised WMP F5 Previous IEA PA 4-13-1 DoPI WMP submission letter.pdf Previous 2014 IEA	Verified in previous IEA. A revised Water Management Plan was prepared and submitted for approval in 2013. The revised WMP meets the requirements of this condition.	C	

	<p>(f) Surface and Groundwater Response Plan, setting out the procedures for:</p> <ul style="list-style-type: none"> • 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. <p><i>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.</i></p>				
Site Water Balance					
14	<p>The Site Water Balance must:</p> <p>(a) include details of:</p> <ul style="list-style-type: none"> • sources and security of water supply; • underground water make; • water use on site; • water management on site; • off-site water transfers; • reporting procedures; <p>(b) describe measures to minimise water use by the project; and</p> <p>(c) be reviewed and recalculated each year in the light of the most recent water monitoring data.</p>	PA 4-13-5 43207396 Revised WMP F5	The revised WMP contains a Site Water balance that adequately meets the requirements of this condition.	C	

Erosion and Sediment Control					
15	<p>The Erosion and Sediment Control Plan must:</p> <p>(a) be consistent with the requirements of <i>Managing Urban Stormwater: Soils and Construction</i> manual (Landcom, 2004), or its latest version;</p> <p>(b) identify activities that could cause soil erosion and generate sediment;</p> <p>(c) describe measures to minimise soil erosion and the potential for transport of sediment to downstream waters;</p> <p>(d) describe the location, function, and capacity of erosion and sediment control structures; and</p> <p>(e) describe what measures would be implemented to monitor and maintain the structures over time.</p>	<p>PA 4-13-5 43207396</p> <p>Revised WMP F5</p> <p>Site Observations</p> <p>Previous 2014 IEA</p>	<p>The revised WMP contains an Erosion and Sediment Control Plan that meets the requirements of this condition.</p> <p>No significant soil erosion was observed at site during the site inspection. Non-operational land appeared to be well stabilised at the time of the audit.</p>	C	
Surface Water Monitoring Program					
16	<p>The Surface Water Monitoring Plan must include:</p> <p>(a) detailed baseline data on surface water flows and quality in creeks and other water bodies that could be affected by the project;</p> <p>(b) surface water impact assessment criteria;</p>	<p>PA 4-13-5 43207396</p> <p>Revised WMP F5</p>	<p>The revised WMP contains a Surface Water Monitoring Plan that meets the requirements of this condition.</p>	C	

	(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: (a) be approved by the Secretary prior to any raffinate discharge to the Namoi River; (b) include measures for the continuous monitoring and recording of volumes of water discharged to the Namoi River; (c) contain an ambient water quality monitoring program upstream and downstream of the discharge point; and (d) contain a water quality monitoring program for discharged waters.	PA 4-13-5 43207396 Revised WMP F5 Interview – Environmental Superintendent Previous 2014 IEA	No discharge of raffinate to-date. The auditor was advised that this will be a feature of for future operations.	NT	
Groundwater Management Plan					
18	The Groundwater Monitoring Program must include: (a) further development of the regional and local groundwater model; (b) detailed baseline data to benchmark the natural variation in groundwater levels,	PA 4-13-5 43207396 Revised WMP F5	The revised WMP contains a detailed Groundwater Monitoring Program that meets the requirements of this condition. The Brine Storage Ponds have not yet been commissioned.	C	

	<p>yield and quality (including at any privately owned bores in the vicinity of the site); (c) groundwater impact assessment criteria;</p> <p>(d) a program to monitor the impact of the project on groundwater levels, yield and quality; (e) a program to monitor any impacts of the project on the Namoi River Alluvium;</p> <p>(f) 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</p> <p>(g) procedures for reporting the results of this monitoring.</p>				
Evaporation / Storage Ponds					
19	<p>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.</p>	<p>Previous 2014 IEA PA 4-19-1 43167673_WorkingRE V01050911_reduced</p> <p>PA 4-19-2 Narrabri North Coal Evaporation Pond Groundwater</p>	<p>The 'as constructed' plans indicate use of 1.5mm HDPE liner (impermeable) overlaying a 500mm clay layer (low permeability) for the evaporation/storage ponds for storage of saline water (Ponds A1, A2, A3). Assuming integrity of the HDPE liner and appropriate compaction of the clay liner this would be expected to meet the</p>	C	

		<p>Review_Final.pdf</p> <p>PA 4-19-3 1541470_001_R_Rev0 Narrabri Slope Inspections.pdf</p> <p>PA 4-19-4 Scheduled Dam Inspection_Dam A1.pdf</p> <p>PA 4-19-4 Scheduled Dam Inspection_Dam A1.pdf</p>	<p>permeability objectives of this condition. Compaction testing was undertaken during construction of the dams to confirm 95% compaction.</p> <p>Groundwater Review and Dam integrity inspections have been undertaken to assess performance of the storages. A sample of Scheduled Dam Inspections Reports were sighted by the auditor.</p>		
Brine Storage Ponds					
20	<p>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.</p>	<p>Previous 2014 IEA</p> <p>PA 4-19-1 43167673_WorkingRE V01050911_reduced</p> <p>PA 4-19-2 Narrabri North Coal Evaporation Pond Groundwater Review_Final.pdf</p> <p>PA 4-19-3 1541470_001_R_Rev0 Narrabri Slope</p>	<p>The 'as constructed' plans indicate use of 1.5mm HDPE liner (impermeable) overlaying a 500mm clay layer (low permeability) for the brine storage ponds (Pond A1, A2, A3). Assuming integrity of the HDPE liner and appropriate compaction of the clay liner this would be expected to meet the permeability objectives of this condition. Compaction testing was undertaken during construction of the dams to confirm 95%</p>	C	

		Inspections.pdf	compaction. The Brine Storage Ponds have not yet been commissioned		
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 Secretary, the Proponent shall engage suitably qualified experts approved by the Secretary 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 Secretary.	PA 4-21-1 sf1500304_Brine Review DPE Endorsement PA 4-21-2 Letter to NC approval Brine- Water expert Mar 2015 PA 4-19-4 Scheduled Dam Inspection_Dam A1.pdf	The brine management review was not commissioned or completed within 2 years of commissioning the water conditioning plant. The auditor was advised that the brine management report is in Draft status.	ANC	NCOPL should complete the final brine management report.

HERITAGE

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

Aboriginal Cultural Heritage Management Plan

22	<p>The Proponent shall not destroy damage or deface any known Aboriginal objects (as defined in the <i>National Parks and Wildlife Act 1974</i>) without the written approval of the Secretary.</p>	<p>PA 4-22-2 Narrabri - Penalty Notice - Aboriginal Cultural Heritage 131114</p> <p>PA 4-22-3 sf150703_DP&E_Narrabri Mine Cultural Heritage Wet Sieving Report</p> <p>PA 4-22-2 Narrabri - Penalty Notice - Aboriginal Cultural Heritage 131114</p>	<p>NCOPL received a Penalty Notice for an incident involving the disturbance of an Aboriginal heritage site, identified on 14 October 2014.</p>	NC	<p>NCOPL should continue to address Cultural Awareness and the requirements of the Aboriginal Cultural Heritage Management Plan as part of ongoing induction training and other communication opportunities with site personnel.</p>
23	<p>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</p>	<p>Previous 2014 IEA 01130104-aboriginal-cultural-heritage-management-plan.pdf</p> <p>PA 4-22-1 sf141031_Narrabri Mine Cultural</p>	<p>Preparation and submission of the Aboriginal Cultural Heritage Management Plan verified in previous IEA.</p> <p>NCOPL received a Penalty Notice for an incident involving the disturbance of an Aboriginal heritage site, identified on 14</p>	NC	<p>As above.</p>

	<p>Aboriginal Cultural Heritage Management Plan to the satisfaction of the Secretary. This plan must:</p> <p>(a) be submitted the Secretary by 30 June 2011;</p> <p>(b) be prepared in consultation with the OEH, the Narrabri Local Aboriginal Land Council and the Narrabri Goomeroi Aboriginal Corporation;</p> <p>(c) include a protocol for the ongoing consultation and involvement of Aboriginal communities in the conservation and management of Aboriginal heritage on site; and</p> <p>(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</p>	<p>Heritage Incident Report.pdf</p> <p>PA 4-22-2 Narrabri - Penalty Notice - Aboriginal Cultural Heritage 131114</p> <p>PA 4-22-4 sf20150612_DPE re Aboriginal Cultural Heritage Environmental Event Report.pdf</p>	<p>October 2014.</p> <p>NCOPL also reported an unauthorised access to an identified Aboriginal Cultural Heritage Site (Sites 38-40) on 4 June 2015. The incident was investigated with behavioural factors identified as the event cause. Controls required by the Aboriginal Cultural Heritage Management Plan were reported to be in place at the time of the incident.</p> <p>The above incidents can be attributed in part to not adequately implementing the ACHMP.</p>		
24	<p>Prior to undertaking any activities involving surface disturbance or vegetation removal for the lands overlying Longwalls 8-26, the Proponent shall</p>	<p>Previous 2014 IEA</p>	<p>Verified in previous IEA</p>	C	

	undertake a detailed Aboriginal cultural heritage survey in consultation with the local Aboriginal community and OEH, and to the satisfaction of the Secretary. The Secretary 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 PA 4-26-1 WHC_PLN_NAR_Greylands Road Management Plan v2 and the Kamilaroi Highway in consultation with NSC and to the satisfaction of RMS.	PA 4-25-1 RMS Compliance - An assessment of the RMS roads	No evidence of requisite consultation. Intersection requires maintenance work, on basis of ongoing assessment.	ANC	NCOPL should ensure NSC is consulted where required (ie. to the satisfaction of the RMS) in relation to any ongoing maintenance of the Mine Access Road Intersection.
----	--	---	---	-----	---

Greylands and Scratch Roads

26	<p>Prior to using Greylands and Scratch Roads to construct mine-related infrastructure, the Proponent shall enter into an agreement with NSC to:</p> <p>(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 NSW T&I (Fisheries) and to the satisfaction of NSC; and</p> <p>(b) fund the maintenance of those sections</p>	<p>Previous IEA</p> <p>PA 4-26-1 WHC_PLN_NAR_Greylands Road Management Plan v2</p>	<p>Greylands Road is now under mine ownership.</p> <p>No mine related infrastructure in relation to Scratch Road.</p>	C	
----	---	--	---	---	--

	of these roads that it uses to an all-weather unsealed road standard.				
Gunnedah Traffic Management Study					
27	<p>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.</p> <p><i>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</i></p>	Previous 2014 IEA	Verified by previous IEA	C	
VISUAL					
<i>Note: These conditions should be read in conjunction with section 14 of the Statement of Commitments.</i>					
Visual Amenity					
28	The Proponent shall minimise the visual impacts of the project to the satisfaction of the Secretary.	<p>Previous 2014 IEA</p> <p>Site observations</p>	As noted in previous IEA a visual bund was constructed and vegetated to reduce view of the mine operational areas from public	C	

			roads. Additional tree screening has recently been planted along Kurrajong Creek Road to further reduce views to the mine.		
Lighting Emissions					
29	<p>The Proponent shall ensure that:</p> <p>(a) no outdoor lights shine above the horizontal; and</p> <p>(b) all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting</i>.</p>	<p>PA 6-1-2 Complaints Register</p> <p>Site observation Tuesday 6 December 2016.</p>	<p>The auditors viewed site lighting from the surface operational areas on the evening of Tuesday 6 December 2016 at approximately 9pm from surrounding vantage points near the site boundary. No outdoor lighting was observed to obviously shine above the horizontal.</p> <p>The 2014-2015 Annual Review states that all lighting is designed in accordance with AS4282 (INT) 1995. The scope of this IEA did not include a detailed audit of lighting installations against AS4282 (INT) 1995. However, based on the above observations the Lead Auditor is satisfied that NCOPL is generally complying with the</p>	O	<p>NCOPL should continue to proactively monitor the positioning of mobile lighting plant to limit any potential light pollution impacts.</p>

			<p>intent of this condition.</p> <p>NCOPL did receive two complaints during the audit period (12/01/2014 and 19/5/2015) in relation to light emanating from the mine. These were attributed to the placement of mobile lighting towers and upon receiving complaints they were acted upon immediately. The auditor does not consider this constitutes non-compliance with this condition as they represent isolated instances that appear were responded to appropriately.</p>		
ENERGY EFFICIENCY AND GREENHOUSE GAS					
<i>Note: These conditions should be read in conjunction with section 11 of the revised Statement of Commitments.</i>					
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	<p>Previous 2014 IEA</p> <p>PA 4-30-2 12593</p> <p>Narrabri Mine Energy Saving Action Plan</p>	<p>Verified in previous IEA.</p> <p>Revised ESAP (Revision 4) approved by DPE in August 2014.</p>	C	

	<p>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 Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH;</p> <p>(b) be prepared in accordance with the <i>Guidelines for Energy Savings Action Plans</i> (DEUS, 2005), or its latest version;</p> <p>(c) be submitted to the Secretary for approval prior to 30 June 2011; and</p> <p>(d) include a program to monitor the effectiveness of measures to reduce energy use on site.</p>	<p>Rev 4</p> <p>PA 4-30-3 DoPI submission letter_ESAP</p> <p>Narrabri-Approval Biodiversity Offset Strategy, ESAP and Extension to Se....pdf</p> <p>PA 4-30-4 2013_07_30_NM EMC Meeting #1</p> <p>PA 4-30-5 Narrabri Mine Cleanskin Induction_Environmental</p>			
Gas Drainage					
31	<p>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 Secretary.</p>	<p>PA 4-7-2 610.11062-R1_GHG MP</p> <p>PA 4-7-3 DK_Approval of GHG Minimisation Plan 120612</p> <p>Interview – Environmental</p>	<p>Gas continues to be extracted and vented to air. Mostly carbon dioxide and smaller amounts of methane.</p> <p>The auditor was advised that it was not considered feasible to install Ventilation Air Methane VAM oxidising units due to the gas make-up from the mine.</p>	ANC	<p>NCOPL should demonstrate and document the feasibility or otherwise of VAM oxidising units in order to confirm compliance with this condition.</p>

		Superintendent	No specific evidence was provided in relation assessment of the final feasibility of VAM oxidising units.		
32	<p>Prior to carrying out longwall coal mining operations, the Proponent shall submit a Greenhouse Gas Minimisation Plan for the approval of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH;</p> <p>(b) identify options for minimising greenhouse gas emissions from underground mining operations, with a particular focus on capturing and/or using these emissions;</p> <p>(c) investigate the feasibility of implementing each option;</p> <p>(d) propose the measures that would be implemented in the short to medium term on site; and</p> <p>(e) include a research program to inform the continuous improvement of the greenhouse gas minimisation measures on site.</p>	<p>Previous 2014 IEA PA 4-7-2 610.11062-R1_GHG MP.pdf</p> <p>PA 4-32-1 DP&I submission letter_GHG</p> <p>PA 4-7-3 DK_Approval of GHG Minimisation Plan 120612</p> <p>energy-savings-action-plan18094719.pdf</p>	<p>Submission of original plan verified in previous IEA.</p> <p>A level 3 Energy Audit was proposed to be undertaken following Stage 2 Commencement. The DP&E approval of the GHG MP stipulated its expectation that the Level Energy Audit be completed by the end of June 2013.</p> <p>The auditor has reviewed the Energy Saving Action Plan (Rev 4, Final), dated 11 August 2014, which adequately addresses the requirements of this condition. The Level 3 audit was commissioned prior to the stipulated date of completion however finalisation of this report does not appear to meet the stipulated timeframe.</p>	O	No further action required.

Waste

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

Waste Minimisation

33	<p>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 Secretary. This plan must:</p> <p>(a) be submitted to the Secretary for approval prior to 30 June 2011; (b) identify the various waste streams of the project;</p> <p>(c) describe what measures would be implemented to reuse, recycle, or minimise the waste generated by the project;</p> <p>(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</p> <p>(e) include a program to monitor the</p>	<p>Previous 2014 IEA PA 4-33-1 WHC_PLN_NAR_Waste Management Plan_Rv2 AEMR 2013 – 2014 AR 2014 – 2015, 2015 – 2016 Site inspection</p>	<p>Verified in previous IEA NCOPL actively segregates waste streams for recycling where possible, or for appropriate disposal as general or regulated waste. Waste generation is reported in the AR / AEMR. No evidence of ponding of treated wastewater was observed during the site inspection.</p>	C	
----	---	---	---	---	--

	effectiveness of these measures.				
Schedule 5 – Rehabilitation and Offsets					
<i>Note: These conditions must be read in conjunction with Section 2 of the Statement of Commitments.</i>					
Rehabilitation Objectives					
1	The Proponent shall rehabilitate the site to the satisfaction of the Secretary and DRE in accordance with the rehabilitation objectives in Table 1.	ep-appendix-f-rehabilitation-management-plan24113258.pdf AEMR 2013 – 2014 AR 2014 – 2015, 2015 – 2016 Site observations Interview – Environmental Superintendent LW101 – 106 Biodiversity – Monitoring Report 2016 (Vol 1) Narrabri Mine LW101-105 2014 Monitoring Report	Progressive rehabilitation of land impacted by subsidence cracking was observed, along with areas previously sewn with pasture grasses in accordance with Short-term goals. The latter including former drill sites were observed in the field. A stand of large trees was observed to have died over LW101 and LW102 as reported as likely result of subsidence impacts as was addressed in previous IEA. Trees over LW103 – LW105 were reported to show no signs of subsidence impacts. No obvious further tree impacts were observed during the audit inspection. At the time of reporting, only LW101 had exceeded its predicted subsidence criteria. The 2016 Biodiversity Monitoring Report	C	

		Volume 1)	<p>indicates that monitoring in LW101 and LW102 suggests that recruitment is occurring and that individual trees recorded in previous years continue to grow. Ponding in LW105 was reported to have occurred requiring management in accordance with the Rehabilitation Management Plan. Areas of ponding were observed and the auditor was advised of plans being considered/reviewed to divert and drain water in some instances to establish natural flow patterns.</p> <p>No impacts to built features reported during the audit period.</p> <p>Areas of ponding were observed and the auditor was advised of plans being considered/reviewed to divert and drain water in some instances to establish natural flow patterns.</p> <p>Non-operational areas, spoil stockpiles and drainage lines were observed to be generally well stabilised.</p> <p>Rehabilitation performance is</p>														
<p>Table 1: Rehabilitation Objectives</p> <table><tr><th>Domain</th><th>Rehabilitation objective</th></tr><tr><td>Surface Facilities Area</td><td>Set through condition 4 below</td></tr><tr><td>Other land affected by the project</td><td>Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems:<ul style="list-style-type: none">comprised of local native plant species; witha landform consistent with the surrounding environment</td></tr><tr><td>Built features</td><td>Repair/restore to pre-mining condition or equivalent</td></tr><tr><td>Community</td><td>Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment</td></tr><tr><td></td><td>Ensure public safety</td></tr></table> <p><i>Note: The Proponent may be required to define other rehabilitation objectives in management plans or strategy required under this schedule.</i></p>			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; witha 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			
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; witha 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																

			reported in the AR / AEMR and demonstrates general conformance with completion criteria contained in the Landscape Management Plan.		
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.	ep-appendix-f-rehabilitation-management-plan24113258.pdf AEMR 2013 – 2014 AR 2014 – 2015, 2015 – 2016 Site observations Interview – Environmental Superintendent	As above	C	
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)	Previous 2014 IEA PA 5-4-8 LMP Consultation	Original submission and approval of plan verified by previous IEA. A revised LMP was submitted in	C	

	<p>and subsequently implement this revised version of the Landscape Management Plan to the satisfaction of the Secretary and DRE. This plan must:</p> <p>(a) be submitted to the Secretary for approval by 30 June 2011;</p> <p>(b) be prepared by suitably qualified expert/s whose appointment/s have been endorsed by the Secretary;</p> <p>(c) be prepared in consultation with DPI Water, OEH and NSC; and</p> <p>(d) include a:</p> <ul style="list-style-type: none"> • Rehabilitation Management Plan; and • Mine Closure Plan. 		<p>2015 to include longwall panel LW106. The current LMP is dated 18 May 2016.</p> <p>The revised LMP adequately addresses the requirements of this condition.</p>		
Rehabilitation Management Plan					
4	<p>The Rehabilitation Management Plan must include: (a) the rehabilitation objectives for the site;</p> <p>(b) a strategic description of how the rehabilitation of the site would be integrated with surrounding land use;</p> <p>(c) a general description of the short and long term measures that would be implemented to rehabilitate the site;</p> <p>(d) a detailed description of the measures that would be implemented to remediate predicted subsidence impacts under individual Extraction Plans;</p> <p>(e) a detailed description of the measures</p>	<p>Previous 2014 IEA ep-appendix-f-rehabilitation-management-plan24113258.pdf</p>	<p>Original submission and approval of plan verified by previous IEA.</p> <p>A revised RMP was submitted with the LMP above in 2015 to include longwall panel LW106. The current RMP dated 18 May 2016.</p> <p>The revised RMP adequately addresses the requirements of this condition.</p>	C	

<p>that would be implemented to minimise environmental impacts of mining operations and to rehabilitate the site, including measures to be implemented for:</p> <ul style="list-style-type: none"> • 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. <p>(f) detailed performance and completion criteria for the rehabilitation of the site;</p> <p>(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</p> <p>(h) details of who is responsible for monitoring, reviewing and implementing the plan.</p> <p><i>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</i></p>				
--	--	--	--	--

	<i>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.</i>				
Mine Closure Plan					
5	<p>The Mine Closure Plan must:</p> <p>(a) define the objectives and criteria for mine closure; (b) investigate options for the future use of the site;</p> <p>(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;</p> <p>(d) investigate ways to minimise the adverse socio-economic effects associated with mine closure, including reduction in local and regional employment levels;</p> <p>(e) describe the measures that would be implemented to minimise or manage the on-going environmental effects of the project; and</p> <p>(f) describe how the performance of these measures would be monitored over time.</p>	Narrabri Coal Mine - Revised Conceptual Mine Closure Plan for Stage 2 Longwall Operations (18 May 2016)	<p>The Revised Conceptual Mine Closure Plan (CMCP) finalised May 2016. The Department of Primary Industries (DPI Water) was consulted and responded in a letter dated 1 September 2015 to suggest the Conceptual Mine Closure Plan should be revised to consider the requirements of the Aquifer Interference Policy for post closure.</p> <p>The current CMCP adequately addresses the requirements of this condition. The plan states that the Mine Closure Plan will be reviewed and updated over the life of the mine. A Detail Mine Closure Plan is to be prepared when the mine is within 5 years of closure.</p>	C	Evidence of approval of the CMCP should be provided.

Offsets					
Biodiversity Offset Strategy					
6	<p>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:</p> <p>(a) be prepared in consultation with OEH;</p> <p>(b) be submitted to the Secretary for approval by 31 December 2010, or as otherwise agreed by the Secretary;</p> <p>(c) provide a detailed assessment of offset proposal/s involving the property/ies (agreed to by OEH) 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;</p> <p>(d) include and assess proposals to offset impacts to the Inland Grey Box EEC, Bertya opponens, and foraging habitat for the Superb Parrot;</p> <p>(e) include proposals on offsetting both direct and indirect impacts (ie edge effects) of the project; and</p> <p>(f) determine the best overall combination of lands to provide a suitable offset.</p>	<p>Previous 2014 IEA 2010_12_03_DECCW advice.pdf</p> <p>PA 5-6-3 Narrabri Coal Mine Offset Strategy Final 230910 Compressed</p> <p>PA 5-6-2 Letter Final BOS_OEH</p> <p>PA 6-1-7 2010_12_03_DECCW advice</p> <p>PA 5-6-1 Narrabri Coal Mine Offset Strategy_Revision 2_Final_160414</p> <p>Narrabri-Approval Biodiversity Offset Strategy, ESAP and Extension to Se....pdf</p>	<p>The offset strategy was prepared in consultation with OEH and approved within the stipulated timeframe.</p> <p>The strategy has undergone subsequent revision to meet EPBC requirements.</p> <p>The Revised Final strategy was last submitted to DSEWPaC in April 2014 and meets the requirements of this condition. The Revised Final strategy was approved by DPE in August 2014.</p>	C	

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 Secretary, to the satisfaction of the Secretary.	PA 5-7-1 Narrabri - Offset Security Extension of Time - 19.06.15 Interview - Environmental Superintendent	This was due 31 December 2016 – the auditor was advised that NCOPL was likely to seek further extension. This condition was not triggered at the time of the audit based on the extended submission date.	NT	

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	<p>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 Secretary. This strategy must:</p> <p>(a) be submitted to the Secretary for approval prior to 30 June 2011;</p> <p>(b) provide the strategic context for environmental management of the project;</p> <p>(c) identify the statutory requirements that apply to the project;</p> <p>(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental</p>	<p>PA 6-1-1 Environmental Management Strategy</p> <p>Previous 2014 IEA</p> <p>PA 6-1-2 DoPI EMS submission letter</p> <p>PA 6-1-2 Complaints Register</p> <p>PA 6-1-3 Newsletters</p>	<p>The EMS was updated as required as verified in previous IEA.</p> <p>The EMS was revised as part of a 3 yearly review in dated 26 May 2015.</p> <p>The current revision of the EMS addresses the requirements of this condition.</p>	C	
---	--	---	--	---	--

	<p>management of the project</p> <p>(e) describe the procedures that would be implemented to:</p> <ul style="list-style-type: none"> • 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 <p>(f) include a clear plan depicting all the monitoring currently being carried out in the project area.</p>				
Management Plan Requirements					
2	<p>The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <p>(a) detailed baseline data;</p> <p>(b) a description of:</p>	<p>Review of Management Plans</p> <p>PA 6-1-1 Environmental Management Strategy</p>	<p>The review of Management Plans undertaken for this audit identified they adequately address the requirements of this condition. Most of the Plans contain an upfront compliance table addressing the relevant Schedules and Conditions and where in the</p>	C	

<ul style="list-style-type: none"> • 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; <p>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</p> <p>(d) a program to monitor and report on the:</p> <ul style="list-style-type: none"> • impacts and environmental performance of the project; • effectiveness of any management measures (see (c) above); <p>(e) a contingency plan to manage any unpredicted impacts and their consequences;</p> <p>(f) a program to investigate and implement ways to improve the environmental performance of the project over time;</p>		<p>Management Plan specific requirements are addressed.</p> <p>The EMS addresses most of the requirements of this condition while specific performance criteria and reporting requirements are addressed in the individual Management Plans.</p>		
--	--	--	--	--

	<p>(g) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> incidents; complaints; non-compliances with statutory requirements; and exceedances of the impact assessment criteria and/or performance criteria; and <p>(h) a protocol for periodic review of the plan.</p>				
Revision of Strategies, Plans and Programs					
3	<p>Within 3 months of the submission of an:</p> <p>(a) audit under condition 7 of schedule 6;</p> <p>(b) incident report under condition 4 of schedule 6; and</p> <p>(c) annual review under condition 5 of schedule 6; and</p> <p>(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 Secretary.</p> <p><i>Note: This is to ensure that the strategies, plans</i></p>	<p>Previous 2014 IEA</p> <p>AEMR 2013 – 2014</p> <p>AR 2014 – 2015, 2015 – 2016</p> <p>PA Modifications</p> <p>Interview – Environmental Superintendent</p> <p>Review of NCOPL Management Plans</p>	<p>NCOPL undertakes regular review update where required of strategies, plans and programs. Revisions status and review frequency is identified on the EMS and Management Plans.</p>	C	

	<i>and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project</i>				
REPORTING					
Incident					
4	The Proponent shall notify the Secretary 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 Secretary and any relevant agencies with a detailed report on the incident.	PA 6-4-1 sf141010_DP&E Notification re Noise Exceedances Sep 14 PA 4-22-1 sf141031_Narrabri Mine Cultural Heritage Incident Report PA 4-22-4 sf20150612_DPE re Aboriginal Cultural Heritage Environmental Event Report	NCOPL has notified incidents and reported within the stipulated timeframe.	C	

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 Secretary.	EPL 12789 Monthly EPL Monitoring Data Dec 2013 – Nov 2016 AEMR 2013 – 2014 AR 2014 – 2015, 2015 – 2016	The referenced documents are available on the NCOPL website.	C	
Annual Review					
6	<p>Within 12 months of this approval, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must:</p> <p>(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;</p> <p>(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</p> <ul style="list-style-type: none"> the relevant statutory requirements, limits or performance measures/criteria; the monitoring results of previous years; and 	<p>AEMR 2013 – 2014</p> <p>2013-2014</p> <p>2014_10_24_DPE response</p> <p>AR 2014 – 2015</p> <p>PA 6-2 2014-2015 Narrabri AEMR Site Inspection Letter_DRE</p> <p>2015-2016 AR</p> <p>PA 6-2 2015-2016 AR Approval DP&E</p>	The referenced AR and AEMR adequately address the requirements of this condition.	C	

	<ul style="list-style-type: none"> 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	<p>Prior to 13 September 2010, and every 3 years thereafter, unless the Secretary 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:</p> <p>(a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;</p> <p>(b) include consultation with the relevant agencies</p>	<p>Previous 2014 IEA</p> <p>This IEA</p>	<p>Verified in 2014 IEA</p> <p>NCOPL sought approval of the current audit team on 2 September 2016.</p>	C	

	<p>(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);</p> <p>(d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate,</p> <p>(e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals.</p> <p><i>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).</i></p>				
8	<p>Within 6 weeks of the completing of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report</p>	Previous 2014 IEA	The previous IEA was submitted within the required timeframe.	C	

COMMUNITY CONSULTATIVE COMMITTEE					
9	<p>The Proponent shall maintain a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary, in general accordance with the Guideline for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007), or its latest version.</p> <p><i>Note: The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.</i></p>	<p>PA 6-9-1 CCC Minutes</p> <p>Interview Environmental Superintendent –</p>	<p>As verified by previous IEA, the CCC was established. CCC meeting minutes demonstrate that the CC met regularly during the audit period.</p>	C	
ACCESS TO INFORMATION					
10	<p>The Proponent shall:</p> <p>(a) make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> 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 	<p>http://www.whitehavencoal.com.au/environment/narrabri_north_mine_environmental_management.cfm</p> <p>PA 6-10-1 140930_DP&E Website Audit Results</p>	<p>DP&E audit of website in 2014 deemed it was in conformance with this condition.</p> <p>The following up-to-date information was current on the web-site at the time of the audit:</p> <p>Stage 2 Project Approval (PA) 08_0144 consolidated</p> <p>Stage 2 Environmental Assessment (EA)</p>	C	

	<p>conditions of this approval, or any approved plans and programs;</p> <ul style="list-style-type: none"> • 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 Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>		<p>Stage 2 EA Specialist Consultant Studies Compendium</p> <p>ML 1609</p> <p>EPL 12789 Monthly EPL Monitoring Data Dec 2013 – Nov 2016</p> <p>AEMR/AER 2013 – 2014, 2014 – 2015, 2015 – 2016</p> <p>CCC Meeting Minutes</p> <p>2013 Complaints (28 complaints)</p> <p>2014 Complaints (39 complaints)</p> <p>2015 Complaints (17 complaints)</p> <p>2016 Complaints (23 Complaints)</p>	
--	---	--	---	--

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 Secretary, 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.	PA 4-3-1 Bow Hills Private Agreement March 2015 sf20150713_Brown Notification re Noise Exceedance June 15	As previously discussed above the mine has entered into private agreements with landholders, based on complaints/request, however this was not based on exceedance of agreed impact assessment criteria.	NT	
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.	PA 4-3-1 Bow Hills Private Agreement March 2015	Air Quality criteria not exceeded	NT	

INDEPENDENT REVIEW

3	<p>If a landowner considers the project to be exceeding the impact assessment criteria in schedule 4, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land.</p> <p>If the Secretary is satisfied that an independent review is warranted, the Proponent shall within 2 months of the Secretary's decision:</p> <p>(a) consult with the landowner to determine his/her concerns;</p> <p>(b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to conduct monitoring on the land, to:</p> <ul style="list-style-type: none"> • 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 <p>(c) give the Secretary and landowner a copy of the independent review.</p>	Interview Environmental Superintendent	–	The auditor was advised that the mine was in current private negotiation with a landholder. However there had been no current request for review at the time of the audit.	NT
---	---	--	---	--	----

4	<p>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 Secretary.</p> <p>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:</p> <p>(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</p> <p>(b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Secretary.</p> <p>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 Secretary.</p>	Interview Environmental Superintendent	–	The auditor was advised that no independent review was requested during the audit period.	NT
---	--	--	---	---	----

	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 Secretary.				
LAND ACQUISITION					
5	<p>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:</p> <p>(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:</p> <ul style="list-style-type: none"> 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 	<p>sf20150713_Brown Notification re Noise Exceedance June 15</p> <p>PA 7-5-2 2015-03-18 Letter of offer Merriman Property</p> <p>PA 7-5-3 2015-03-23 Valuation report – Merriman</p>	<p>Refer above.</p> <p>The auditor was advised that the mine has held recent discussions regarding a land acquisition. A request was made by a landholder and an offer was provided within 3 months. The mine self-determined trigger of Schedule 4. impact assessment criteria, and as such is involved in ongoing private negotiations.</p>	C	

	<p>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;</p> <p>(b) the reasonable costs associated with:</p> <ul style="list-style-type: none"> • relocating within the Narrabri or Gunnedah local government areas, or to any other local government area determined by the Secretary; • 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 • 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 Secretary for resolution. <p>Upon receiving such a request, the Secretary 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;</p> <p>(b) determine a fair and reasonable acquisition price for the land and/or the terms</p>				
--	---	--	--	--	--

<p>(c) reasonable compensation for any disturbance caused by the land acquisition process.</p> <p>However, if following this period, the Proponent and landowner cannot agree upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above;</p> <p>(c) prepare a detailed report setting out the reasons for any determination; and</p> <p>(d) provide a copy of the report to both parties and the Secretary.</p> <p>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.</p> <p>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 Secretary 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 Secretary shall determine a fair and</p>				
--	--	--	--	--

	<p>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 Secretary's determination.</p> <p>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 Secretary determines otherwise.</p>				
6	The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.	Interview Environmental Superintendent –	Not yet triggered, but the auditor was advised that is what will occur – refer above.	NT	
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.	Interview Environmental Superintendent –	As above	NT	

Annex B

AUDIT TABLE B.1 COMPLAINTS WITH ENVIRONMENTAL PROTECTION LICENSE

Table B.1 Compliance with Environment Protection Licence (EPL) 12957

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations
ADMINISTRATIVE CONDITIONS					
A1 What the licence authorises and regulates					
A1.1	<p>This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.</p> <p>Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.</p>	<p>POEO Schedule 1</p> <p>Site Inspection</p> <p>Interview – Group Superintendent – Environment (Compliance)</p> <p>Production reports</p>	<p>NCOPL is undertaking the activities specified under the Licence and within the limits outlined in Schedule 1 of the POEO Act 1997. No issues identified.</p>	C	

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations
	<p>NSW 2390</p> <p>THE LAND APPROVED UNDER PROJECT APPROVAL 08_0144- INDICATED IN APPENDIX 1- SCHEDULE OF PROJECT LAND OF PROJECT APPROVAL 08_0144, DATED 26 JULY 2010 (DOC13/91155).DP 75555503</p>				
A3 Information supplied to the EPA					
A3.1	<p>Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.</p> <p>In this condition the reference to "the licence application" includes a reference to:</p> <p>a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and</p> <p>(a) b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.</p>	Site Inspection	Works and activities are carried out in accordance with the licence application.	C	

2 DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND																					
P1 Location of monitoring/discharge points and areas																					
P1.1	<p>The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.</p> <table><tr><th colspan="4">Air</th></tr><tr><th>EPA Identification no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr><tr><td>3</td><td>Ambient Air Quality Monitoring</td><td></td><td>Monitoring point located at "Bow Hills" and labelled ND3 as shown on map titled "Current Non- Project Related Monitoring Locations- Narrabri Mine" dated 23 November 2011 sent to EPA on 24 November 2011 (DOC11/56033).</td></tr><tr><td>23</td><td></td><td>Gas Drainage Network</td><td>Pre- drainage and Goaf gas drainage network associated with the underground mining operations.</td></tr></table>	Air				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	3	Ambient Air Quality Monitoring		Monitoring point located at "Bow Hills" and labelled ND3 as shown on map titled "Current Non- Project Related Monitoring Locations- Narrabri Mine" dated 23 November 2011 sent to EPA on 24 November 2011 (DOC11/56033).	23		Gas Drainage Network	Pre- drainage and Goaf gas drainage network associated with the underground mining operations.	<p>Monitoring Data as referenced against conditions below.</p> <p>AEMR/ Annual Reviews 2012/13, 2013/14, 2014/15</p> <p>Interview – Environment Superintendent</p>	<p>Monitoring data and reports reviewed indicate that these monitoring locations are present and actively monitored. Several items of monitoring infrastructure were observed on-site during the audit.</p>	C	
Air																					
EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description																		
3	Ambient Air Quality Monitoring		Monitoring point located at "Bow Hills" and labelled ND3 as shown on map titled "Current Non- Project Related Monitoring Locations- Narrabri Mine" dated 23 November 2011 sent to EPA on 24 November 2011 (DOC11/56033).																		
23		Gas Drainage Network	Pre- drainage and Goaf gas drainage network associated with the underground mining operations.																		
P1.2	<p>The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.</p>		No action required.	Noted																	
P1.3	<p>The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the</p>		No action required.	Noted																	

point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
11	Wet weather discharge Discharge water quality monitoring	Wet weather discharge Discharge water quality monitoring	Discharge point on northern side of mine boundary labelled as "SD4" on Figure titled "Wet Weather Discharge Monitoring Locations" provided with licence variation application dated 10 February 2009.
12	Wet weather discharge Discharge water quality monitoring	Wet weather discharge Discharge water quality monitoring	Discharge point on eastern side of mine boundary labelled as "SD5" on Figure titled "Wet Weather Discharge Monitoring Locations" provided with licence variation application dated 10 February 2009.
13	Wet weather discharge Discharge water quality monitoring	Wet weather discharge Discharge water quality monitoring	Discharge point on south eastern side of mine boundary labelled as "SD2" on Figure titled "Wet Weather Discharge Monitoring Locations" provided with licence variation application dated 10 February 2009.
22	Ambient Water Quality Monitoring		Monitoring point in Pine Creek Tributary 1 labelled as "PC1" on figure titled "Figure 1: Surface Water Monitoring Locations" provided with licence variation application dated 2 September 2011 (DOC11/41455).

14	Ambient Water Quality Monitoring		Upstream of mine discharge point on Kurrajong Creek Tributary 1 labelled as "KC1US" on Figure titled "Wet Weather Discharge Monitoring Locations" provided with licence variation application dated 10 February 2009.
15	Ambient Water Quality Monitoring		Downstream of mine discharge point on Kurrajong Creek Tributary 1 labelled as "KC1DS" on Figure titled "Wet Weather Discharge Monitoring Locations" provided with licence variation application dated 10 February 2009.
16	Ambient Water Quality Monitoring		Upstream of mine discharge point on Kurrajong Creek Tributary 2 labelled as "KC2US" on Figure titled "Wet Weather Discharge Monitoring Locations" provided with licence variation application dated 10 February 2009.
17	Ambient Water Quality Monitoring		Downstream of mine discharge point on Kurrajong Creek Tributary 2 labelled as "KC2DS" on Figure titled "Wet Weather Discharge Monitoring Locations" provided with licence variation application dated 10 February 2009.
18	Wet weather discharge Discharge water quality monitoring	Wet weather discharge Discharge water quality monitoring	Discharge point on western side of mine boundary labelled as "SD7" on figure titled "Figure 3- Discharge Location SD7" provided with licence variation application dated 2 September 2011 (DOC11/41455).
19	Ambient Water Quality Monitoring		Upstream location of Kurrajong Creek labelled as "KCUS" on figure titled "Figure 1: Surface Water Monitoring Locations" provided with licence variation application dated 2 September 2011 (DOC11/41455).
20	Ambient Water Quality Monitoring		Upstream location of Kurrajong Creek labelled as "KCDS" on figure titled "Figure 1: Surface Water Monitoring Locations" provided with licence variation application dated 2 September 2011 (DOC11/41455).
21	Ambient Water Quality Monitoring		Northern portion of mining area in Pine Creek labelled as "PCA" on figure titled "Current Environmental Monitoring Locations" provided by licence via email dated 20 October 2011 (DOC11/48204).

P1.4	The following point(s) in the table are identified in this licence for the purpose of the monitoring of weather parameters at the point.		No action required.	Noted							
<table><tr><th>EPA identification number</th><th>Type of Monitoring Point</th><th>Description of Location</th></tr><tr><td>W1</td><td>Weather analysis</td><td>Weather station identified as "Meteorological station" on map titled "Figure B Environmental Monitoring" submitted with the Final Statement of Commitments, dated June 2007.</td></tr></table>						EPA identification number	Type of Monitoring Point	Description of Location	W1	Weather analysis	Weather station identified as "Meteorological station" on map titled "Figure B Environmental Monitoring" submitted with the Final Statement of Commitments, dated June 2007.
EPA identification number	Type of Monitoring Point	Description of Location									
W1	Weather analysis	Weather station identified as "Meteorological station" on map titled "Figure B Environmental Monitoring" submitted with the Final Statement of Commitments, dated June 2007.									

3 LIMIT CONDITIONS

L1 Pollution of Waters

L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	<p>WHC_PLN_NAR Water Management Plan (6/03/2013)</p> <p>Site inspection</p> <p>EPL 5-M1.2-1 Surface Water and Wet Weather Monitoring Results</p> <p>PA 3-4-15 Groundwater Monitoring Data</p>	<p>Monitoring of surface water discharges off-site indicated that no material environmental harm has occurred (i.e. all discharges are within EPL limits). Similarly, groundwater monitoring has not identified any significant on-site or off-site trends which would indicate material environmental harm has been caused by the mine.</p> <p>An opportunity for improvement relating to wastewater management surrounding the workshop was identified while on-site, whereby oily water is discharging to ground and then to on-site drainage ditches.</p>	O	It is recommended that NCOPL consider opportunities for improvement in relation to wastewater management surrounding the workshop, Dangerous good storage/segregation and Bioremediation Cell management to reduce contaminant load to the mine's water management system.
------	---	---	---	---	--

			<p>However, as noted above, there was no evidence that any associated contamination has migrated off-site.</p> <p>In addition, some isolated instances of inappropriate segregation of Dangerous Goods were observed in the Hot Works area on the mine.</p> <p>Finally, there is an opportunity to formalise the management of the Bioremediation Cell to minimise the potential for contaminated run-off reporting to the site's water management system. It is noted however that any overflow would report to storage SB3, and as such remain contained within the mine's water management system.</p>		
L2 Concentration Limits					
L2.1	For each monitoring/discharge point or utilisation area specified in the tables below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	<p>EPL 5-M1.2-1 Surface Water and Wet Weather Monitoring Results</p> <p>AEMR/Annual Reviews 2012/13, 2013/14, 2014/15</p> <p>Interview – Environment Superintendent</p>	No exceedances of criteria were identified during monitoring associated with discharges from these locations.	C	

L2.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	EPL 5-M1.2-1 Surface Water and Wet Weather Monitoring Results AEMR/Annual Reviews 2012/13, 2013/14, 2014/15 Interview – Environment Superintendent	No exceedances of criteria were identified during monitoring associated with discharges from these locations.	C	
L2.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.	EPL 5-M1.2-1 Surface Water and Wet Weather Monitoring Results AEMR/Annual Reviews 2012/13, 2013/14, 2014/15 Interview – Environment Superintendent	No exceedances of criteria were identified during monitoring associated with discharges from these locations. No indication that any other type of pollution was occurring during discharges was noted by NCOPL.	C	

L2.4	<p>Water and/or Land Concentration Limits</p> <p>POINT 12,13,11,18</p> <table border="1"> <thead> <tr> <th>Pollutant</th><th>Units of Measure</th><th>50 percentile concentration limit</th><th>90 percentile concentration limit</th><th>3DGM concentration limit</th><th>100 percentile concentration limit</th></tr> </thead> <tbody> <tr> <td>Oil and Grease</td><td>milligrams per litre</td><td>-</td><td>-</td><td>-</td><td>10</td></tr> <tr> <td>pH</td><td>pH</td><td>-</td><td>-</td><td>-</td><td>6.5-8.5</td></tr> <tr> <td>Total suspended solids</td><td>milligrams per litre</td><td>-</td><td>-</td><td>-</td><td>50</td></tr> </tbody> </table>	Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Oil and Grease	milligrams per litre	-	-	-	10	pH	pH	-	-	-	6.5-8.5	Total suspended solids	milligrams per litre	-	-	-	50	<p>EPL 5-M1.2-1 Surface Water and Wet Weather Monitoring Results</p> <p>AEMR/Annual Reviews 2012/13, 2013/14, 2014/15</p>	<p>No exceedances of criteria were identified during monitoring associated with discharges from these locations. No indication that any other type of pollution was occurring during discharges was noted by NCOPL.</p>	C	
Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																								
Oil and Grease	milligrams per litre	-	-	-	10																								
pH	pH	-	-	-	6.5-8.5																								
Total suspended solids	milligrams per litre	-	-	-	50																								
L2.5	<p>The Total Suspended Solids concentration limits specified for Points 11, 12, 13 and 18 may be exceeded for water discharged provided that:</p> <p>(a) the discharge occurs solely as a result of rainfall measured at the premises that exceeds 38.4 millimetres over any consecutive 5 day period immediately prior to the discharge occurring; and</p> <p>(b) all practical measures have been implemented to dewater all sediment dams</p>	<p>EPL 5-M1.2-1 Surface Water and Wet Weather Monitoring Results</p> <p>AEMR/Annual Reviews 2012/13, 2013/14, 2014/15</p> <p>Interview – Environment Superintendent</p>	<p>No exceedances of criteria were identified during monitoring associated with discharges from these locations (regardless of meteorological conditions). No indication that any other type of pollution was occurring during discharges was noted by NCOPL.</p>	C																									

	<p>within 5 days of rainfall such that they have sufficient capacity to store run off from a 38.4 millimetre, 5 day rainfall event.</p> <p>Note: 38.4 mm equates to the 5 day 90%ile rainfall depth for Gunnedah sourced from Table 6.3a Managing Urban Stormwater: Soils and Construction Volume 1: 4th edition, March 2004.</p>														
L3 Noise Limits															
L3.1	<p>Noise generated at the premises must not exceed the noise limits in the table below.</p> <table><tr><td>Locality and Location</td><td>Day- LAeq (15 minute)</td><td>Evening- LAeq (15 minute)</td><td>Night- LAeq (15 minute)</td><td>Night- LA1 (1 minute)</td></tr><tr><td>All privately-owned residences</td><td>35</td><td>35</td><td>35</td><td>45</td></tr></table>	Locality and Location	Day- LAeq (15 minute)	Evening- LAeq (15 minute)	Night- LAeq (15 minute)	Night- LA1 (1 minute)	All privately-owned residences	35	35	35	45	<p>Site Inspection EPL 6-R4.1-1 Qrtly Noise Rep Sub_Letters sf181013_EPA Notification re Noise Exceedances Sep 13 sf20150713_EPA Notification re Noise Exceedance June 15</p>	<p>Three instances of exceedances of the criteria in the Table in condition L3.1 have occurred on:</p> <ul style="list-style-type: none">September 2014 - quarterly monitoring event at Bow Hills (R1) (3 dB(A) exceedance);June 2015 - quarterly monitoring event at Merriman (R16) (3 dB(A) exceedance) and Oakleigh (R4) 5 dB(A) exceedance;September 2016 quarterly monitoring event at Oakleigh (R4) 8 dB(A) exceedance. <p>Since these exceedances, a private agreement has been entered into with Bow Hills; and Merriman and Oakleigh have entered into negotiations to be purchased. If the</p>	NC	<p>If property sales progress then the EPA/DP&E should be advised accordingly and the EPL and NMP can be modified to reflect the new arrangement/s.</p>
Locality and Location	Day- LAeq (15 minute)	Evening- LAeq (15 minute)	Night- LAeq (15 minute)	Night- LA1 (1 minute)											
All privately-owned residences	35	35	35	45											

			<p>acquisition of these sites is successful, no further noise issues are anticipated.</p> <p>NCOPL is continuing to implement noise mitigation measures to reduce noise impact to the surrounding environment e.g. noise mitigation on dozer tracks.</p>		
L3.2	<p>The noise limits identified in the above table do not apply at privately owned residences that are:</p> <p>a) identified as residences subject to acquisition or noise mitigation on request within the Project Approval; or</p> <p>b) subject to a private agreement, relating to the noise levels, between the licensee and the land owner.</p>	EPL 12957	<p>Since the above recorded exceedances, a private agreement has been entered into with Bow Hills; Naroo has been purchased; and Merriman and Oakleigh have entered into negotiations to be purchased.</p>	Noted	
L3.3	<p>For the purpose of the table above:</p> <p>a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays;</p> <p>b) Evening is defined as the period from 6pm to 10pm;</p> <p>c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.</p>	EPL 12957		Noted	
L3.4	To determine compliance:	EPL 12957	Monitoring locations and	C	

	<p>a) with the Leq(15 minute) noise limits in the Noise Limits table, the noise measurement equipment must be located:</p> <p>i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or</p> <p>ii) within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.</p> <p>b) with the LA1(1 minute) noise limits in the Noise Limits table, the noise measurement equipment must be located within 1 metre of a dwelling façade.</p> <p>c) with the noise limits in the Noise Limits table, the noise measurement equipment must be located:</p> <p>i) at the most affected point at a location where there is no dwelling at the location; or</p> <p>ii) at the most affected point within an area at a location prescribed by part (a) or part (b) of this condition.</p>	<p>EPL 6-R4.1-1 Qrtly Noise Rep Sub_Letters</p> <p>PA 4-1-1 Noise reports_Oct 2013-Mar 2016</p>	<p>methodology are in compliance with condition L3.4 with the following exceptions:</p> <ul style="list-style-type: none"> Access has not been provided to Newhaven's property, therefore monitoring is undertaken at the site boundary and results are extrapolated to be representative of the requirements of this condition; Belah Park is no longer occupied, therefore monitoring is undertaken at the nearby Merriam property (owned by the same individual who owns Belah Park). <p>These variations to the monitoring regime provide appropriate monitoring locations and are not considered to represent a compliance issue.</p>		
L3.5	The noise limits set out in the Noise Limits table apply under all meteorological	<p>EPL 12957</p> <p>PA 4-1-1 Noise</p>	Regarding the exceptions (parts a to c) and the monitoring criteria	NC	No further action required.

	<p>conditions except for the following:</p> <p>a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or</p> <p>b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or</p> <p>c) Stability category G temperature inversion conditions.</p> <p>For the purposes of this condition:</p> <p>a) Data recorded by the meteorological station identified as EPA Identification Point(s) W1 must be used to determine meteorological conditions; and</p> <p>b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.</p>	<p>reports_Oct 2013- Mar 2016</p>	<p>regarding the weather station W1 (parts a) to b)), this information is noted.</p> <p>Upon notifying EPA during 2015-2016 reporting period of Noise exceedance it was noted the inversion conditions were not determined at the time. Meteorological conditions must be determined by the onsite weather station.</p> <p>NCOPL has implemented a Trigger Action Response Plans (TARP) including an automated alarm system, the criteria of which are set to the requisite meteorological conditions.</p> <p>NCOPL has installed meteorological equipment to track temperature inversion conditions.</p> <p>Monitoring reports reviewed reference the relevant conditions.</p>		
L3.6	<p>For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.</p>	<p>Noise Management Plan</p> <p>PA 4-1-1 Noise reports_Oct 2013- Mar 2016</p>	<p>Relevant monitoring report references the NSW Industrial Noise Policy.</p>	Noted	

L4 Blasting					
L4.1	The overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	AEMR/Annual Reviews 2012/13, 2013/14, 2014/15	Not applicable. No blasting has occurred during the audit period.	NT	
L4.2	The overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	AEMR/Annual Reviews 2012/13, 2013/14, 2014/15	As above	NT	
L4.3	The airblast overpressure level from blasting operations listed in Conditions L7.1 and L7.2 must not be exceeded at any point within 30 metres of any non-project related residential building or other noise sensitive location.	AEMR/Annual Reviews 2012/13, 2013/14, 2014/15	As above	NT	
L4.4	Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this	AEMR/Annual Reviews 2012/13, 2013/14, 2014/15	As above	NT	

	are not to be taken into account in determining whether or not the limit has been exceeded.				
L4.5	Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.		As above	NT	
L4.6	The ground vibration peak particle velocity limits listed in Conditions L7.3 and L7.4 must not be exceeded at any point within 3.5 metres of any non-project related residential building or other noise sensitive location.		As above	NT	
L4.7	Blasting operations at the premises may only take place between 10:00am-4:00pm Monday to Friday. (Where compelling safety reasons exist, the Authority may permit a blast to occur outside the abovementioned hours. Prior written (or facsimile) notification of any such blast must be made to the Authority).		As above	NT	
L4.8	Blasting at the premises is limited to: a) A maximum of two (2) blasts per day; b) Five (5) blasts a week, averaged over a twelve month period; on each day on which blasting is permitted.		As above	NT	

4 OPERATING CONDITIONS					
O1 Activities must be carried out in a competent manner					
O1.1	<p>Licensed activities must be carried out in a competent manner.</p> <p>This includes:</p> <ul style="list-style-type: none"> a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity. 	<p>Site Inspection</p> <p>Interview –</p> <p>Environment Superintendent</p>	<p>No evidence that activities at NCOPL are not being carried out in a competent manner were observed.</p> <p>Several opportunities for improvement of environmental practices have been identified throughout this report, however, these are not considered systemic or representing poor environmental management.</p> <p>Two noted opportunities for improvement related to management of wastewater and hydrocarbons in the vicinity of the Mine Workshop and management of the bioremediation cell for hydrocarbon impacted soils (both discussed elsewhere in this report).</p>	C	
O2 Maintenance of plant and equipment					
O2.1	<p>All plant and equipment installed at the premises or used in connection with the licensed activity:</p> <ul style="list-style-type: none"> a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner. 	<p>Interview –</p> <p>Maintenance Manager</p>	<p>NCOPL utilises a preventative maintenance system called Pulse. This schedules maintenance for all plant. A review of backlog was reviewed which indicated there were approximately 480 items overdue for maintenance. However, review of</p>	C	

			<p>this list indicated that few of these issues would have an environmental impact (e.g. issues such as change fluorescent lighting).</p> <p>No evidence that plant is not operated in a proper and efficient manner was observed during the site visit.</p>		
O3 Dust					
O3.1	All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.	<p>Site inspection</p> <p>Interview – Mine Manager</p>	<p>Minor dust emissions were observed relating to dozer movements. However, NCOPL has implemented a wide range of dust control measures including varying operations depending on wind speeds; wetting down roadways and stockpiles etc.</p>	C	
O4 Other operating conditions					
Pollution Incident Response Management Plan					
O4.1	The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions, fire) that may occur at the premises or that may be associated with activities that occur at the	<p>PIRMP</p> <p>EPL 4-O4.1-1</p> <p>2015_08_24_WHC_P</p> <p>LN_NAR_Pollution Incident Response Management Plan</p> <p>EPA POEO Public Register - website</p>	<p>Review of the PIRMP for the site indicates that it covers all legislative requirements and considers the major pollution risks across the facility.</p> <p>The PIRMP was tested within a 12 month AR period but not within 12 months of the previous test.</p>	ANC	No further action required.

	premises and which are likely to cause harm to the environment.		Requirements for timing of test have been clarified and test will be conducted within 12 months of previous test.		
O4.2	The licensee must keep the PIRMP on the premises at all times.	Site inspection	Hard copies of PIRMP are located in the Environment Superintendent's office.	C	
5 MONITORING AND RECORDING CONDITIONS					
M1 Monitoring Records					
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Monitoring Records WHC_STD_RECORDS MANAGEMENT	Monitoring records for all parameters in the licence were reviewed during the site visit. Management reported that these are statutorily held for a minimum of four years, however, in practice, management reported that this data would be retained indefinitely.	C	
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Sample of Monitoring results for Noise, Air Quality and Waster monitoring as referenced in following conditions. WHC_STD_RECORDS	Monitoring records are retained in excel spreadsheets with supporting lab reports linked to each line item. NCOPL's records management procedure requires retention of records for four years, however, management reported that in practice, records are retained indefinitely.	C	

		MANAGEMENT			
M1.3	<p>The following records must be kept in respect of any samples required to be collected for the purposes of this licence:</p> <p>a) the date(s) on which the sample was taken;</p> <p>b) the time(s) at which the sample was collected;</p> <p>c) the point at which the sample was taken; and</p> <p>d) the name of the person who collected the sample.</p>	<p>WHC_STD_RECORDS MANAGEMENT</p> <p>EPL 5-M1.2-1 Surface Water and Wet Weather Monitoring Results</p>	<p>Monitoring records are retained in excel spreadsheets with supporting lab reports linked to each line item. NCOPL's records management system requires retention of records for four years, however, management reported that in practice, records are retained indefinitely.</p> <p>All of the records required by M1.3 are maintained either in the lab reports; or excel spreadsheet.</p> <p>The name of person who collected the sample and time of sample collection is not recorded in the spreadsheet for all data (e.g. wet weather monitoring). These are however recorded on field monitoring sheets.</p>	O	NCOPL should consider including the name of the person collecting samples and the time at which samples are collected in the excel spreadsheets.
M2 Requirement to monitor concentration of pollutants discharged					
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the	<p>PA 4-6-2 Deposited Dust Results.xlsx</p> <p>EPL 5-M2.1-1 Deposited Dust COC_Results</p>	A review of monitoring data indicates that the sampling frequency and methodology aligns with the requirements in M2.1.	C	

	sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Examples			
M2.2	Air Monitoring Requirements <				

M2.4	For the purposes of the table(s) above Special Frequency 1 means the collection of samples as soon as practicable after each discharge commences and in any case not more than 12 hours after each discharge commences.	EPL 5-M1.2-1 Surface Water and Wet Weather Monitoring Results	No evidence that monitoring was not undertaken in accordance with this condition was identified.	C	
M2.5	For the purposes of the table(s) above Special Frequency 2 means the collection of samples quarterly (in the event of flow during the quarter) at a time when there is flow and as soon as practicable after each wet weather discharge from points 11, 12, 13 or 18 commences and in any case not more than 12 hours after each discharge commences.	EPL 5-M3.2-1 ALS CBM Water Sampling-Surface Water	Typically data was available within 12 hours of a discharge point overflowing. In one instance overflows from SD4 and SD5 occurred on 28th March 2014 however monitoring was only undertaken at points 14, 15, 16, 17, 19, 20, 21 and 22 during the previous three days. It is noted that all water quality sampling results were below the relevant discharge criteria. This represented an isolated contractor management incident and is not considered to be a systemic issue.	NC	NCOPL should continue to ensure samples are collected after each wet weather discharge from the prescribed sampling points.

M2.6	Note: Groundwater monitoring has not been formally included in the licence. However, the licensee is required to undertake groundwater monitoring in accordance with the Department of Planning and Infrastructure approved "Stage 2 Water Management Plan" required under Schedule 4, condition 18 of the Project Approval (08_0144) for the Stage 2 project. The results of this monitoring are required to be reported in the Annual Environmental Management Report (AEMR).	WHC_PLN_NAR Water Management Plan (6/03/2013)	Monitoring is undertaken in accordance with the Water Management Plan and is reported in the AEMR.	C	
M3 Testing Methods – concentration limits					
M3.1	Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW EPL 5-M3.1-1 ALS CBM Dust Deposition	Monitoring data and Dust Deposition Monitoring procedures confirm that approved methods are being utilised.	C	

	testing prior to the testing taking place.				
M3.2	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW EPL 5-M3.2-1 ALS CBM Water Sampling-Surface Water EPL 5-M3.1-1 ALS CBM Dust Deposition	Document EPL 5-M3.2-1 ALS CBM Water Sampling - Surface Water confirms that approved methods are being used. Similarly, air quality monitoring is being undertaken using approved methods.	C	
M3.3	Clause 18 (1), (1A) and (2) of the Protection of the Environment Operations (General) Regulation 2009 requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.1.	EPL	No assessable pollutants are specified in the EPL.	NT	
M3.4	For each monitoring points specified below, the Licensee must monitor the noise parameter specified in Column 1. The Licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns.	EPL Annual Returns EPL Monthly Monitoring Data WHC_PLN_NAR_Noise Management Plan (26/05/2015) EPL 6-R4.1-1 Qrtly	Quarterly monitoring undertaken in accordance with the Noise Management Plan and requirements of this condition.	C	

	<div>Noise Sub_Letters</div> <div>PA 4-1-1 Noise reports_Oct 2013-Mar 2016</div> <div>POINTS: N5, N6, N7, and N8</div> <table><tr><th>Parameter</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Ambient Noise</td><td>LAeq (15 minute) LAmx LA1 LA10 LA90 LAmin</td><td>Quarterly frequency of monitoring as detailed in the most recently approved "Noise Management Plan" for the premises.</td><td>As detailed in the most recently approved "Noise Management Plan" for the premises.</td></tr></table>	Parameter	Units of measure	Frequency	Sampling Method	Ambient Noise	LAeq (15 minute) LAmx LA1 LA10 LA90 LAmin	Quarterly frequency of monitoring as detailed in the most recently approved "Noise Management Plan" for the premises.	As detailed in the most recently approved "Noise Management Plan" for the premises.	Rep			
Parameter	Units of measure	Frequency	Sampling Method										
Ambient Noise	LAeq (15 minute) LAmx LA1 LA10 LA90 LAmin	Quarterly frequency of monitoring as detailed in the most recently approved "Noise Management Plan" for the premises.	As detailed in the most recently approved "Noise Management Plan" for the premises.										
M3.5	<div>M3.5 POINT: N10</div> <table><tr><th>Parameter</th><th>Units of Measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Ambient noise</td><td>LAeq (15 minute) LAmx LA1 LA10 LA90 LAmin</td><td>Continuous real time noise monitoring as detailed in the most recently approved "Noise Management Plan" for the premises.</td><td>As detailed in the most recently approved "Noise Management Plan" for the premises.</td></tr></table>	Parameter	Units of Measure	Frequency	Sampling Method	Ambient noise	LAeq (15 minute) LAmx LA1 LA10 LA90 LAmin	Continuous real time noise monitoring as detailed in the most recently approved "Noise Management Plan" for the premises.	As detailed in the most recently approved "Noise Management Plan" for the premises.	PA 4-4-4 Real-time Noise Unit Information	Folder PA 4-4-4 Real-time Noise Unit Information contained records of real time noise monitoring as required under the approved 'Noise Management Plan'. The Units of measure and the sampling methodologies aligned with the requirements of the EPL. The folder also included detailed calibration records for the continuous noise monitor. A Sentinex Data Auditing Report provided a summary of any anomalies/gaps in the real time monitoring system for noise (document reference: PA 4-4-4 Real-time Noise Unit Information SX97-auditreport-20160331) between 1 st	C	
Parameter	Units of Measure	Frequency	Sampling Method										
Ambient noise	LAeq (15 minute) LAmx LA1 LA10 LA90 LAmin	Continuous real time noise monitoring as detailed in the most recently approved "Noise Management Plan" for the premises.	As detailed in the most recently approved "Noise Management Plan" for the premises.										

			January 2013 and 31 st March 2016. No significant anomalies that would represent a breach of this licence condition were observed.														
M3.6	For the purpose of this condition, the noise monitoring locations are described as: M3.6 For the purpose of this condition, the noise monitoring locations are described as: <table><tr><th>EPA Identification No.</th><th>Description of Location</th></tr><tr><td>N5</td><td>Within 30m of the residence on property "Oakleigh"</td></tr><tr><td>N6</td><td>Within 30m of the residence on property "Newhaven"</td></tr><tr><td>N7</td><td>Within 30m of the residence on property "Belah Park"</td></tr><tr><td>N8</td><td>Within 30m of the residence on property "Haylin View"</td></tr><tr><td>N10</td><td>Portable monitor</td></tr></table>	EPA Identification No.	Description of Location	N5	Within 30m of the residence on property "Oakleigh"	N6	Within 30m of the residence on property "Newhaven"	N7	Within 30m of the residence on property "Belah Park"	N8	Within 30m of the residence on property "Haylin View"	N10	Portable monitor	EPL 12957	Noted.	Noted	
EPA Identification No.	Description of Location																
N5	Within 30m of the residence on property "Oakleigh"																
N6	Within 30m of the residence on property "Newhaven"																
N7	Within 30m of the residence on property "Belah Park"																
N8	Within 30m of the residence on property "Haylin View"																
N10	Portable monitor																
M3.7	Note: Monitoring at N8 to commence when surface activities approach the eastern end of the southern longwall panels.	Interview Environmental Superintendent	- Surface activities have not commenced on the eastern end of the southern longwall panels. Therefore this condition is not currently applicable.	NT													
M3.8	Note: N10 is a potable monitor enabling the monitor to be relocated to areas of potential greatest impact. The licensee is responsible to ensure that it is located at the most suitable location.	Interview Environmental Superintendent	- The site utilises three portable monitors. These are currently located at the three closest inhabited locations; Oakleigh (N5); Belah Park (N7); and Newhaven (N6). Note: N6 will not provide access to their property, therefore the monitor is located on the Site boundary, rather than at 30m from the residence.	C	Note - there is a typographical error in this condition whereby "potable" should read "portable".												

			Based on a review of aerial photography these appear to comprise the three most affected receivers which are not owned by the mine (or have not entered into a private agreement with the mine).																																															
M4 Weather monitoring																																																		
M4.1	<p>For each monitoring point specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the parameter specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns:</p> <p>POINT W1</p> <table><tr><th>Parameter</th><th>Units of Measure</th><th>Frequency</th><th>Averaging Period</th><th>Sampling Method</th></tr><tr><td>Rainfall</td><td>mm</td><td>Continuous</td><td>1 hour</td><td>AM-4</td></tr><tr><td>Wind speed @ 10 metres</td><td>m/s</td><td>Continuous</td><td>15 minute</td><td>AM-2 & AM-4</td></tr><tr><td>Wind direction @ 10 metres</td><td>°</td><td>Continuous</td><td>15 minute</td><td>AM-2 & AM-4</td></tr><tr><td>Temperature @ 2 metres</td><td>°C</td><td>Continuous</td><td>15 minute</td><td>AM-4</td></tr><tr><td>Temperature @ 10 metres</td><td>°C</td><td>Continuous</td><td>15 minute</td><td>AM-4</td></tr><tr><td>Sigma theta @ 10 metres</td><td>°</td><td>Continuous</td><td>15 minute</td><td>AM-2 & AM-4</td></tr><tr><td>Solar radiation</td><td>W/m2</td><td>Continuous</td><td>15 minute</td><td>AM-4</td></tr><tr><td>Additional requirements - siting - measurement</td><td></td><td></td><td></td><td>AM-1 & AM-4 AM-2 & AM-4</td></tr></table>	Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method	Rainfall	mm	Continuous	1 hour	AM-4	Wind speed @ 10 metres	m/s	Continuous	15 minute	AM-2 & AM-4	Wind direction @ 10 metres	°	Continuous	15 minute	AM-2 & AM-4	Temperature @ 2 metres	°C	Continuous	15 minute	AM-4	Temperature @ 10 metres	°C	Continuous	15 minute	AM-4	Sigma theta @ 10 metres	°	Continuous	15 minute	AM-2 & AM-4	Solar radiation	W/m2	Continuous	15 minute	AM-4	Additional requirements - siting - measurement				AM-1 & AM-4 AM-2 & AM-4	Interview - Environmental Superintendent Site Inspection PA 4-8-1 Weather Station Reports	Real time monitoring was observed for all criteria with the exception of Sigma theta @ 10 metres. An update to the Site’s data supplier website does not provide this data as standard on the weather monitoring portal. However, real time monitoring of these criteria was observed in the control room.	C	
Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method																																														
Rainfall	mm	Continuous	1 hour	AM-4																																														
Wind speed @ 10 metres	m/s	Continuous	15 minute	AM-2 & AM-4																																														
Wind direction @ 10 metres	°	Continuous	15 minute	AM-2 & AM-4																																														
Temperature @ 2 metres	°C	Continuous	15 minute	AM-4																																														
Temperature @ 10 metres	°C	Continuous	15 minute	AM-4																																														
Sigma theta @ 10 metres	°	Continuous	15 minute	AM-2 & AM-4																																														
Solar radiation	W/m2	Continuous	15 minute	AM-4																																														
Additional requirements - siting - measurement				AM-1 & AM-4 AM-2 & AM-4																																														

Recording of pollution complaints					
M5.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	https://www.whitehavencoal.com.au/environment/narrabri_north_mine_environmental_management.cfm PA 6-1-2 Complaints Register	A full up to date complaints register was observed covering the audit period.	C	
M5.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	PA 6-1-2 Complaints Register Complaints Form Year 2016	The complaints register records criteria a); b) and d) to f). Criterion c) information is collected in the individual complaints forms. Examples of these and the register were reviewed as part of this assessment. No anomalous or missing data was observed.	C	
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	PA 6-1-2 Complaints Register and sample of Complaints	Complaints records between 2011 and 2016 were reviewed during the audit. Management reported that	C	

		Records	data such as complaints are in practice held indefinitely.		
M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Interview - Environmental Superintendent	The EPA has not requested this information.	NT	
M6 Telephone complaints line					
M6.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	https://www.whitehavencoal.com.au/environment/narrabri_north_mine_environmental_management.cfm	The complaints line number was identified on the NCOPL website. This was tested during the audit and was functional. The number is a 24 hour number, which is only physically manned between 7am and 4pm. An answer phone service operates outside of these hours.	C	
M6.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	https://www.whitehavencoal.com.au/environment/narrabri_north_mine_environmental_management.cfm	The complaints line is present at the bottom of the Environmental Management page on Whitehaven NCOPL's website:	C	
M6.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.		Noted.	Noted	
M7 Other monitoring and recording conditions					
M7.1	To assess compliance with the noise limits presented in the Noise Limits table, attended noise monitoring must be undertaken in	PA 4-1-1 Noise reports_Oct 2013-Mar	Quarterly monitoring reports were available for review between October 2013 and March 2016. The	C	

	<p>accordance with the condition titled Determining Compliance, outlined above, and:</p> <p>a) at each one of the locations listed in the Noise Limits table;</p> <p>b) occur quarterly in a reporting period;</p> <p>c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of:</p> <p>i) 1.5 hours during the day;</p> <p>ii) 30 minutes during the evening; and iii) 1 hour during the night.</p> <p>d) occur for three consecutive operating days.</p>	2016	<p>scope of these assessments aligns with the requirements outlined in condition M7.1.</p> <p>No issues identified.</p>		
6 Reporting Conditions					
R1 Annual return documents					
The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.					
R1.1	<p>The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:</p> <p>(a) a Statement of Compliance; and</p> <p>(b) a Monitoring and Complaints Summary.</p> <p>At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to</p>	<p>EPL 6-R1.1-1 Annual Returns</p> <p>EPA POEO Public Register - website</p>	<p>Annual returns for each reporting period included in the scope of this assessment were available for review as well as evidence that they had been submitted on-site to the EPA on-time.</p> <p>Review of the annual returns confirms that the information required by Condition R1.1 has</p>	C	

	the EPA.		been included.		
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	EPL 6-R1.1-1 Annual Returns EPA POEO Public Register - website	Annual returns for each reporting period included in the scope of this assessment were available for review as well as evidence that they had been submitted on-site to the EPA on-time.	C	
R1.3	Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.	EPL 12789 Interview – Group Superintendent – Environment (Compliance)	The licence has not been transferred to a new licensee.	NT	
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval	EPL 12789 Interview - Environmental Superintendent	The licence has not been revoked or surrendered.	NT	

	<p>of the surrender is given; or</p> <p>(a) b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.</p>				
R1.5	<p>The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').</p>	<p>EPA POEO Public Register - website</p> <p>EPL 6-R1.5-1 AR Submission Letters</p>	<p>Annual Returns were submitted to the EPA within 60 during the audit period.</p>	C	
R1.6	<p>The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.</p>	<p>Interview - Environmental Superintendent</p> <p>EPL 6-R1.1-1 Annual Returns</p> <p>WHC_STD_RECORD S MANAGEMENT</p>	<p>Annual returns dating 2015/16 to the 2008/09 reporting period were available for review. The Site's Records Management system states that Annual Returns must be retained for four years. Management reported that in practice, data such as annual returns would be retained indefinitely.</p>	C	
R1.7	<p>Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:</p> <p>(a) the licence holder; or</p> <p>(b) by a person approved in writing by the EPA to sign on behalf of the licence</p>	<p>EPL 6-R1.1-1 Annual Returns</p>	<p>Two Directors; Mr. Jamie Frankcombe and Mr. Steven Bow signed the Annual Returns.</p> <p>No issues identified.</p>	C	

	holder.				
	Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.		Noted.	Note	
	Note: An application to transfer a licence must be made in the approved form for this purpose.		Noted.	Note	
R2 Notification of environmental harm					
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	Incident Register Interview - Environmental Superintendent Environment Event Reports EPL 6-R2.1-1 EPA Hotline Self Report_Examples.pdf	No instances of material environmental harm have reportedly occurred during the period of this audit. No evidence of material environmental harm was observed during the course of this assessment.	C	
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	Incident Register Interview Environment Event Reports EPL 6-R2.1-1 EPA Hotline Self Report_Examples.pdf	No instances of material environmental harm have reportedly occurred during the period of this audit. No evidence of material environmental harm was observed during the course of this assessment.	C	

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R3 Written report

R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: (a) where this licence applies to premises, an event has occurred at the premises; or (b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Interview - Environmental Superintendent Incident Register Environment Event Reports EPL 6-R2.1-1 EPA Hotline Self Report_Examples.pdf	No instances of material environmental harm have reportedly occurred during the period of this audit. No evidence of material environmental harm was observed during the course of this assessment.	C	
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Interview - Environmental Superintendent	No instances of material environmental harm have reportedly occurred during the period of this audit. No evidence of material environmental harm was observed during the course of this assessment.	C	
R3.3	The request may require a report which includes any or all of the following information:	Interview - Environmental Superintendent	No instances of material environmental harm have reportedly occurred during the	C	

	<p>(a) the cause, time and duration of the event;</p> <p>(b) the type, volume and concentration of every pollutant discharged as a result of the event;</p> <p>(c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;</p> <p>(d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;</p> <p>(e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;</p> <p>(f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and</p> <p>(g) any other relevant matters.</p>	<p>Review of incident reports submitted to EPA</p> <p>EPL 6-R2.1-1 EPA Hotline Self Report_Examples.pdf</p>	<p>period of this audit. No evidence of material environmental harm was observed during the course of this assessment.</p>		
R3.4	<p>The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.</p>	<p>Interview - Environmental Superintendent</p>	<p>No instances of material environmental harm have reportedly occurred during the period of this audit. No evidence of material environmental harm was observed during the course of this assessment.</p>	C	

R4 Other reporting conditions					
R4.1	<p>A noise compliance assessment report must be submitted to the EPA within thirty (30) days of the completion of the quarterly noise monitoring. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:</p> <p>a) an assessment of compliance with noise limits detailed in the limit conditions of this licence; and</p> <p>b) an outline of any management actions taken within the monitoring period to address any exceedances of the limits detailed in the limit conditions of this licence.</p>	<p>EPA POEO Public Register - website</p> <p>EPL 6-R4.1-1 Qrtly Noise Rep Sub_Letters</p>	<p>Records (correspondence between NCOPL and the EPA) of quarterly submission of noise monitoring reports was reviewed between 2013 and the present day.</p> <p>The noise report for September 15 was received by the NCOPL on 16 September 2015 but was not provided to the EPA until 11 November 2015.</p>	ANC	The mine should endeavour to submit future reports on time.
7 GENERAL CONDITIONS					
G1 Copy of licence kept at premises or plant					
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Site inspection	A copy of the licence was available on NCOPL's website; intranet and in hard copy in the Environmental Superintendent's office.	C	
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Interview - Group Superintendent - Environment (Compliance)	No authorised officer of the EPA has requested to seen a copy of the EPL. Not applicable.	NT	
G1.3	The licence must be available for inspection	Interview -	No employee or agent of the licensee	NT	

	by any employee or agent of the licensee working at the premises.	Environmental Superintendent	<p>working at the premises has requested to view a copy of the licence. However, the Environment Manger could provide access to the Licence via:</p> <p>http://www.whitehavencoal.com.au/environment/narrabri_north_mine_environmental_management.cfm</p>		
8 SPECIAL CONDITIONS					
E1 Quality assurance and verification report					
E1.1	Prior to the commissioning of the Brine Storage Ponds (approved per Stage 2 Development Consent 08_0144), the licensee must provide the EPA Armidale office with an "as constructed" report, produced by an experienced and qualified engineer. The report must include detailed design plans for the ponds and illustrate the use of low permeability layers to manage mine waters generated by the project. The report also must include a detailed Quality Assurance/Quality Control program that was used throughout the construction of the ponds.	EPL 8-E1.1-1 OEH 'As Constructed' Report submission letter	<p>A letter to Ms. Jessica Creed at the OEH, dated June 2010 included as an annex an "as constructed" report for the evaporation and brine storage ponds. The report was prepared by URS Australia. The Brine Storage Ponds have not yet been commissioned; therefore the remainder of this condition is not currently relevant.</p> <p>It is noted that the most recent (August 2015) Surface Water Assessment states that based on current modelling, only one brine storage pond is likely to be required to be built.</p>	C	

E2 Noise Impacts					
E1.2	<p>Noise impacts where wind speed exceeds 3 metres per second at 10 metres above the ground must be addressed by:</p> <p>a) documenting noise complaints received to identify any higher level of impacts or wind patterns; where levels of noise complaints indicated a higher level of impact then actions to quantify and ameliorate any enhanced impacts where wind speed exceeds 3 metres per second at 10 metres above the ground should be developed and implemented.</p>	Interview Environmental Superintendent	–	<p>NCOPL had not at the time of the audit incorporated a mechanism in their management systems to trigger this condition in the event that these meteorological conditions are triggered.</p>	<p>NC</p> <p>It is recommended that NCOPL undertake analysis of historical complaints and meteorological conditions to determine whether any higher level of impact has been occurring at sensitive receivers when wind direction is aligned with these receivers and wind speed exceeds 3 metres per second at 10 metres above the ground. Amend management systems to include trigger to quantify and ameliorate any enhanced impacts where wind speed exceeds 3 metres per second at 10 metres above the ground towards an impacted receptor where complaints are being received.</p>

Annex C

AUDIT TABLE C.1 COMPLIANCE ASSESSMENT OF MINING LEASE

Table B1 **Compliance Assessment – Mining Lease 1609**

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
ML1624					
Notice to Landholders					
1	<p>Within a period of three months from the date of grant/renewal of this lease or within such further time as the Minister may allow. The lease holder must serve on each landholder of the land a notice in writing indicating that this lease has been granted/renewed and whether the lease includes the surface~ An adequate plan and description of the lease area must accompany the notice~</p> <p>If there are ten or more landholders affected. The lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated~ The notice must indicate that this lease has been granted/renewed; state whether the lease includes the surface and must contain an adequate plan and description of the lease area~</p>	Previous 2014 IEA	As per previous IEA report this is not applicable to environmental audit.	NT	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Environmental Harm					
2	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 development.	Review against Ministers Conditions of Approval PA 08_0144 (Modification 5 issued December 2015)	<p>There were no recorded discharges of mine affected water from the site during the audit period.</p> <p>NCOPL received a Penalty Notice for an incident involving the disturbance of an Aboriginal heritage site, identified on 14 October 2014.</p> <p>NCOPL undertook further training of personnel in Cultural Awareness and the requirements of the Aboriginal Cultural Heritage Management Plan in response to incidents.</p>	NC	Duplicate finding – refer recommendation for Sch.4 C22 of PA 08_0144 (Mod 5).
Mining Operations Plan					
3a	Mining operations must not be carried out otherwise than in accordance with a Mining Operations Plan (MOP) which has been approved by the Director-General of the Department of Primary Industries.	ML 3-1 Narrabri Mine MOP Stage 2 Amdt B_FINAL.pdf	Refer Schedule 3 Specific Environmental conditions - mining area in <i>Annex B</i> of this report. In addition, review of Environmental Management Plans along with site observations demonstrate that NCOPL is generally operating within the	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
			requirements of the current approved MOP.		
3b	<p>The MOP must:</p> <p>i) identify areas that will be disturbed by mining operations;</p> <p>ii) detail the staging of specific mining operations;</p> <p>iii) identify how the mine will be managed to allow mine closure;</p> <p>iv) identify how mining operations will be carried out on site in order to prevent and or minimise harm to the environment;</p> <p>v) reflect the conditions of approval under:</p> <ul style="list-style-type: none"> • <i>the Environmental Planning and Assessment Act 1979</i> • <i>the Protection of the Environment Operations Act 1997</i> • and any other approvals relevant to the development including the conditions of this lease; and <p>vi) have regard to any relevant guidelines adopted by the Director-General.</p>	<p>ML 3-1 Narrabri Mine MOP Stage 2 Amdt B_FINAL.pdf</p> <p>ML 3-2 ML 1609_Narrabri UG_MOP Amendment B approval letter_Sept 2015.signed.pdf</p>	The approved MOP adequately addresses the requirements of this condition.		
3c	The titleholder may apply to the Director-	ML 3-1 Narrabri Mine	The MOP has undergone two	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	General to amend an approved MOP at any time~	MOP Stage 2 Amdt B_FINAL.pdf	revisions since it was originally approved. The current revision of the MOP was approved in October 2015.		
3d	It is not a breach of this condition if: i) the operations constituting the breach were necessary to comply with a lawful order or direction given under the <i>Mining Act 1992, the Environmental Planning and Assessment Act 1979, Protection of the Environment Operations Act 1997 or the Occupational Health and Safety Act 2000</i> ; and ii) the Director-General had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out	Interview – Environmental Superintendent	No breaches reported during the audit period.	NT	
3e	A MOP ceases to have affect 7 years after date of approval or other such period as identified by the Director-General. An approved amendment to the MOP under condition 5 does not constitute an approval for the purpose of this paragraph unless otherwise identified by the Director - General	ML 3-1 Narrabri Mine MOP Stage 2 Amdt B_FINAL.pdf ML 3-2 ML 1609_Narrabri UG_MOP Amendment B approval letter_Sept 2015.signed.pdf	The current approved MOP has a period end date of 31 December 2017.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
ENVIRONMENTAL MANAGEMENT REPORTING					
4	The lease holder must lodge Environmental Management Reports (EMR) with the Director-General annually or at dates otherwise directed by the Director-General.	AEMR 2013 – 2014 AR 2014 – 2015 AR 2015-2016	Annual reports (AR / AEMR) have been prepared and submitted as required by the Project Approval during the audit period.	C	
5	The EMR must: a) report against compliance with the MOP; b) report on progress in respect of rehabilitation completion criteria; c) report on the extent of compliance with regulatory requirements; and d) have regard to any relevant guidelines adopted by the Director-General;	AEMR 2013 – 2014 AR 2014 – 2015 AR 2015-2016	The annual reports (AR / AEMR) prepared during the audit period adequately address the requirements of this condition.	C	
6	Additional environmental reports may be required on specific surface disturbing operations or environmental incidents from time to time as directed in writing by the Director-General and must be lodged as instructed.	PA 4-22-1 sf141031_Narrabri Mine Cultural Heritage Incident Report.pdf PA 4-22-4 sf20150612_DPE re Aboriginal Cultural Heritage Environmental Event	A report was prepared in response to the above discussed disturbance of an Aboriginal heritage site, along with another in relation to an unauthorised access to a protected Cultural Heritage Site.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
		Report.pdf			
Rehabilitation					
7	Disturbed land must be rehabilitated to a sustainable/agreed end land use to the satisfaction of the Director -General	AEMR 2013 – 2014 AR 2014 – 2015 AR 2015-2016	Refer to Schedule 5 – Rehabilitation and Offsets in <i>Annex A</i> of this Report. Progressive rehabilitation was undertaken during the audit period and examples sighted by the auditor. Rehabilitation performance against goals is reported in the annual reports (AR / AEMR).	C	
Subsidence Management					
8	(a) The lease holder shall prepare a Subsidence Management Plan prior to commencing any underground mining operations which will potentially lead to subsidence of the land surface. (b) Underground mining operations which will potentially lead to subsidence include secondary extraction panels such as longwalls or mini walls, associated first workings (gate roads, installation roads and associated main headings, etc.), and pillar extractions, and are otherwise defined by	Previous 2014 IEA SMP 2-12-2 Narrabri Mine SMP Modification Letter_300713.pdf SMP 2-12-4 Approval of Revised EP Appendix C Aug 2013 (DP&I).pdf	The Extraction Plan for Longwalls LW1-LW5 was approved in 2012 as verified in the previous IEA. A revision to the Subsidence Monitoring Program, Appendix C of the Extraction Plan was approved August 2013.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>the Applications for Subsidence Management Approvals guidelines (EDG17)</p> <p>(c) The lease holder must not commence or undertake underground mining operations that will potentially lead to subsidence other than in accordance with a Subsidence Management Plan approved by the Director-General, an approval under the Coal Mine Health and Safety Act 2002, or the document New Subsidence Management Plan Approval Process - Transitional Provisions (EDP09).</p> <p>(d) Subsidence Management Plans are to be prepared in accordance with the Guideline for Applications for Subsidence Management Approvals.</p> <p>(e) Subsidence Management Plans as approved shall form part of the Mining Operations Plan required under Condition 2 and will be subject to the Annual Environmental Management Report process as set out under Condition 3. The SMP is also subject to the requirements for subsidence monitoring and reporting set out in the document New Approval Process for Management of Coal Mining Subsidence - Policy.</p>				

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Working Requirement					
9	<p>The lease holder must:</p> <p>(a) ensure that at least 212 competent people are efficiently employed on the lease area on each week day except Sunday or any week day that is a public holiday,</p> <p>OR</p> <p>(b) expend on operations carried out in the course of prospecting or mining the lease area, an amount of not less than \$3,710 000 per annum whilst the lease is in force.</p> <p>The Minister may at any time or times, by instrument in writing served on the lease holder, increase or decrease the expenditure required or the number of people to be employed.</p>	General Ledger Summary Trial Balance – 2013-2014, 2014-2015, 2015-2016	Annual expenditure exceeds that stipulated by this condition.	C	
Control of Operations					
10	(a) If an Environmental Officer of the Department-believes that the lease holder is not complying with any provision of the Act or any condition of this lease relating to the working of the lease, he may direct the lease holder to:-			Note	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>(i) cease working the lease; or</p> <p>(ii) cease that part of the operation not complying with the Act or conditions; until in the opinion of the Environmental Officer the situation is rectified.</p> <p>(b) The lease holder must comply with any direction given. The Director-General may confirm, vary or revoke any such direction</p> <p>(c) A direction referred to in this condition may be served on the Mine Manager.</p>				
Reports					
11	<p>The lease holder must provide an exploration report, within a period of twenty-eight days after each anniversary of the date this lease has effect or at such other date as the Director-General may stipulate, of each year. The report must be to the satisfaction of the Director-General and contain the following:</p> <p>(a) Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period;</p> <p>(b) Details of expenditure incurred in conducting that exploration;</p>	<p>EL 2-2-1 2013 Annual Report.pdf</p> <p>EL 2-2-2 2014 Annual Exploration Report.pdf</p> <p>EL 2-2-3 2015 Annual Exploration Report.pdf</p>	Annual exploration reports reviewed for the audit period adequately meet the requirements of this condition.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	(c) A summary of all geological findings acquired through mining or development evaluation activities; (d) Particulars of exploration proposed to be conducted in the next twelve months period; (e) All plans, maps, sections and other data necessary to satisfactorily interpret the report				
Licence to Use Reports					
12	(a) The lease holder grants to the Minister, by way of a non-exclusive licence, the right in copyright to publish, print, adapt and reproduce all exploration reports lodged in any form and for the full duration of copyright (b) The non-exclusive licence will operate as a consent for the purposes of section 365 of the Mining Act 1992.			Note	
Confidentiality					
13	(a) All exploration reports submitted in accordance with the conditions of this lease will be kept confidential while the lease is in force, except in cases where:			Note	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>(i) the lease holder has agreed that specified reports may be made non-confidential.</p> <p>(ii) reports deal with exploration conducted exclusively on areas that have ceased to be part of the lease.</p> <p>(b) Confidentiality will be continued beyond the termination of a lease where an application for a flow-on title was lodged during the currency of the lease. The confidentiality will last until that flow-on title or any subsequent flow-on title, has terminated.</p> <p>(c) The Director-General may extend the period of confidentiality.</p>				
Terms of non-exclusive licence					
14	<p>The terms of the non-exclusive copyright licence granted under condition 12 are:</p> <p>(a) the Minister may sub-licence others to publish, print, adapt and reproduce but not on-licence reports.</p> <p>(b) the Minister and any sub-licensee will acknowledge the lease holder's and any identifiable consultant's ownership of copyright in any reproduction of the reports, including storage of reports onto an</p>			Note	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>electronic database.</p> <p>(c) the lease holder does not warrant ownership of all copyright works in any report and, the lease holder will use best endeavours to identify those parts of the report for which the lease holder owns the copyright.</p> <p>(d) there is no royalty payable by the Minister for the licence.</p> <p>(e) if the lease holder has reasonable grounds to believe that the Minister has exercised his rights under the non-exclusive copyright licence in a manner which adversely affects the operations of the lease holder, that licence is revocable on the giving of a period of not less than three months' notice.</p>				
15. Blasting					
a	<p>Ground Vibration</p> <p>The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the lease area does not exceed 10 mm/second and does not exceed 5 Mm/second in more than 5% of the total number of blasts over a period of 12 months at any dwelling or</p>	<p>Interview Environmental Superintendent</p> <p>–</p>	No blasting took place during audit period.	NT	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	occupied premises as the case may be, unless determined otherwise by the Department of Environment and Climate Change.				
b	<p>Blast Overpressure</p> <p>The lease holder must ensure that the blast overpressure noise level generated by any blasting within the lease area does not exceed 120 dB (linear) and does not exceed 115 dB (linear) in more than 5% of the total number of blasts over a period of 12 months, at any dwelling or occupied premises, as the case may be, unless determined otherwise by the Department of Environment and Climate Change.</p>	Interview Environmental Superintendent –	No blasting took place during audit period.	NT	
Safety					
16	Operations must be carried out in a manner that ensures the safety of persons or stock in the vicinity of the operations. All drill holes shafts and excavations must be appropriately protected, to the satisfaction of the Director-General, to ensure that access to them by persons and stock is restricted. Abandoned shafts and excavations opened up or used by the lease holder must be filled in or otherwise rendered safe to a standard		Safety not subject if IEA	Note	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	acceptable to the Director -General.				
Exploratory Drilling					
17a	At least twenty eight days prior to commencement of drilling operations the lease holder must notify the relevant Department of Water and Energy Regional Hydrologist of the intention to drill exploratory drill holes together with information on the location of the proposed holes	ML 17-1 NSW-Office-of-Water-Drilling-Notification EL6243_SE Longwall Panels	Example sighted South-eastern Longwall Panels Exploration Program	C	
17b	<p>If the lease holder drills exploratory drill holes he must satisfy the Director-General that:-</p> <p>{i} all cored holes are accurately surveyed and permanently marked in accordance with Departmental guidelines so that their location can be easily established;</p> <p>{ii} all holes cored or otherwise are sealed to prevent the collapse of the surrounding surface;</p> <p>{iii} all drill holes are permanently sealed with cement plugs to prevent surface discharge of groundwater;</p> <p>{iv} if any drill hole meets natural or noxious gases it is plugged or sealed to</p>	<p>ML 17b – Survey Surface Borehole Tracking (spreadsheet)</p> <p>Sample of Cementing Records: NC621C, NC617C</p>	Sample of cementing records sighted.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>prevent their escape;</p> <p>{v} if any drill hole meets an artesian or sub-artesian flow it is effectively sealed to prevent contamination of aquifers.</p> <p>{vi} once any drill hole ceases to be used the hole must be sealed in accordance with Departmental guidelines. Alternatively, the hole must be sealed as instructed by the Director -General</p> <p>{vii} once any drill hole ceases to be used the land and its immediate vicinity is left in a clean, tidy and stable condition.</p>				
Prevention of Soil Erosion and Pollution					
18	<p>Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, waterbody or groundwater. The lease holder must observe and perform any instructions given by the Director-General in this regard.</p>	<p>EPL 6-R1.1-1 Annual Returns</p> <p>AEMR 2013 – 2014</p> <p>AR 2014 – 2015</p> <p>AR 2015-2016</p>	<p>No recorded discharges of mine affected water and no exceedance air quality criteria during the reporting period.</p>	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Transmission lines, Communication lines and Pipelines					
19	Operations must not interfere with or impair the stability or efficiency of any transmission line, communication line, pipeline or any other utility on the lease area without the prior written approval of the Director-General and subject to any conditions he may stipulate.	PA 3-2-1 Extraction Plan LW101 to LW106 SMP 2-14-2 WHC_PLN_NAR_Essential Energy Management Plan.pdf	The powerline located on the mine lease was decommissioned in accordance with the approved Essential Energy Management Plan.	C	
Fences, Gates					
20	(a) Activities on the lease must not interfere with or damage fences without the prior written approval of the owner thereof or the Minister and subject to any conditions the Minister may stipulate. (b) Gates within the lease area must be closed or left open in accordance with the requirements of the landholder.	Interview – Environmental Superintendent PA 3-2-1 Extraction Plan LW101 to LW106	No fences removed on the mining lease. Access agreements generally require NCOPL to leave gates as they are found (ie. open or closed).	C	
Roads and Trucks					
21	(a) Operations must not affect any road unless in accordance with an accepted Mining Operations Plan or with the prior written approval of the Director -General and subject to any conditions he may	ML 3-1 Narrabri Mine MOP Stage 2 Amdt B_FINAL.pdf Interview – Environmental	NCOPL owns Greylands Road – no public access.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>stipulate.</p> <p>(b) The lease holder must pay to the designated authority in control of the road (generally the local council or the Roads and Traffic Authority) the cost incurred in fixing any damage to roads caused by operations carried out under the lease, less any amount paid or payable from the Mine Subsidence Compensation Fund.</p>	Superintendent			
22	Access tracks must be kept to a minimum and be positioned so that they do not cause any unnecessary damage to the land. Temporary access tracks must be ripped, topsoiled and revegetated as soon as possible after they are no longer required for mining operations. The design and construction of access tracks must be in accordance with specifications fixed by the Department of Environment and Climate Change	ML 3-1 Narrabri Mine MOP Stage 2 Amdt B_FINAL.pdf	Access track aligned with pre-existing tracks where possible. Where not aligned construction of tracks to consider environmental values and to be progressively closed and rehabilitated in accordance with the MOP.	C	
Trees and Timber					
23	(a) The lease holder must not fell trees, strip bark or cut timber on the lease without the consent of the landholder who is entitled to the use of the timber. or if such a landholder refuses consent or attaches unreasonable	<p>Interview – Environmental Superintendent</p> <p>ML 23-1 Letter -</p>	<p>The auditor was advised that no trees removed without approval.</p> <p>Examples approval sighted by the auditor.</p>	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>conditions to the consent. without the approval of a warden.</p> <p>(b) The lease holder must not cut, destroy, ring bark or remove any timber or other vegetative cover on the lease area except such as directly obstructs or prevents the carrying on of operations. Any clearing not authorised under the Mining Act 1992 must comply with the provisions of the Native Vegetation Act 2003.</p> <p>(c) The lease holder must obtain all necessary approvals or licences before using timber from any Crown land within the lease area.</p>	Approval under Roads Act - Seismic lines - Narrabri Coal Operations PL.pdf			
Resource Recovery					
25a	Notwithstanding any description of mining methods and their sequence or of proposed resource recovery contained within the Mining Operations Plan, if at any time the Director-General is of the opinion that minerals which the lease entitles the lease holder to mine and which are economically recoverable at the time are not being recovered from the lease area, or that any such minerals which are being recovered are not being recovered to the extent which	Interview Environmental Superintendent –	No such request.	NT	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	should be economically possible or which for environmental reasons are necessary to be recovered; he may give notice in writing to the lease holder requiring the holder to recover such minerals.				
25b	The notice shall specify the minerals to be recovered and the extent to which they are to be recovered, or the objectives in regard to resource recovery, but shall not specify the processes the lease holder shall use to achieve the specified recovery.		As above	NT	
25c	The lease holder must, when requested by the Director-General, provide such information as the Director-General may specify about the recovery of the mineral resources of the lease area.			Note	
25d	The Director-General shall issue no such notice unless the matter has firstly been thoroughly discussed with and a report to the Director-General has incorporated the views of the lease holder.			Note	
25e	The lease holder may object to the requirements of any notice issued under this condition and on receipt of such an objection the Minister shall refer it to a			Note	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	Warden for inquiry and report under Section 334 of the Mining Act, 1992.				
25f	After considering the Warden's report the Minister shall decide whether to withdraw, modify or maintain the requirements specified in the original notice and shall give the lease holder written notice of the decision. The lease holder must comply with the requirements of this notice.			Note	
Indemnity					
26	The lease holder must indemnify and keep indemnified the Crown from and against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses which may be brought against the lease holder or which the lease holder may incur in respect of any accident or injury to any person or property which may arise out of the construction, maintenance or working of any workings now existing or to be made by the lease holder within the lease area or in connection with any of the operations notwithstanding that all other conditions of this lease shall in all respects have been observed by the lease holder or that any such accident or injury shall arise from any			Note	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	act or thing which the lease holder may be licensed or compelled to do.				
Security					
27a	A security in the sum of \$3,175,000 must be given and maintained with the Minister by the lease holder for the purpose of ensuring the fulfilment by the lease holder of obligations under this lease. If the lease holder fails to fulfil any one or more of such obligations the said sum may be applied at the discretion of the Minister towards the cost of fulfilling such obligations. For the purpose of this clause the lease holder shall be deemed to have failed to fulfil the obligations of this lease if the lease holder fails to comply with any condition or provision hereof. Any provision of the Act or regulations made thereunder or any condition or direction imposed or given pursuant to a condition or provision hereof or of any provision of the Act or regulations made thereunder.	Interview – Environmental Superintendent ML 27-1 I&I NSW ML Revised Security Letter.pdf ML 27-2 ML_1609 Security Certificate.pdf	Security Certificate sighted by the auditor.	C	
27b	The lease holder must provide the security required by sub-clause (a) in one of the following forms:		As above	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	(i) cash, (ii) a security certificate in a form approved by the Minister and issued by an authorised deposit-taking institution.				
Trigonometrical Stations and Survey Marks					
28	A person must not remove, damage, destroy, displace, obliterate or deface any marks on connection with any trigonometrical station permanent mark or survey mark unless authorized to do so by the Surveyor-General.	Interview Environmental Superintendent –	The auditor was advised that no trigonometrical station permanent mark or survey mark has been impacted by the mining operations.	NT	

Annex D

AUDIT TABLE D.1 SUBSIDENCE AUDIT REPORT

7th December 2016

ERM
Level 1 / 60 Leichhardt Street, Spring Hill
Brisbane QLD 4000

For the attention of Mr. William Weir – Principal Environmental Engineer

Dear William,

Narrabri Coal Mine – Review of subsidence management plans and procedures for the compliance audit (surface subsidence component)

Narrabri Coal Operations Pty Ltd (NCOPL) operates the Narrabri Coal Mine (NCM) which is located 28 km south of the township of Narrabri in the Gunnedah Coalfield of New South Wales.

NCOPL initially submitted an Environmental Assessment for the extraction of coal from the Hoskissons Seam using continuous miners (Stage 1) and received Project Approval under Part 3A of the Environmental Planning and Assessment Act 1979 on the 13th November 2007 (PA 08_0144). NCOPL subsequently modified the method of extraction to longwall mining (Stage 2) and was granted a S75J Modification on the 26th July 2010 (PA 08_0144 MOD 2). NCOPL has approval for the extraction of 26 longwalls in the Hoskissons Seam.

The Extraction Plan for LW101 to LW105 was approved by the Department of Planning and Infrastructure (DoPI) in March 2012 (Ref. PA 3-4-3). The revised Extraction Plan for LW101 to LW106 (Ref. PA 3-2-1) and was approved by the Department of Planning and Environment (DP&E) in May 2016 (Ref. PA 3-4-25). Longwall mining commenced in June 2012 and, to date, LW101 to LW105 have been completed and LW106 is currently being extracted.

Condition 7 of Schedule 6 of the Project Approval (PA 08_0144, as Modified) states that:

“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.”*

Environmental Resources Management (ERM) is the lead consultant undertaking the environmental audit for the NCM covering the period from October 2013 (i.e. previous environmental audit) through to November 2016. Over this period, NCM extracted the remaining 750 m of LW102, completed LW103, LW104, LW105 and extracted LW106 to longwall chainage 1250 m.

Mine Subsidence Engineering Consultants (MSEC) has been engaged by ERM to review the subsidence management plans and procedures, in relation to surface subsidence, for compliance with Conditions 1 to 7 of Schedule 3 of the Project Approval (PA 08_0144, as Modified).

The subsidence review is based on the documents that are available on the mines website¹, an inspection of the surface undertaken on the 6th December 2016 and discussions and documentation provided by NCOPL during the audit on the 6th December 2016. The documents referred to in this letter report adopt the NCOPL referencing system.

The findings of the review of compliance with Conditions 1 to 7 of Schedule 3 are provided in the table at the end of this letter report. A summary of the review of the subsidence management plans and procedures, in relation to surface subsidence, is provided below:

Ground monitoring:

- The Subsidence Monitoring Plan (Ref. PA 3-2-1 Extraction Plan LW101 to LW106 - Appendix C) adequately outlines the locations, methods, timing and frequency and reporting of monitoring results. In our opinion, the established ground monitoring lines and the monitoring frequency are appropriate for the site, based on the mining geometry, surface features and constraints, as well as for the validation of the prediction model and for the management of subsidence impacts;
- The End of Panel Reports for LW102 to LW105 indicate that the maximum measured vertical subsidence varies between 2.6 and 2.8 m, representing approximately 60 to 65 % of the cutting height of 4.3 m. The maximum measured subsidence is within ± 15 %, which is generally considered acceptable in the industry for the prediction of maximum vertical subsidence. The subsidence prediction model has been further refined based on the ground monitoring data from LW101 to LW105;
- The maximum measured strains are greater than the maximum predicted strains along some of the monitoring lines. However, 95 % of the measured strains are within the predicted range. The magnitudes of strain become less meaningful when they are greater than approximately 25 mm/m, as they are affected by the locations and spacings of the survey marks relative to the surface deformations. It is also well understood that strain is the most difficult parameter to predict and, in our opinion, the predicted magnitudes of strain are sufficient for the assessments of impacts and the development of management strategies for the surface features;
- MSEC considers that the subsidence predictions provided in the Extraction Plan (Ref. PA 3-2-1) are acceptable for the assessment of the potential surface impacts. This opinion is based on the available ground monitoring data and the surface disturbances observed during the site inspection.

Subsidence impacts:

- The surface features located above or in the vicinity of LW102 to LW106 include Pine Creek and associated tributaries, Pine Creek Tributary 1, Greylands Road, aerial 11 kV powerlines, fences, farm dams and archaeological sites;
- It was observed during the site inspection that surface ponding has developed between Pine Creek Tributary 1 and Greylands Road above LW101 and along Pine Creek above LW104. Ponding management strategies are currently being developed in liaison with the Office of Environment and Heritage (OEH);
- The End of Panel Reports for LW102 to LW105 indicate that the surface cracks are typically between 50 and 100 mm with some cracks up to approximately 200 mm. The surface cracking observed during the site inspection was typically less than 50 mm, with some cracks up to approximately 100 mm and cracking of approximately 200 mm in one location;

¹ Narrabri North Environmental Management - www.whitehavencoal.com.au/environment/narrabri_north_mine_environmental_management.cfm. Viewed between the 21st and 25th November 2016.

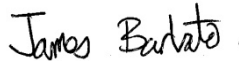
- The size and extent of the surface deformations observed above LW102 to LW106 are similar to the range predicted and similar to those expected based on the shallow super-critical mining conditions. The surface area above LW102 was inspected where the surface deformations had been remediated by ploughing and recompacting the surface soils. The larger surface cracks along the unsealed access roads have generally been remediated;
- Greylands Road is owned by the Mine and the 11 kV powerline has been decommissioned. It appears from the site inspection that the built features have been maintained in safe and serviceable conditions.

Compliance with Conditions 1 to 7 of Schedule 3:

- Comments on the review of Conditions 1 to 7 of Schedule 3 of the Project Approval (PA 08 0144, as Modified) are provided in the table at the end of this letter report. No non-conformances were identified in relation to the surface subsidence component of the audit.
- In our opinion, the subsidence management plans and procedures for the longwalls are adequate and are generally compliant with the conditions that are relevant to subsidence management. Further comments have been provided by ERM for these conditions.

We trust that the comments, findings and recommendations provided in this letter report assist with the environmental audit for the NCM. If you have any questions, or require further clarification, please do not hesitate to call us on (02) 9413-3777.

Yours sincerely,



James Barbato
Mine Subsidence Engineering Consultants

Schedule 3 – Specific Environmental conditions – mining area

Condition No.	Assessment Requirement	Reference / Evidence	Comments	Compliance Status	Recommendations								
1	<p>The Proponent shall ensure that mine subsidence does not cause any exceedances of the performance measures in Table 1.</p> <div><p>Table 1: Subsidence Impact Performance Measures</p><table><tr><td colspan="2">Water Resources</td></tr><tr><td>Great Artesian Basin</td><td>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 DPI Water.</td></tr><tr><td colspan="2">Biodiversity</td></tr><tr><td>Flora and Fauna</td><td>The Proponent shall ensure that clearing and disturbance of vegetation above the mining area is minimised, to the satisfaction of the Secretary.</td></tr></table><p><small>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).</small></p></div>	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 DPI Water .	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 Secretary .	<ul style="list-style-type: none">PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix G - Water Management Plan)PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix H - Biodiversity Management Plan)	<ul style="list-style-type: none">Application for 248 ML licence submitted in August 2016	C	
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 DPI Water .												
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 Secretary .												
2	<p>The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 2, to the satisfaction of DRE.</p> <div><p>Table 2: Subsidence Impact Performance Measures</p><table><tr><td colspan="2">Built Features</td></tr><tr><td>All built features</td><td>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.</td></tr><tr><td colspan="2">Public Safety</td></tr><tr><td>Public Safety</td><td>No additional risk.</td></tr></table><p><small>Notes:</small></p><p>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).</p><p>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.</p><p>3) Compensation required under this condition includes any compensation payable under the Mine Subsidence Compensation Act 1981 and/or the Mining Act 1992.</p></div>	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.	<ul style="list-style-type: none">Site inspection undertaken on the 6th December 2016PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix D - Built Features Management Plan)PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix E - Public Safety Management Plan)	<ul style="list-style-type: none">Surface deformations along Greylands Road and tracks above LW102 to LW106 have been repaired by ploughing and recompactingGreylands Road is now owned by the Mine11 kV powerline has been decommissioned	C	
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.												
3	<p>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 DRE. DRE may seek the advice of the MSB on the matter. Any decision by DRE shall be final and not subject to further dispute resolution under this approval.</p>	<ul style="list-style-type: none">NCOPL advised that there have been no disputes with the owners of built features		C									
4	<p>The Proponent shall prepare and implement Extraction Plans for any second workings to be mined to the satisfaction of the Secretary. Each Extraction Plan must:</p> <p>a. be prepared by a team of suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;</p>	<ul style="list-style-type: none">PA 3-2-1 (Extraction Plan LW101 to LW106)PA 3-4-1 (Letter Approving EP Experts)PA 3-4-2 (Letter Approving EP Heritage Consultant)		C									

Condition No.	Assessment Requirement	Reference / Evidence	Comments	Compliance Status	Recommendations
	b. be approved by the Secretary before the Proponent carries out any of the second workings covered by the plan;	<ul style="list-style-type: none"> Extraction Plan approved by DoPI in March 2012 (PA 3-4-3) and Revised Extraction Plan approved by DP&E in May 2016 (PA 3-4-25) 		C	
	c. include detailed plans of the proposed first and second workings and any associated surface development;	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106) 		C	
	d. include detailed performance indicators for each of the performance measures in Tables 1 and 2;	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix D - Built Features Management Plan) PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix E - Public Safety Management Plan) PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix H - Biodiversity Management Plan) 	<ul style="list-style-type: none"> Performance indicators and measures provided in the Built Features, Public Safety and Biodiversity Management Plans 	C	
	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;	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Chapter 3 - Review of Subsidence Predictions; Appendix B - Subsidence Predictions) 	<ul style="list-style-type: none"> Subsidence predictions for LW101 to LW106 provided in the subsidence report submitted with the Extraction Plan 	C	
	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;	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix D - Built Features Management Plan) PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix E - Public Safety Management Plan) 	<ul style="list-style-type: none"> Control measures provided in the Built Features, Public Safety and Biodiversity Management Plans 	C	
	g. include the following to the satisfaction DRE:				
	<ul style="list-style-type: none"> a Coal Resource Recovery Plan that demonstrates effective recovery of the available resource; 	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix A - Coal Resource Recovery Plan) 		C	

Condition No.	Assessment Requirement	Reference / Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> a Subsidence Monitoring Program to: <ul style="list-style-type: none"> 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; 	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix C - Monitoring Plan) 	<ul style="list-style-type: none"> Subsidence Monitoring Program adequately outlined the locations, methods, timing and frequency and reporting of monitoring results The established ground monitoring lines and the monitoring frequency are appropriate for the site, based on the mining geometry, surface features and constraints, as well as for the validation of the prediction model and the management of impacts 	C	
	<ul style="list-style-type: none"> a Built Features Management Plan to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which: <ul style="list-style-type: none"> 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; 	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix D - Built Features Management Plan) 	<ul style="list-style-type: none"> Built Features Management Plan addresses each of the built features Consultation with some asset owners are referred to in the document, with details of consultation prior to and during active subsidence for each feature. 	C	
	<ul style="list-style-type: none"> a Public Safety Management Plan to ensure public safety in the mining area; and 	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix E - Public Safety Management Plan) 	<ul style="list-style-type: none"> NCOPL advised that there have been no public safety incidents due to mine subsidence 	C	
	<ul style="list-style-type: none"> appropriate revisions to the Landscape Management Plan required under condition 3 of Schedule 5; and <p>Landscape Management Plan</p> <p>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:</p> <p>(a) be submitted to the Director-General for approval by 30 June 2011;</p> <p>(b) be prepared by suitably qualified expert/s whose appointment/s have been endorsed by the Director-General;</p> <p>(c) be prepared in consultation with NOW, DECCW and NSC; and</p> <p>(d) include a:</p> <ul style="list-style-type: none"> Rehabilitation Management Plan; and Mine Closure Plan. 	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix F - Landscape Management Plan) 	<ul style="list-style-type: none"> The revised Landscape Management Plan includes a Rehabilitation Management Plan and Mine Closure Plan 	C	

Condition No.	Assessment Requirement	Reference / Evidence	Comments	Compliance Status	Recommendations
	h. include a:				
	<ul style="list-style-type: none"> Water Management Plan, which has been prepared in consultation with EPA and DPI Water, 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: <ul style="list-style-type: none"> 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; 	<ul style="list-style-type: none"> Not part of the surface subsidence review 	<ul style="list-style-type: none"> Refer to comments by ERM 	N/A	
	<ul style="list-style-type: none"> Biodiversity Management Plan, which has been prepared in consultation with OEH and DRE, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on flora and fauna; 	<ul style="list-style-type: none"> Not part of the surface subsidence review 	<ul style="list-style-type: none"> Refer to comments by ERM 	N/A	
	<ul style="list-style-type: none"> 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; 	<ul style="list-style-type: none"> Not part of the surface subsidence review 	<ul style="list-style-type: none"> Refer to comments by ERM 	N/A	
	<ul style="list-style-type: none"> Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders for Aboriginal heritage, to manage the potential environmental consequences of the proposed second workings on heritage sites or values; and 	<ul style="list-style-type: none"> Not part of the surface subsidence review 	<ul style="list-style-type: none"> Refer to comments by ERM 	N/A	
	<ul style="list-style-type: none"> include a program to collect sufficient baseline data for future Extraction Plans. <p><i>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.</i></p>	<ul style="list-style-type: none"> Not part of the surface subsidence review 	<ul style="list-style-type: none"> Refer to comments by ERM 	N/A	

Condition No.	Assessment Requirement	Reference / Evidence	Comments	Compliance Status	Recommendations
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;	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix D - Built Features Management Plan) PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix E - Public Safety Management Plan) 	<ul style="list-style-type: none"> The assessed impacts for the built features are summarised in the Built Features Management Plan 	C	
	b. a detailed description of the measures that would be implemented to remediate predicted impacts; and	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix D - Built Features Management Plan) PA 3-2-1 (Extraction Plan LW101 to LW106 - Appendix E - Public Safety Management Plan) 	<ul style="list-style-type: none"> The monitoring and management strategies for the built features and detailed in the Built Features Management Plan 	C	
	c. a contingency plan that expressly provides for adaptive management.	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106) 		C	
6	The Proponent may carry out first workings within the underground mining area, other than in accordance with an approved extraction plan, provided that DRE 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.	<ul style="list-style-type: none"> PA 3-2-1 (Extraction Plan LW101 to LW106) 	<ul style="list-style-type: none"> First workings in accordance with the approved Extraction Plan 	C	
7	The Proponent shall pay all reasonable cost incurred by the Department to engage independent experts to review the adequacy of any aspect of the Extraction Plan.		<ul style="list-style-type: none"> It is understood that NCOPL is paying the cost of the current independent environmental audit 	C	

Annex E

DEPARTMENTAL CORRESPONDENCE

William Weir

From: Heidi Watters <Heidi.Watters@Planning.nsw.gov.au>
Sent: Friday, 25 November 2016 11:56 AM
To: William Weir
Subject: RE: Whitehaven - Narrabri Coal - IEA Terms of Reference

Dear Will

Thank you for your email regarding the Narrabri Coal Mine IEA.

The Department requests the audit also include the following:

- Effectiveness and adequacy of environmental monitoring (air and noise) locations, particularly in relation to the location of private receivers
- Review of environmental monitoring (air and noise) results for the audit period, identification of trends in monitoring data and comparison with EA predictions
- Review of complaints management systems and adequacy of responses
- Review of TARPs and reporting procedures (air and noise)
- Effectiveness and health of rehabilitation
- Effectiveness of current measures to minimise visual impacts (including vegetation screening)

Kind regards

Heidi Watters

Senior Compliance Officer
Northern Region
Department of Planning and Environment
Level 1 Suite 14 | 1 Civic Ave | PO Box 3145 SINGLETON NSW 2330
T 02 6575 3401
E heidi.watters@planning.nsw.gov.au

Please consider the environment before printing this email.



From: William Weir [<mailto:William.Weir@erm.com>]
Sent: Friday, 25 November 2016 10:54 AM
To: Heidi Watters <Heidi.Watters@Planning.nsw.gov.au>
Cc: Robert Smith <Robert.Smith@erm.com>; Michael Gaggin <Michael.Gaggin@erm.com>; SFarrar@whitehavencoal.com.au
Subject: Whitehaven - Narrabri Coal - IEA Terms of Reference

Good morning Heidi,

ERM are currently completing an independent environmental audit (IEA) on the Conditions of Approval issued to Whitehaven Coal for the Narrabri Coal Mine. The [site](#) also holds EPL12789.

A requirement of the audit is that it is to be undertaken in consultation with relevant agencies. This email invites the NSW Department of Planning and Environment to raise any questions or concerns regarding this project from an environmental management aspect.

The attached Terms of Reference outlines the audit process, and also introduces the approved team of suitably qualified, experienced and independent experts who will be undertaking the audit. The site inspection will be completed over the period 5-7 December 2016, therefore it would be appreciated if there are any concerns, areas of focus etc, they are raised before this date.

Please don't hesitate to contact me at the details listed below to discuss further.

Kind regards

Will Weir

Principal Environmental Engineer

ERM

Level 4, 201 Leichhardt St,

Spring Hill QLD 4004

T +61 7 3007 8432 | M +61 427 707 803

E william.weir@erm.com | W www.erm.com



ERM *The business of sustainability*

This electronic mail message may contain information which is (a) LEGALLY PRIVILEGED, PROPRIETARY IN NATURE, OR OTHERWISE PROTECTED BY LAW FROM DISCLOSURE, and (b) intended only for the use of the Addressee (s) names herein. If you are not the Addressee (s), or the person responsible for delivering this to the Addressee (s), you are hereby notified that reading, copying, or distributing this message is prohibited. If you have received this electronic mail message in error, please contact us immediately and take the steps necessary to delete the message completely from your computer system. Environmental Resources Management Australia Pty Ltd (ERM) has systems in place to encourage a virus free software environment, however we cannot be liable for any loss or damage, corruption or distortion of electronically transmitted information, or for any changes made to this information during transferral or after receipt by the client.

Please visit ERM's web site: <http://www.erm.com>

This electronic mail message may contain information which is (a) LEGALLY PRIVILEGED, PROPRIETARY IN NATURE, OR OTHERWISE PROTECTED BY LAW FROM DISCLOSURE, and (b) intended only for the use of the Addressee (s) names herein. If you are not the Addressee (s), or the person responsible for delivering this to the Addressee (s), you are hereby notified that reading, copying, or distributing this message is prohibited. If you have received this electronic mail message in error, please contact us immediately and take the steps necessary to delete the message completely from your computer system. Environmental Resources Management Australia Pty Ltd (ERM) has systems in place to encourage a virus free software environment, however we cannot be liable for any loss or damage, corruption or distortion of electronically transmitted information, or for any changes made to this information during transferral or after receipt by the client.

Please visit ERM's web site: <http://www.erm.com>

Contact: Heidi Watters
Phone: 02 6575 3401
Email: Heidi.Watters@planning.nsw.gov.au
compliance@planning.nsw.gov.au
Our ref 08_0144

Steve Farrar
Environmental Superintendent – Narrabri Mine
Locked Bag 1002,
Narrabri NSW 2390

Narrabri Mine – Independent Environmental Audit 2016

Dear Steve,

I refer to your email dated 2 September 2016 seeking the endorsement of the Secretary of the Department of Planning and Environment (the Department) of a suitably qualified, experienced and independent team to undertake an independent environmental audit (IEA) of the Narrabri Mine, required by Project Approval 08_0144 (the Approval).

In accordance with Schedule 6, Condition 7, the Secretary has approved the following audit team to conduct the 2016 IEA of the Narrabri Mine:

- Will Weir – Lead Auditor
- Robert Smith – Auditor
- Nathan Lynch – Noise Specialist
- Sarah Sawyer – Surface and Groundwater Specialist
- James Barbato – Subsidence Specialist
- Dr. Iain Cowan – Air Quality Specialist

In preparing the IEA, the audit team must ensure the audit is conducted in accordance with Schedule 6, Condition 7 of the Approval, and the Department's *Post-approval requirements for State Significant Developments – Independent Audit Guideline* (October 2015).

In accordance with Schedule 6, Condition 8 of the Approval, a copy of the audit report must be submitted to the Secretary, together with responses to any recommendations contained in the audit report, within six weeks of completing this audit.

Should you wish to discuss the above please contact Heidi Watters on 02 6575 3401 or by email at Heidi.Watters@planning.nsw.gov.au

Yours sincerely,



Chris Knight
A/Team Leader – Compliance Northern Region
As nominee for the Secretary

William Weir

From: John Trotter <john.trotter@industry.nsw.gov.au>
Sent: Friday, 25 November 2016 10:12 AM
To: William Weir
Subject: RE: Whitehaven - Narrabri Coal - IEA Terms of Reference

Hello William,

DRE's Environmental Sustainability Unit has a key focus of rehabilitation and achievement of nominated final land use. As such, ESU suggests that you consider the following key rehabilitation issues as part of the audit (in addition to any you may nominate):

Audit Component - Desktop

- Is there a current Mining Operations Plan (MOP) in place and has it been approved by DRE?
- Has the MOP been prepared in consultation with the relevant agencies as outlined in the Project Approval?
- Is the rehabilitation strategy as outlined in the MOP consistent with the Project Approval in terms of progressive rehabilitation schedule; and proposed final land use(s)?
- Has the rehabilitation objectives and completion criteria as outlined in the MOP been developed in accordance with the proposed final land(s) as outlined in the Project Approval?
- Has a rehabilitation monitoring program been developed and implemented to assess performance against the nominated objectives and completion criteria? – verified by reviewing monitoring reports and rehabilitation inspection records.
- Has a rehabilitation care and maintenance program been developed and implemented based on the outcomes of monitoring program? – verified by reviewing Annual Rehabilitation Programs or similar documentation.

Audit Component - Site Inspection

- Are mining operations being conducted in accordance with the approved MOP (production, mining sequence etc.), including within the designated MOP approval boundary? – to be verified by site plans and site inspection.
- Is rehabilitation progress consistent with the approved MOP as verified by site plans and a site inspection? This should include an evaluation against rehabilitation targets and whether the final landform is being developed in accordance with conceptual final landform in Project Approval.
- Based on a visual inspection, are there any rehabilitation areas that appear to have failed or that have incurred an issue that may result in a delay in achieving the successful rehabilitation?

In addition to the above, the audit should note observations where rehabilitation procedures, practices and outcomes represent best industry practice.

Regards,

John Trotter
A/Mgr Northern Region
Environmental Sustainability Unit – Mineral Resources Branch
Department of Industry – Division of Resources and Energy
516 High Street Maitland NSW 2320 | GPO Box 344 | Hunter Region Mail Centre NSW 2310
T: 0249 316553 | E: john.trotter@industry.nsw.gov.au | M: 0409 360 414 W: www.dtiris.nsw.gov.au

From: William Weir [mailto:William.Weir@erm.com]
Sent: Friday, 25 November 2016 10:48 AM
To: john.trotter@industry.nsw.gov.au
Cc: Robert Smith; Michael Gaggin; SFarrar@whitehavencoal.com.au
Subject: Whitehaven - Narrabri Coal - IEA Terms of Reference

Hi John

ERM are currently completing an independent environmental audit (IEA) on the Conditions of Approval issued to Whitehaven Coal for the Narrabri Coal Mine. The [site](#) also holds EPL12789.

A requirement of the audit is that it is to be undertaken in consultation with relevant agencies. This email invites the NSW Department of Industry to raise any questions or concerns regarding this project from an environmental management aspect.

The attached Terms of Reference outlines the audit process, and also introduces the approved team of suitably qualified, experienced and independent experts who will be undertaking the audit. The site inspection will be completed over the period 5-7 December 2016, therefore it would be appreciated if there are any concerns, areas of focus etc, they are raised before this date.

Please don't hesitate to contact me at the details listed below to discuss further.

Kind regards

Will Weir

Principal Environmental Engineer
ERM
Level 4, 201 Leichhardt St,
Spring Hill QLD 4004
T +61 7 3007 8432 | M +61 427 707 803
E william.weir@erm.com | W www.erm.com



This electronic mail message may contain information which is (a) LEGALLY PRIVILEGED, PROPRIETARY IN NATURE, OR OTHERWISE PROTECTED BY LAW FROM DISCLOSURE, and (b) intended only for the use of the Addressee (s) names herein. If you are not the Addressee (s), or the person responsible for delivering this to the Addressee (s), you are hereby notified that reading, copying, or distributing this message is prohibited. If you have received this electronic mail message in error, please contact us immediately and take the steps necessary to delete the message completely from your computer system. Environmental Resources Management Australia Pty Ltd (ERM) has systems in place to encourage a virus free software environment, however we cannot be liable for any loss or damage, corruption or distortion of electronically transmitted information, or for any changes made to this information during transferral or after receipt by the client.

Please visit ERM's web site: <http://www.erm.com>

This electronic mail message may contain information which is (a) LEGALLY PRIVILEGED, PROPRIETARY IN NATURE, OR OTHERWISE PROTECTED BY LAW FROM DISCLOSURE, and (b) intended only for the use of the Addressee (s) names herein. If you are not the Addressee (s), or the person responsible for delivering this to the Addressee (s), you are hereby notified that reading, copying, or distributing this message is prohibited. If you have received this electronic mail message in error, please contact us immediately and take the steps necessary to delete the message completely from your computer system. Environmental Resources Management Australia Pty Ltd (ERM) has systems in place to encourage a virus free software environment, however we cannot be liable for any loss or damage, corruption or distortion of electronically transmitted information, or for any changes made to this information during transferral or after receipt by the client.

Please visit ERM's web site: <http://www.erm.com>

This message is intended for the addressee named and may contain confidential information. If you are not the intended recipient, please delete it and notify the sender. Views expressed in this message are those of the individual sender, and are not necessarily the views of their organisation.

Contact: Heidi Watters
Phone: 02 6575 3401
Email: heidi.watters@planning.nsw.gov.au
Our ref: PA 08_0144

Steve Farrar
Environmental Superintendent – Narrabri Mine
Narrabri Coal Operations Pty Ltd
Locked Bag 1002
NARRABRI NSW 2390

Dear Steve

Narrabri Mine (PA 08_0144) – 2016 Independent Environmental Audit

Reference is made to the Independent Environmental Audit (IEA) report prepared for the Narrabri Mine by Environmental Resources Management Australia Pty Ltd (ERM), as required by Schedule 6 Condition 7 of Project Approval 08_0144, as modified (the approval) and submitted to the Department of Planning and Environment (the Department) on 11 August 2017.

The 2016 IEA covered the period 1 October 2013 to 30 November 2016 (inclusive) and identified nine non-compliances with the approval as well as several non-compliances with the Environmental Protection Licence (EPL) 12957 and Mining Lease 1609. A total of 21 recommendations to address the identified non-compliances and improve environmental performance of the project were made by the audit team.

On review of IEA report, the Department has noted a number of errors and omissions which the Department requests be rectified to satisfy the requirements of the approval and the Department's Independent Audit Guideline (October 2015):

- Section 3.1 Previous Audit Follow-Up – Table 3.1 only reports on status of actions arising from non-compliances identified in the 2013 IEA. Please include a status update for all actions, including actions arising from observations.
- Section 3.3.1 Noise – reports an exceedance dated September 2013 (outside of the IEA period). This may be a typographical error, as the 2013/2014 Annual Review (AR) reports an exceedance at this location in September 2014. Please review and update.
- Section 3.3.1 Noise – The 2016 Annual Review reports an exceedance from September 2016 (within the IEA period) which is not listed in the IEA report. Please review and update.
- Section 3.3.3 Air Quality – The IEA report states that there were no exceedances with dust monitoring criteria during the audit period; please include a statement of compliance with criteria for particulate matter (PM₁₀ and TSP).
- Section 3.3.6 Rehabilitation – the IEA report states that *a stand of trees were observed to have died as likely result of subsidence impacts as was addressed in previous IEA*. Please include a comment on the current status of rehabilitation over LW1.

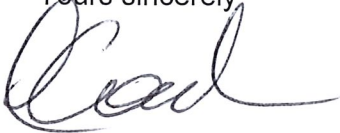
Please submit the revised IEA report by **25 October 2017**.

The Department has also reviewed the response to the audit recommendations (RAR) submitted with the IEA report, and accepts the proposed actions for recommendations. It is noted that many actions have already been completed, with the exception of the review of the Aboriginal Cultural Heritage Management Plan (ACHMP) and Greenhouse Gas Management Plan (GHGMP), which are to be complete by 31 December 2017. Please include a status update on all currently outstanding actions in future Annual Reviews, until each action is completed.

Please note that acceptance of the RAR is not an endorsement of the compliance status of the project. The Department may investigate the non-compliances identified in the IEA report and will provide separate correspondence in due course.

Should you need to discuss the above, please contact Heidi Watters, Senior Compliance Officer as per the details provided above.

Yours sincerely



27/09/17

Leah Cook

Team Leader - Compliance

As Nominee of the Secretary

Annex F

COMPLAINTS SUMMARIES

Narrabri Mine
2013 Complaints Register

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
1	Phone call to site, talked with CRO	1/01/2013 2:10pm	Complaint relating to visible dust being generated from the product stockpile. Dozer was working on stockpile and the main source of the dust.	Dozer was working on product stockpile following train load out. Dust being generated from dozer movements on the coal stockpile. Gantry sprays not activated.	CRO advised TSM of complaint. Gantry sprays were activated following complaint. EO to review options for setting a TARP for weather conditions. Complainant came to site and talked with EO/TSM on Wednesday 2 January. Complainant advised that coal dust is settling on his property. First flush system to be installed on rainwater tanks.
2	Phone call to CRO, also attended site	6/01/2013 ~11:00am	Complaint relating to visible dust being generated from the coal stockpiles. Dozer was working on stockpile and the main source of the dust. Complainant requested that dozer operations cease and that the sprays be activated on the gantry. The CRO informed complainant that he cannot comply as it is outside of his area of control.	Dozer was working on product stockpile during train load out. Dust being generated from dozer movements on the coal stockpile. Gantry sprays not activated.	Complainant was put in contact with CHPP CRO and CHPP Supervisor. Sprays on the gantry were then activated. CHPP Supervisor assured complainant that we were attempting to do all we could under the circumstances. EO contacted complainant on Monday 7 th January to inform complainant that a meeting is planned early this week to discuss dust issues.
3	Phone call to CRO	13/01/2013 11:58am	Complaint relating to visible dust being generated from the coal stockpiles. Complainant also noted noise from the mine wakes him up.	CRO noted that sprays were on and that the company is addressing the issue. No specific date/time for noisy activities given.	Complainant rang EO on Tuesday 15 th January to follow up and highlight current dust generation. EO explained that the issue is being addressed but no timeline for implementation as assessing options.
4	Phone call to CRO	23/01/2013 6:50pm	Complaint relating to visible dust being generated from the product tripper during a gusty weather change.	CRO informed complainant that the CHPP control room was already in the process of shutting the plant down due to the strong winds.	EO rang complainant on Thursday 24 th January to follow up and ensure complainant was happy with the response received.
5	Phone call to site	20/02/2013 10:20am	Complaint related to rubbish accumulating adjacent to the main access road to the site in an area that mine personnel utilise for smoking as the mine site is a non-smoking site.	Phone call transferred to EO. Mine personnel utilise this area and the issue has been raised in the past.	EO organised for area to be tidied planned for the 21 st February. TBT to be issued to remind personnel to keep areas tidy and to clean up after themselves.
6	EPA emailed EM on behalf of anonymous complainant	26/02/2013 2:45pm	General complaint in relation to noise and dust from site. EPA also reviewed complaints register and queried dust TARP development, real-time noise unit and noise monitoring locations.	No specific date/times for general complaint but real-time noise data reviewed daily.	Response provided to the EPA advising of current dust management measures and noise monitoring undertaken at the site including locations. Dust TARP has now been implemented.

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
7	Phone call to CRO	7/04/2013 4:40pm	Too much dust at the product stockpile and tripper. Water sprays were not activated at the time of the complaint.	CRO notified the CHPP control room and sprays were in the process of being activated at the time of the complaint as required by the Dust TARP. The Dust TARP resulted in 20 level 1 wind warnings and 5 level 2 wind warnings on Sunday	Complainant rang back at ~5:00pm as the sprays that were activated were not located near the product tripper. CRO notified the CHPP control room again and all sprays were activated. Complainant also rang the EO on Tuesday 9 th April to discuss the issues on Sunday. EO reiterated that the Dust TARP has now been implemented and has worked well to date.
8	Phone call to CRO	16/04/2013 5:45pm	Dust being generated at the coal stockpiles.	CRO investigated dust levels but could not identify dust being generated from the coal stockpiles at the time of the complaint. CRO also noted at this time it was approaching dusk and hard to see anything. TARP notifications indicate that at 3:56pm there was a level 2 wind warning and corrective actions were taken at this time.	No additional action taken as no dust generation was identified at the time of the complaint and controls were in place.
9	Phone call to site	19/04/2013 6:00pm	Complaint related to a "1/4 mile" of dust being generated at the coal processing area.	Phone call taken by Training and Safety Coordinator who advised the complainant that the complaint info would be passed on to the relevant people. After ending the phone call the Training and Safety Coordinator took photos of the 'dust' being generated, which indicated no dust was leaving the coal processing area and that the gantry sprays were active at the time of the complaint.	No additional actions have been undertaken as dust generation was investigated and no dust was being generated at the time and the gantry sprays were active.
10	Phone call to CRO	26/04/2013 5:13pm	Dust being generated from PCI stockpile.	CRO notified the CHPP control room and additional sprays were activated (some already running). The Dust TARP resulted in 14 level 1 wind warnings and 2 level 2 wind warnings. The dust notifications resulting from the TARP indicated that dust suppression sprays were on the feed belts and the skyline and dust was contained to the product stockpile area.	No follow up action taken as dust managed at the time of the complaint and site reporting indicates that the dust was not leaving the coal stockpile area.
11	Phone call to EO	31/07/2013 12:00pm	Sprays not activated on product gantry. Wind gusts blowing dust off stockpile.	EO contacted CHPP. CHPP advised that sprays were activated earlier in the day but had stopped for some reason.	Sprays reactivated. No follow up action as complainants request actioned.
12	Phone call to EO	22/08/2013 9:00am & 10:38am	Dust generated in coal processing area and gantry sprays not activated	Dust from coal processing area was from dozer moving between stockpiles. Gantry sprays not activated.	Options are being considered for watering transfer road between stockpiles including using water carts and installing a permanent spray system. Gantry sprays activated.
13	Phone call to complaints hotline	24/08/2013 8:15am & 9:00am	Noise in the morning relating to dozer reversing beeps and tracks. Also woke	EO returned call on Monday (26/08/2013) morning at 8:50am. Wind was blowing on the direction of	EO phoned complainant back at 4:15pm on 26/08/2013 and explained that excessive noise likely due to

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
			complainant up on Friday morning at ~6am but no complaint made at this time. Complainant called the complaints hotline on Saturday morning at 8:15am but no message left, then called again at 9:00am and left a message.	the complainant's residence although only a slight breeze. Weather data also indicates presence of a temperature inversion at the time of the complaint. Dozers were operating on the ROM pad and the product pad as a train was being loaded.	temperature inversion conditions. EO also noted that noise monitoring, which includes the complainant's residence, is to be undertaken during August and September. EO also stated that Narrabri Mine will revisit the noise model for the site. Complainant stated that they will contact EO for any future instances.
14	Phone call to EO	26/08/2013 3:52pm	Dust being generated at product stockpile by dozers.	Dust was being generated by dozers working on the product stockpile, no sprays activated as wind was calm.	EO notified CHPP CRO and sprays activated where dozers were working. EO phoned complainant back at 4:18pm on 26/08/2013 and informed complainant that sprays were activated, complainant still not happy with dust controls in place. CHPP have since installed a sprinkler at the base of the ROM stockpile and 6 more have been ordered for the ROM pad and transfer road.
15	Phone call to EO	28/08/2013 12:39pm	Dust being generated at product stockpile by dozers.	Dust was being generated by dozers working on the product stockpile, no sprays activated as wind was calm.	EO notified CHPP CRO and sprays activated where dozers were working.
16	Phone call to EO	12/09/2013 12:17pm	Dust being generated at ROM stockpile by dozer loading the bypass crusher. Complainant rang back as more dust being generated.	3 dozers working on the ROM pad. The dozer loading the bypass crusher was creating dust. Dozer was tracking to product pad from ROM pad.	CHPP notified and a sprinkler was to be relocated to the bypass crusher loading area. Additional sprinklers are to be purchased for the transfer road between stockpiles.
17	Phone call to EM	16/09/2013 10:35am	Noticed significant additional noise from site when attending local property which is not occupied constantly. Not sure of noise source but constant throughout night.	Advised complainant that noise model is being revisited for the site.	Narrabri Mine will include the residence in the next round of monitoring to better understand noise impacts.
18	Phone call to complaints hotline	19/09/2013 2:39pm	Constant humming noise and dozer tracks at approx. 7am and 8:30pm. Dust also visible from Greylands Road at approx. 8am.	EO returned phone call at 7:58am on Friday 20 th September. EO investigated wind direction strength and dozer movements at the time of the complaint. Wind direction was blowing towards complainant's property but was not particularly strong. Weather data also indicates the presence of a temperature inversion at that time. Dozer movements were in relation to stockpile operations.	EO reiterated to the complainant that the noise model is being revisited. Monitoring is also due again this month at the complainant's residence. Complainant said they would notify the mine for any future instances.
19	Phone call to complaints hotline	22/09/2013 7:32am	Constant drone from mine can heard inside the house, especially the eastern end	EO investigated operations at the time. Dozers working on ROM pad but not product pad. Weather data indicates temperature inversion. Subsequent investigations highlighted the goaf plant being used over Longwall panel 102 could have been the source of the noise and this	EO phoned complainant back on 23 September and advised of strong temperature inversions over the weekend. Noise monitoring is also due this and it is the 3-day round which should identify any impacts.

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
				has since been rectified.	
20	Phone call to EO	30/09/2013 2:02pm	Dust being generated at the mine particularly from dozers.	Dozer working on ROM pad feeding bypass crusher was recovering coal at the extent of the stockpile where it was drier.	EO contacted CHPP and they had already added additional sprinklers. Next steps if dust continued were to swap Komatsu dozer for a Caterpillar dozer and if dust continued then to stop dozer movements. EO phoned back complainant and informed him of the measures above.
21	Phone call to EO	6/10/2013 6:51am	Noise and dust being generated on the previous day.	Dust on ROM pad from dozer feeding the bypass crusher. Also windy on Saturday afternoon. Noise on Saturday night related mainly to trains but also some from dozers.	Complaint made the following day. Additional water can be added to the ROM pad if required. EO to contact train company and inform them of the complaint. Noise model being revisited to validate the predicted levels.
22	Phone call to EO	10/10/2013 2:32pm	Dust being generated at the coal processing area	Bypass crusher on and dozer loading train.	Bypass crusher stopped after adding additional water did not achieve required dust suppression. Sprays were already activated on gantry.
23	Phone call to complaints hotline	12/10/2013 7:23am	Noise relating to dozer tracks and engine hum	Weather conditions indicate southerly winds at ~2m/s towards the complainant's house. No trains being loaded and no production as Longwall on maintenance.	EO advised complainant that noise model being validated. EO provided copy of the monitoring report for September 2013 on 21 October 2013.
24	Phone call to EO	24/10/2013 12:48pm	Dust being generated at the coal processing area	Train being loaded at the time.	EO contacted CHPP and gantry sprays activated above where dozers were working.
25	Phone call to complaints hotline	28/10/2013 12:07pm	Dozer noise on Saturday morning and afternoon / evening. Dust also visible. Bad smell on Saturday night.	Dozers undertaking normal operations on Saturday. Wind direction towards complainant's residence. Dust likely from coal processing area. Bad smell in relation to a spontaneous combustion event on the coal stockpiles on Saturday evening.	Latest noise monitoring report provided to complainant. Enquired as to monitoring at adjacent property but EO's understanding is that they are amalgamated with property with residence (part of the noise monitoring network). Spontaneous combustion event managed as per site management plans and extinguished. EO explained that dust may be visible however monitoring network reports results within compliance limits.
26	Phone call to EO	15/11/2013 12:22pm	Dust being generated at the coal processing area	Dust coming from tripper, reject stockpile operations and dozer loading a train on the product stockpile. Sprays on the conveyors were already activated at the time of the complaint.	Sprays on gantry activated. Reject stockpile operations ceased.
27	Phone call to complaints hotline	19/11/2013 5:59pm	Dozer noise, tracks and engine hum, on Friday morning and Tuesday afternoon. Loud enough to wake children	ROM coal stockpile close to capacity due to rail outage meaning dozers working higher than usual.	EO to provide noise model validation results when available. Should model indicate compliant levels at complainant's residence then the mobile noise unit will be relocated to their property to gain a better understanding of noise

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
					sources/levels.
28	Phone call to EO	10/12/2013 10:30am	Dust being generated at the coal processing area from the bypass crusher is excessive.	Bypass crusher operating and dozer loading coal on the PCI stockpile.	EO contacted CHPP. Sprays on bypass crusher in the process of being activated. Sprays on gantry for stockpile. Sprays cannot be activated above working dozers due to safety concerns.

EO – Environmental Officer
EM – Environmental Manager
TBT – Tool Box Talk

TSM – Technical Services Manager
CHPP – Coal Handling and Preparation Plant
EPA – Environment Protection Authority

GM – General Manager
CRO – Control Room Operator

Narrabri Mine
2014 Complaints Register

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
1	Phone call to CRO	9/01/2014 5:11pm	Too dusty. Only been home two days and very dusty.	CRO talked with CHPP in relation to sprays.	CRO advised EO of complaint. EO followed up with complainant the following week.
2	Phone call to CRO	11/01/2014 4:10pm	Complaint relating to dust from the product tripper.	CRO checked with CHPP to ensure sprays were functioning properly.	CRO notified EO. EO followed with complainant the following week.
3	Phone call to Complaints Hotline	12/01/2014 8:03am	Light from the mine shining in the front yard and very dusty the previous week.	Only light in addition to normal operations is a lighting tower on the ROM pad. EO advised CHPP that the lights should not shine above the horizontal and this should be rectified if non-compliant.	EO rang complainant back on 13 January at 8:54am and left a message. EO tried again on 17 January at 3:14pm and talked with complainant. EO again contacted the CHPP on 20 January to check on status of lighting tower. Visual observation on 21 January had lighting plant pointing down on ROM stockpile.
4	Phone call to Complaints Hotline	14/01/2014 6:23pm	Complaint relating to excessive dust being generated from the site.	Dust being generated by dozer and tripper operations.	EO rang complainant on 15 January and advised of sprays on gantry and EPL requirements for dust management due to be implemented and reported to the EPA by 28 February.
5	Phone call to Complaints Hotline	15/01/2014 8:55am	Complainant concerned about dust and noise levels (dozer tracks) from the mine. Concerned about breathing the dust in and about it settling on their roof.	Complaint in relation to general issues with no specific time.	EO returned phone call at on 15 January at 2:05pm. EO outlined EPA dust mitigation measures being implemented as well as monitoring network around the mine. EO also talked about the sprays in place and the dust TARP. EO to organise meeting with resident in the near future.
6	Phone call to EO	15/01/2014 1:47pm	Dust generated from the skyline tripper and sprays not on.	Product tripper creating dust when loading onto stockpiles.	EO contacted CHPP at 1:53pm. Sprinklers activated on the upwind side of the coal unloading point, conveyor sprays were on at the time of complaint. CHPP also changed feed point from ROM stockpile to take fresher coal which should have a higher moisture content.
7	Phone call to Complaints Hotline	16/01/2014 7:25am	Complainant wanted to bring to the attention of the mine the level of dust being generated. Dust coming across Baan Baa and coal dust on the complainant's roof. Also about the smell relating it to Singleton/Muswellbrook.	Bypass crusher used in the morning of the complaint which processes a drier product with the potential to make dust. Spontaneous combustion also occurring onsite.	EO phoned complainant back at 8:03am and explained dust mitigation measures. Complainant stated that info has also been forwarded to the EPA. EO to arrange a meeting with complainant.
8	Phone call to	16/01/2014	Dust being generated onsite. Sprays on gantry not	EO contacted CHPP at 1:19pm, CHPP advised that conveyor sprays were	EO requested gantry sprays be activated as well. CHPP activated

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
	EO	1:20pm	on.	on.	gantry sprays.
9	Phone call to EO	17/01/2014 3:35pm	Dust being generated from site.	Dust being generated from dozers loading a train and working the ROM stockpile. CHPP had been wetting the area for most of the day with the gantry sprays.	EO contacted CHPP at 3:53pm. CHPP explained they could relocate the dozer to load the train from a different position which may limit the dust being generated.
10	Phone call to Complaints Hotline	19/01/2014 4:30pm	Dust generation all day from site	Hot and dry day. General operations with sprays activated.	CRO contacted CHPP and made them aware of the complaint. CRO requested CHPP check the sprays that are on and activate more sprays. EO rang complainant back at 9am on 20 January as requested. Complainant stated the dust is a problem for the community. EO stated that EPL measures are being addressed. Complainant stated that more needs to be done.
11	Phone call to Complaints Hotline	19/01/2014 5:37pm	Coal dust been blown over house	Storm bringing high winds went through at this time. General dust from the coal processing area was blown away in the 55km/hr gusts. Some gantry sprays on at the time.	Rang complainant back on 20 January. Coal dust on roof, in washing and in their pool. Photos taken and EPA notified. EO acknowledged that the storm created strong winds which were the cause for the dust.
12	Phone call to site	20/01/2014 12:41pm	Cloud of dust from site	The cause was a dozer trafficking between stockpiles. EO had already contacted CHPP at 12:26pm in relation to dust management.	EO rang complainant back at 12:43pm. Dust cloud gone by the time EO returned call. EO advised CHPP of complaint and to ensure areas that have sprinklers are wet.
13	Phone call to Complaints Hotline	27/01/2014 9:53am	Plume of dust over complainants house	EO reviewed video footage at time of the complaint. One dozer working on ROM stockpile and one dozer working on reject stockpile.	EO phoned complainant back at 8:45am on Tuesday morning. Complainant requested a dust deposition monitor be installed. EO phoned complainant back at 8:55am to advise that a dust deposition gauge would be installed with the next round of sampling, ~13 February 2014.
14	Phone call to EO	30/01/2014 3:19pm	Dust from dozers, dusty last three days	Train was not being loaded at the time. Dust being generated from dozer on the ROM stockpile.	EO contacted CHPP at 3:32pm. One Komatsu and one Cat dozer being used on the ROM stockpile. At 3:40pm CHPP Supervisor instructed operator to only push 'half blades of coal' on the Komatsu to limit dust generation.
15	Email to EO received from CCC Rep.	31/01/2014 1:09pm	Dust being generated at the mine. Dust in the house and in the hot water system.	Complaint related to a 3 month period with no specific date/time.	EO contacted complainant on 31 January. EO arranged for a meeting the following week to talk about dust management at the mine and to assess the dust levels at the residence.
16	Phone call to Complaints Hotline	19/02/2014 7:40am	Dozer noise this morning	Dozer working on reject stockpile from 7am.	EO reviewed noise monitoring information. Dozer noise hard to identify over general road noise. EO requested CHPP start reject stockpile

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
					operations after 8am. CHPP acknowledged this would be done. EO advised complainant. Complainant to continue to provide feedback if noise seems excessive.
17	Phone call to site	19/02/2014 ~3:00pm	Dusty conditions at the mine particularly late last year.	Complaint in relation to dust over a period of months, no specific date/time.	Complainant raised concerns in relation to health impacts, why issue is ongoing and what has been done. EO explained the volume of the coal on the surface and the dry/hot weather resulted in dustier than usual conditions. EPL for the mine requires measures to be implemented two of which have been reported with a further two to be reported by end of February 2014. Additional measures are also been investigated to minimise visible dust at the mine.
18	Phone call to Complaints Hotline	4/03/2014 10:02pm	Hard to breathe	EO contacted CHPP which advised no instances of spontaneous combustion in the coal processing area. All coal is now fresh coal with old stocks depleted. Wind direction also meant the complainants residence was not down wind at the time of the complaint.	EO contacted complainant on 5 th March and advised no spontaneous combustion issues noted at the coal processing area and also noted wind direction. Complainant advised that it was a smell similar to what had been detected in the past and thought they would check with the mine.
19	Phone call to site	19/03/2014 10:50am	Noise from a new installation and black material in water tank and on water filter	EO was aware of a temporary fan being installed at the end of longwall panel 103. Prior to installation EO investigated noise levels and compared to sound levels predicted in the EA which showed similar levels were modelled. Noise source is the temporary fan.	EO requested earthen bund be installed around the fan. EO was then informed that the fan will have a shed installed around it as it is not weather proof. EO sought additional detail from the acoustic consultant and then provided this information, for the modification of the shed to maximize noise reduction, to the site civil supervisor. The earthen bund was deemed not practical due to access and heights so a temporary installation, including temporary fencing and brattice sheeting, was installed on 21 March as a noise barrier until the shed can be erected and modified. Shed is due to be erected on 3 April. EO rang complainant back at 5pm on 19 March 2014. Complainant rang back at 10am on 20 March 2014. EO informed complainant that the temporary fan will be in place until June 2014. Plan is to have them approx. every 3rd longwall panel which will progressively move west away from the residence. EO explained the noise barrier measures being implemented and associated timeframes which should alleviate

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
					noise at the residence. EO advised complainant to drop off a water sample and water filter and the mine would have it analysed. Samples have since been forwarded to the lab.
20	Phone call to site	4/04/2014 3:30pm	Concerned about residents in a mine owned house that is sublet by the leasee.	Complainant advised that as it is sublet there may be little Whitehaven can do.	Complaint referred to the Community Relations Manager who advised the leasee of the complaint. Leasee to follow up with tenants.
21	Phone call to Complaints Hotline	6/05/2014 8:37am	Noise coming from mine especially over previous 3 days and this morning.	EO listened to sound recording from early 7th May. Mining noise hard to distinguish over general environmental noise. EO investigated weather data which confirmed atmospheric stability classes ranging from Class E to Class G with Classes F & G indicative of temperature inversion conditions. The weather over the previous 5 days has also been much cooler than preceding period.	EO rang complainant back at 8:35 am on 7th May. EO advised complainant that temperature has cooled off recently and conditions may lead to temperature inversions which mean noise travels further. EO also advised that coal stockpiles are high on the product side but are small on the ROM side so no shielding can occur from the ROM stockpile. Complainant stated that noise monitoring has just been undertaken. EO said that the results of this monitoring and the real-time noise monitor located at the residence will give a good indication of the mines performance now that it is cooling down and identify any trends. EO notified all CHPP supervisors of the complaint and outlined noise management options that could be implemented to reduce noise impacts, especially during the night/early morning periods. Complainant said she would call again if noise from the mine was considered excessive.
22	Phone call to Complaints Hotline	12/07/2014 10:06pm	Noise is very loud from the mine.	EO investigated operations at the time of the complaint, audio and noise levels recorded on the mobile noise unit and weather data for the time of the complaint. The bypass crusher was running at the time but the CHPP was not. A train was being loaded meaning there would have been 2 dozers on the product stockpile. Audio recording does have some general mine hum noise in the background and also general traffic noise. Weather data indicated that temperature inversion conditions were present at the time of the complaint based on stability class and wind speeds.	EO contacted complainant at 1:56 pm on 15 July 2014. EO explained operations at the time and noise recorded on the mobile noise unit. EO also explained temperature inversion conditions were present at the time of the complaint. Complainant asked if inversion conditions mean the noise levels don't apply which the EO confirmed. Complainant also noted a vibration in the house at the time of the complaint and that it had been noisy for the last week and a half. Complainant stated they would ring again if the noise is thought to be excessive. EO has since sought advice on low frequency noise mitigation options at the CHPP. The complainant has been notified that this investigation may be extended to include the affected property.

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
23	Attended site	23/09/2014 9:30am	Complainant frustrated with the mine for leaving gates open on leased land that is currently being used for operational activities. Complainant wants to stock paddock but is not satisfied mine will keep gates closed. Previously put signs on gates to alert people that stock were present which have been removed and gates secured open.	Operational activities being undertaken on leased area requiring truck/drill rig access etc and gates left open.	EO issued TBT to all surface personnel reminding them that gates must remain closed, no exceptions. Complainant to replace signs on gates to alert people of stock in the paddock.
24	Phone call to site / Complaints Hotline	23/09/2014 12:25pm	Three issues: Dust – dusty last couple of days and a while ago it was windy and gantry sprays not on; Light – lighting tower direct at the complainant's residence; and Noise – very noisy last night while loading a train.	Dust – coal processing area and rejects haul route creating dust. Light – Lighting plant at rejects area directed towards complainant's residence. Noise – train being loaded when complaint made on complaint line, complainant phoned the next day as well. Met data shows wind blowing away from complainant's residence and towards mobile noise trailer which showed noise results below relevant criteria.	Dust – Civil contractor notified of complaint and reminded of need to manage dust onsite. Civil contractor disappointed with complaint as they felt they were managing dust appropriately. EO requested CHPP Superintendent remind staff of TARP's for dust management in the coal processing area. Light – Civil contractor rectified the lighting plant noted in the complaint on the day of the complaint. Noise – CHPP confirmed train being loaded but nothing out of the ordinary occurring. Noise data shows levels within compliance limits and wind blowing away from residence towards noise trailer.
25	Phone call to site	4/10/2014 3:45pm	Dust coming from the CHPP. Complainant advised it had been dusty all day but the last 30mins was severe.	CRO rang CHPP Supervisor who advised CRO that dozer had come off stockpile to fuel up and crossed a dusty area	CHPP Supervisor arranged for dozer operators to avoid the area where possible and move at a slower speed in areas where there is dust. Extra sprays were also activated. EO also advised CHPP Superintendent who will also inspect areas to determine if the finer dust requires clean out as done previously. Complainant phoned on Tuesday 7/10/2014 at 1109 to talk about the complaint and to also complain again in relation to the 3 dozers working on the coal stockpile which were making dust and no sprays were activated. EO advised CHPP Superintendent who shut the dozers on the stockpile down. This in turn stopped production from the longwall as no dozers could operate to clear coal from beneath the ROM gantry. EO advised complainant at 1313 that this had been done.
26	Phone call to site	11/10/2014 10:26am	Dust on Saturday morning was blowing to complainants house and it	CRO notified CHPP Supervisor of the complaint	Prior to the complaint CHPP Control Operator had been getting Level 1 and Level 2 Wind Tarp warnings. The

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
			looked as though the dust sprays were not on		wind speed had been ranging from 2m/s to a max that peaked at 9m/s. This had prompted the operator to turn on the Product sprays, Rotary Breaker and ROM tunnel Sprays. The By-Pass sprays were also turned on at the time. Prior to the complaint 2 of the dozers had to relocate from ROM to Product Stockpiles. The Komatsu was the first which did create some dust prompting a call to the civil contractor onsite to give the area Nth of the Product pile a good wet down which occurred. The Cat relocated approx. 20 mins before the complaint but with minimal dust at low speed. After talking to the Dozer operators, the CHPP Supervisor was confident that the minimal dust that was created from the product and By-Pass streams did not leave the stockpile area. CHPP Supervisor discussed the dust issue with the operators again and outlined the importance of acting promptly and correctly when dust events occur on any of the coal stockpiles.
27	Phone call to site	15/10/2014 07:00am	Noisy this morning and Monday evening.	Noise unit located residence is faulty and to be rectified.	As previously discussed with complainant, attended noise monitoring to be undertaken as soon as possible to determine impacts.
28	Phone call to site	16/10/2014 15:41pm	Dust coming from the mine and sprays not on. Also noted lights visible and hard to sell property when mine making dust. Sprays also seem to go off at shift change time. Complainant stated that management should be more involved and direct all operators to be responsible for controlling dust.	EO advised CHPP CRO at 15:46pm. CHPP CRO advised that spray's shown as active on control screens, EO advised that there is no water coming from them. EO followed up with CHPP Superintendent at 15:47pm who stated that there was a problem with the sprays and it is being looked into. Decision made at this time to shut the plant down as the sprays could not be fixed.	EO rang complainant back at 16:21 pm to advise that the plant was being shut down due to problem with the sprays.
29	Phone call to Complaints Hotline	20/10/2014 08:03am	Extremely noisy Friday night, all weekend and a large plume of dust at approximately 10am Saturday morning.	EO reviewed noise levels. EO also reviewed camera footage at the time of the dust complaint. The noise levels on Friday night were propagated by a strong southerly breeze of >4m/s. The camera footage showed dozers working but no dust plumes were evident however the cameras do not cover the entire ROM/Product stockpile area.	EO contacted complainant and stated another round of attended noise monitoring would be organized for as soon as possible but likely the following week due to availability. EO advised complainant to continue to let the mine know if they think the noise levels are too high.
30	Phone call to site	27/10/2014 11:19am	Dust from product tripper and dozer working on ROM stockpile	EO contacted CHPP CRO at 13:47pm in relation to dust from tripper, no dozer on ROM stockpile at this time.	CHPP Superintendent advised wind levels only recent issue with speeds around 7m/s. CHPP shut down due to

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
					windy conditions at around 13:50pm.
31	Phone call to EO	29/10/2014 07:40am	Extremely noisy this morning and last night, not sure if loading a train.	EO reviewed noise levels at the time of the complaint & at 01:00am on 29 October 2014 (train loaded at this time) and mining noise hard to determine above other noise sources. No trains were being loaded on the morning of 29 October at the time of the complaint.	EO contacted complainant at 08:05am and stated that the stockpiles are low at the moment but dozers still working. EO also stated that extra activity on the surface as longwall move underway. EO noted that attended monitoring was undertaken at the residence on Monday night/Tuesday morning and that when the results received these would be compared to the mobile noise unit data and provided to the complainant. EO advised complainant to continue to let the mine know if they think the noise levels are too high.
32	Phone call to EO	29/10/2014 10:00am	Complainant called EO and stated that dust coming from tripper and dozers and the sprays were not on.	EO inspected coal area and dust was being blown from the product tripper but didn't appear to be leaving the coal processing area. Dozer also parking up at this time.	EO contacted the CHPP CRO at 10:03am and advised of the complaint. Sprays were activated. Wind speed approx. 4m/s and blowing from the SE, i.e. away from Complainants residence
33	Phone call to EO	3/11/2014 9:56am	Complainant called EO and complained about dust generated during windy conditions on Friday afternoon, 31 st October 2014, and Saturday 1 st November 2014. Complainant advised he rang CRO Friday afternoon around 5pm. Complainant advised that he had coal in his house and when he walks around his feet get black and he is having breathing difficulties. Complainant also stated that it was not only him that was affected.	EO reviewed footage of operations. No operational activities were being undertaken during the storm event that occurred at 7:20pm on Friday evening. During Saturday, the tripper was off from 8:40am due to wind speeds as noted in the CHPP shift reports. Dozers were operating at 1pm and 6pm on 1 November but wind speeds had dropped by these times and dozers generating minimal dust.	EO advised complainant of dust suppression system to be implemented and that previously the fine material around the stockpiles has been removed.
34	Phone call to EO	24/11/2014 9:15am	Dust coming from emplacement area and coal processing area	Coal haulage works, bypass crusher and product tripper generating dust. Wind at the time ~7m/s. Sprinklers on product gantry shown as on in CHPP – CRO but not actually working.	Emplacement area operations ceased until water cart saturated work area. Operations then stopped at 11:35am due to weather. Coal processing operations stopped while sprinkler issue resolved. CHPP not operated again due to weather conditions.
35	Phone call to EO	27/11/2014 12:02pm	Dust coming from the product tripper and stockpile	CHPP manager had already shut down the plant as dust generation was not normal and had commenced an investigation.	The investigation confirmed that a combination of very dusty coal and an issue with the conveyor spray system automation was the cause. The spray system automation issue was rectified and the CHPP restarted within 0.5hrs with no issues. EO rang complainant back at 12:49pm to

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
					advise that the plant was shut down and restarted without any issues.
36	Phone call to EO	16/12/2014 14:55pm	Complaint related to dust being generated at the emplacement area.	Coal haulage works creating dust. Wind speed at the time was 6.8m/s and coming from the north-west.	EO rang emplacement area supervisor at 15:02pm and advised of complaint. Supervisor advised water cart there at the moment and would keep going. EO advised that more needs to be done and operator should be the first person making a call about the conditions and organising appropriate mitigation measures to be implemented. EO also advised the CSC of the complaint.
37	Phone call to EO	19/12/2014 12:17pm	Complaint related to dust coming from the coal processing area, thought to be a dozer	EO rang CHPP Manager who advised issue was from plant start-up and not a dozer. Plant had an unplanned shutdown which left coal on a reclaim conveyor for 12hrs. Upon start up coal was very dry and generated dust. Dust suppression on the conveyors is triggered by feed rates so no sprays were activated during the initial start-up.	CHPP to review start-up procedure to investigate options for dust suppression during times when CHPP running at low feed rates, including plant start-up. EO rang complainant and advised of reason for dust and investigation to be undertaken.
38	Phone call to site	20/12/2014 10:15am	Complaint related to dust from the coal processing area	EO reviewed camera footage on Monday 22/12/2014 and dust generation was visible from dozer operations. EO requested information from CHPP Manager.	At the time of the complaint the CRO contacted the CHPP CRO to advise of the complaint. CHPP CRO advised they were trying to minimise dust from the operation. CHPP Manager provided the statutory report stating that dust mitigation measures were implemented on the day. Narrabri Mine is also installing a spray system for the coal processing area which will assist in minimising dust generation.
39	Phone call to Complaints Hotline	25/12/2014 7:00am	Complaint related to noise coming from the mine	Train loading was occurring at the time.	TSM spoke with complainant on 31/12/2014 and advised that when EO back to site, EO will follow up with noise monitoring results and weather conditions at time and provide more feedback. EO reviewed noise files and mine noise audible as well as transportation and wildlife noises recorded. Low Frequency noise contribution around this time was 32dB(A). Wind coming from the south-east at the time of the complaint with near calm conditions. EO contacted complainant on 19 January 2015.

EO – Environmental Officer
EM – Environmental Manager
TBT – Tool Box Talk
CSC – Civil Services Coordinator

TSM – Technical Services Manager
CHPP – Coal Handling and Preparation Plant
EPA – Environment Protection Authority

GM – General Manager
CRO – Control Room Operator
EA – Environmental Assessment

**NARRABRI MINE 2015 COMPLAINTS REGISTER**

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
1	Phone call to ES	5/01/2015 8:05pm	Very noisy at the mine	Winds at the time around 2.5m/s and coming from the SE. No trains were being loaded and CHPP plant being fed by dozers on the ROM pad. The CHPP advised that likely cause is rock coming out of the mine on the drift conveyor which is a rare occurrence.	ES contacted complainant on 19/01/2015.
2	Phone call to site	18/01/2015 4:10pm	Dust being generated at the site	The CHPP was shut down at the time of the complaint and a train was being loaded at the time. Dust sprays were on at the time.	CRO notified CHPP of the complaint. ES contacted complainant on 21/01/2015.
3	Phone call to Complaints Hotline	19/04/2015 9:55pm	Noisy	Winds at the time were around 3.9m/s and coming from the south, i.e. towards the complainant's property. ES requested advice on CHPP operations at the time and advice was given on 21 April 2014 by CHPP Superintendent that usual operations were occurring at the time with both the CHPP and bypass running and a train being loaded	ES left message for complainant on 20 April 2015. ES rang complainant on 22 April to advise that normal operations occurring at the time with nothing happening out of the ordinary. Complainant advised noise was both plant and dozers. ES advised weather conditions were unfavourable, e.g. windy, and coming from the south towards property. Complainant advised she would ring again if she considers it too noisy.
4	Phone call to Complaints Hotline	24/04/2015 11:20pm	Noise	Wind at the time was 3.9m/s and coming from the WNW-NW, i.e. towards the complainant's property but not directly.	ES contacted complainant at 1419 on 27 April 2015. Complainant said it was noisy, ES stated that strong winds coupled with a full ROM stockpile meant



Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
					it was more audible than usual. Complainant to ring back if they consider it too noisy
5	Message to Complaints Hotline	25/04/2015 9:03am	Noise	Wind at the time was 1.3m/s and coming from the NNW, which is towards the complainants residence but not directly. Noise unit located between complainant and the mine, reported a LF noise contribution of 35dB(A) at this time. Dozer track noise is audible in the recordings from the noise monitor but not for the full 15-min period.	ES rang complainant at 1430 on 27 April 2015. Complainant stated that noise quite common in the house and can see the dozers on the product stockpile. It must be the height causing noise at their place and can they hear the clack-clack of the dozers when in reverse. ES stated the mine is investigating options to limit noise but what was recorded was within the required levels.
6	Phone call to Complaints Hotline	12/05/2015 8:03am	Noisy at the mine with tractor noise, dozer noise and reversing alarms	Winds at the time were 0.6 m/s and swinging from south-westerly to northerly. ROM coal haulage operation recently started again. Tractor noise noted likely the loader and reversing alarms on haul trucks/loader.	ES advised contractor to fit low-frequency reverse beepers to equipment. ES also confirmed haul start time at 7am. ES contacted complainant on 13 May 2015 at 4:08pm. Stated reverse alarms and tractor sound likely to do with haulage operations. Complainant to call back if concerned about noise.
7	Phone call to site	13/05/2015 3:25pm	Dust on the product tripper and sprays not on	Coal was being blown from the product tripper discharge however it was not leaving the coal processing.	ES rang the complainant back at 3:31 pm after inspecting the coal processing area. Sprays were activated following complaint as wind speeds kept increasing.



Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
8	Phone call to ES	15/05/2015 5:29pm	Noisy, more reversing beepers, been like that all day and night	ES called CSC to confirm reverse beeper change over day.	ES rang complainant back at 5:32 pm on 15 May 2015. Stated that the reversing beepers to be changed Monday and that the hauling operation finishes at 6pm. ES also stated that the ROM stockpile is almost full which may be the source of night-time noise. Complainant requested the mobile noise unit be placed at the property. Complainant also spoke to the GM-CRP as WCL has made an offer for purchase. GM-CRP Manager stated that locating the noise monitor at the residence might not achieve much as negotiations for acquisition already commenced.
9	Phone call to site	19/05/2015 5:34pm	Lights	Lighting tower at the REA was found to be the source.	Lighting towers at the REA were turned off or redirected within 10 minutes of receiving the complaint. ES rang the complainant back at 6:31 pm. CSC was informed and lighting plants checked 20 th May 2015 to ensure they were setup appropriately.
10	Message to Complaints Hotline	27/05/2015 9:54am	Noise	Complainant recognised accentuation of noise during cooler temperatures and time limitations on train loading activities. Winds during the morning were light (~2 m/s) and coming from the S-SE, which is towards the mine from the complainants	Return call made to complainant by GES at 2:30pm on 27/05/2015. Complainant confirmed nature of complaint being noise generation from trucks, stockpile dozers and trains. Complainant noted noise generation throughout morning of



Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
				property. Inversion conditions earlier in the morning ~4:45am.	27/05/2015. Complainant reiterated request that site "make an effort" to reduce noise.
11	Phone call to Complaints Hotline	9/06/2015 10:28pm	Noise	Investigation found three dozers working on the ROM stockpile at this time and one loading a train. The ROM stockpile dozers included one working the rear of the stockpile, which is the highest point. This dozer was associated with coal haulage operation pushing coal out for the next day. This haulage operation is a temporary activity. No inversion conditions present at the time but they were prevalent prior to the time of the complaint. Wind at the time approximately 1m/s and coming from the east, i.e. away from the complaints property.	ES phoned complainant at 2:13pm on 10/06/2015. Complainant requested noise monitor be placed back at their residence. ES stated that we are aware of the issues and as an acquisition process is ongoing, by placing the monitor there we would likely end up in the same position we are in now. ES stated he would have the GM-CRP contact the complainant in relation to the status of the acquisition process.
12	Phone call to Complaints Hotline	7/08/2015 9:28pm	Noise	Banging/clanging, dozers and heavy machinery. Additional complaints from same complaint received 7:28 am on 8/08/2015 and 8:19 am on 9/08/2015 in relation to the same issue. Investigation found inversion present at the time of the complaint on the 7 th and a southerly breeze (blowing towards complainants residence) of 1m/s. No inversions were present during the complaints received on 8 and 9 August 2015 but winds were 2m/s and coming from the SE, i.e.	Complaint received Monday morning by ES. ES rang complainant back at 9:24 am on Monday 10 August 2015. ES stated that the ROM stockpile is being processed to reduce dozer-working heights. Longwall move is currently underway which means more equipment is brought to the surface for repairs and there is more activity on the surface than normal. This will continue for the next 3-4 weeks. Email sent reminding personnel to be aware of
13		8/08/2015 7:28am			
14		9/08/2015 8:19am			



Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
				towards the complaints property.	neighbours when working at night.
15	Phone call to Complaints Hotline	2/09/2015 5:45am	Noise	Investigation found inversions likely present and a north-westerly breeze (blowing towards complainant's residence) of 1m/s at the time of the complaint. Train being loaded at the time with two dozers operating on the product stockpile.	ES rang complainant back at 8:02 am Wednesday 2 nd September 2015. Complainant is of the opinion that the stockpile modification will make it noisier – monitoring results indicate this is not the case. ES explained the only way to determine compliance is to do more monitoring, which the complainant stated may not be an issue now until next winter.
16	Phone call to Complaints Hotline	28/09/2015 4:10pm	Noise	Complainant stated that the noise is a low background constant hum/rumbling. Constant at times but not all the time. Venturi setup assessed as this is potentially the source of noise as it is being used in place of the goaf drainage plant at the northern end of LW105, i.e. adjacent to "Newhaven".	Compressor/generator doors/covers checked to ensure they were closed and the venturi exhaust rotated to point to the north-west, i.e. away from the complainant's residence. Complainant happy for noise monitoring to be undertaken at the residence but will confirm what monitoring would be preferred, i.e. attended or mobile noise unit.
17	Phone call to ES	12/10/2015 12:10pm	Dust	Sprays were on the product skyline at the time of the complaint but had been used intermittently during the day. Wind speeds gusting to ~10m/s at the time of the complaint.	Activated more sprays on the ROM stockpile.

ES – Environmental Superintendent

TSM – Technical Services Manager

GM – General Manager



EM – Environmental Manager CHPP – Coal Handling and Preparation Plant TBT – Tool Box Talk
CRO – Control Room Operator EPA – Environment Protection Authority CSC – Civil Services Coordinator
EA – Environmental Assessment GM-CRP – Group Manager-Community Relations and Property
GES – Group Environmental Superintendent TSS – Technical Services Superintendent
Engineering and Surface Operations Manager – ESOM



NARRABRI MINE 2016 COMPLAINTS REGISTER

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
1	Phone call to Complaints Hotline	6/01/2016 1:41pm	Noise	ES investigated possible noise sources near complainant's property but found nothing out of the ordinary that would explain additional noise over the last few days.	ES contacted complainant on 7 January 2016 at 11:38am to discuss the complaint. The Complainant agreed to allow attended noise monitoring to be undertaken.
2	Phone call to Gunnedah Office	30/01/2016 12:51pm	Noise	Investigation shows slight westerly breeze, i.e. heading towards the complainants residence and high humidity (~90%) on Friday night, which are adverse weather conditions for noise propagation. CHPP was fully operational with trains being loaded throughout the night.	GME advised that the best contact was to ring mobile. ES contacted complainant on 1 February 2016. Complaint was made Saturday morning but related to dozer noise on the Friday night. Complainant agreed to noise monitoring to determine levels.
3	Phone call to Site	17/02/2016 11:55am	Noise, Dust	Complaint related to dust/noise over previous week.	ES noted that the past week had been hot and windy. ES advised the SCOS and ESOM of the complaint. SCOS had addressed dust with the operators and they had been instructed to take action as required. ES communicated to the complainant that new noise monitoring equipment will be in place by the end of April.



Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
4	Phone call to site	4/03/2016 12:29pm	Dust	Video footage was reviewed and the dust was found to be from a 'whirly wind' passing over the ROM pad. Dozers were operating in the area but ceased during the wind event.	ES contacted the complainant and explained the event leading to the dust.
5	Phone call to site	10/03/2016 11:45am	Dust	Dust visible from dozers on the product pad but considered minor.	ES notified ESOM and SCOS of the complaint. SCOS contacted the CHPP CRO and the gantry sprays were activated where the dozers were working.
6	Phone call to Complaint Hotline	22/04/2016 6:25am	Noise	At the time of the complaint the CHPP was running with two dozers on the ROM stockpile. Inversions conditions were present between 1-3 am but not at the time of the complaint with a breeze of 2 m/s coming from the SE.	TSS contacted complainant on 22 April 2016. Complainant noted it has been noisy for a while and that a tree screen needed to be replanted / watered. ES contacted complainant about the timing of the new noise management measures to be installed.
7	Phone call to site	25/05/2016 1:50pm	Dust	Dozer was running on the ROM pad and recovering coal from close to the floor of the ROM pad creating intermittent dust.	ES notified SCOS and ESOM. SCOS contacted CHPP CRO and directed them to modify operations to avoid this area.
8	Phone call to site then GMCRP	8/06/2016 10:30pm	Noise	Noise from conveyors and loaders.	GMCRP advised the mine is the best contact. Complainant advised it is always noisy but that monitoring has/is occurring.



Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
9	Phone call to site	9/06/2016 10:30am	Noise	Noise last night. Review of temperature inversion data confirmed inversion conditions were present.	ES explained to complainant that the inversions enhance noise and under these conditions, the mine noise criteria do not apply.
10	Phone call to site	17/06/2016 11:50am	Dust	Windy conditions were present at the time. CHPP was stopped for short periods.	ES advised CHPP to monitor conditions and take necessary dust management action.
11	Phone call to site	27/07/2016 12:40pm	Dust	ES and ESOM reviewed CCTV footage with minimal dust visible.	ES informed the CHPP of the complaint and requested that sprays were activated on the gantry/stockpiles to limit dust lift off.
12	Phone call to site	4/08/2016 1:26pm	Dust	Wind speeds at the time were 7.8m/s.	During the call the tripper was moved by CHPP personnel to utilise the chutes and then the CHPP stop producing coal. ES emailed CHPP personnel to inform them of the complaint and to ensure the dust TARP is followed.
13	Phone call to site	18/08/2016 11:04am	Dust	Following the complaint dust was not observed at the bypass.	ES reviewed footage and dozer tracking to stockpile had generated some dust. ES informed CHPP personnel of the complaint. CHPP Supervisor advised that when dust was noticed all sprays were checked and those that were not on were activated.



Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
14	Phone call to Complaint Hotline	18/08/2016 10:24pm	Noise	ES reviewed inversion tower data, noise unit audio and CHPP activity. No inversion present according to tower data, noise high on unit but no alarms as majority was traffic noise. 2 dozers operating on ROM and 1 on product with the CHPP running. Attended monitoring was being undertaken at the time as well at the residence with mine noise audible but not excessive. Report not yet available.	ES rang complainant back @ 9:35am on 19/08/2016 and explained that attended monitoring undertaken at the time with no major issues identified.
15	Phone call to Complaints Hotline	29/08/2016 11:30pm	Noise	Wind 2.1m/s, inversion 4.8°C/100m, 2 dozers on ROM stockpile	ES contacted and explained the inversion conditions. Further information to be provided to complainant.
16	Phone call to Complaints Hotline	30/08/2016 3:53am	Noise	Wind 3.2m/s, Inversion 2 °C/100m, 1 dozer on ROM and 1 dozer on thermal stockpiles	ES contacted and explained the inversion conditions. Further information to be provided to complainant.
17	Phone call to Complaints Hotline	30/08/2016 10:27pm	Noise	Wind was calm, inversion of 6.8°C/100m, 2 dozers on ROM and 2 dozers on thermal stockpiles	ES contacted and explained the inversion conditions. Further information to be provided to complainant.
18	Phone call to Complaints Hotline	6/09/2016 5:00am	Noise	Wind >3m/s and inversion present. Train being loaded with 1 dozer on ROM and 1 on thermal stockpiles.	ES contacted complainant and stated that while noise was audible on noise trailer no alarms were triggered. ES then explained the alarm trigger level.

**WHITEHAVEN COAL**

Complaint Number	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow Up
19	Phone call to Complaints Hotline	13/09/2016 4:46am	Noise	Wind speed 1.7m/s and inversion present. Train being loaded with 2 dozers on ROM and 2 on thermal stockpiles.	ES attempted to contact complainant to explain inversion conditions present.

ES – Environmental Superintendent

SCOS – Surface Coal Operations Superintendent

CHPP – Coal Handling and Preparation Plant

TSS – Technical Services Superintendent

GME – Group Manager – Environment

ESOM – Engineering & Surface Operations Manager

CRO – Control Room Operator

GMCRP – Group Manager – Community Relations & Property

ERM has over 100 offices
across the following
countries worldwide

Australia	Netherlands
Argentina	New Zealand
Belgium	Peru
Brazil	Poland
China	Portugal
France	Puerto Rico
Germany	Singapore
Hong Kong	Spain
Hungary	Sri Lanka
India	Sweden
Indonesia	Taiwan
Ireland	Thailand
Italy	UK
Japan	USA
Korea	Venezuela
Malaysia	Vietnam
Mexico	

Environmental Resources Management

PO Box 803
Newcastle NSW 2300
Watt Street Comercial Centre
45 Watt Street
Newcastle NSW2300

T: +61 2 49 035500
F: +61 2 49 295363
www.erm.com

