



Independent Environmental Audit 2022

Narrabri Coal Operations

25 January 2023

Project No: 0523817

Independent Audit Certification Form

Independent Audit Certification Form	
Development Name	Narrabri Mine
Development Consent No.	PA 08_0144 (Mod 7, November 2021)
Description of Development	Narrabri Mine is an underground mine
Development Address	10 Kurragong Creek Road, Baan Baa
Operator	Narrabri Coal operations Pty Ltd
Operator Address	10 Kurragong Creek Road, Baan Baa
Independent Audit	
Title of Audit	Narrabri Coal Mine Independent Environmental Audit 2022
<p>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:</p> <ul style="list-style-type: none">• 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• The findings of the audit are reported truthfully, accurately and completely;• I have exercised due diligence and professional judgement in conducting the audit;• I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;• 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 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);• 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 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. <p>Note.</p> <p>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.</p> <p>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).</p>	
Signature	
Name of Lead / Principal Auditor	Heather McKay
Address	Level 9, 260 Queen Street, Brisbane QLD 4000
Email Address	Heather.McKay@erm.com
Auditor Certification (if relevant)	N/A
Date	23/01/20022

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				Name	Date	
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Signature Page

25 January 2023

Independent Environmental Audit 2022

Narrabri Coal Operations



Heather McKay
Lead Auditor



Oliver Moore
Partner in Charge



Tom Abbott
Support Auditor

Environmental Resources Management Australia Pty Ltd
Level 14, 207 Kent Street
Sydney NSW 2000

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EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned to perform an Independent Environmental Audit (IEA) of the Narrabri Coal Operations ('NCO') on behalf of Whitehaven Coal Limited ('WCL'). The mine is located approximately 17 km south east of Narrabri, New South Wales (NSW). The primary purpose of the audit was to satisfy the Department of Planning, and Environment (DPE) Ministers' Conditions of Approval (CoA) Project Approval number PA 08_0144, which requires completion of an independent audit every three years from the date of the approval. The audit period assessed in this IEA is 5 December 2019 through 8 December 2022 (the date the site visit was completed as part of the audit).

The audit included a review of:

- DPIE, Ministers Conditions of Approval PA 08_0144 (Modification 7) including Statements of Commitments;
- Mining Lease 1609;
- Water Access Licences;
- Environment Protection Licence (EPL) 12789; and
- Implementation of Management Plans developed as part of the Ministers Conditions of Approval.

Whitehaven Coal has established the control systems generally required for the stage of development i.e. rehabilitation and closure. All staff interviewed demonstrated an understanding of requirements and a commitment to the application of the requisite management systems and plans.

A qualitative risk assessment was also completed on the findings consistent with AS/NZS ISO31000:2018. The number of non-conformances with the statutory conditions and implementation of the management plans is summarised in *Table E1* below. It is noted that all non-compliances with statutory instruments have been reported to the appropriate regulator where required during the audit period.

Table E.1 Summary of Audit Findings

Review	Non-compliances (NC)	Observations
Statutory Instruments	4 (1 duplicate)	1
Implementation of Plans	1	1

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

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned to perform an Independent Environmental Audit (IEA) of the Narrabri Coal Mine (NCO), on behalf of Whitehaven Coal Limited (herein referred to as 'WCL'). The mine is located approximately 17 km south east of Narrabri, New South Wales (NSW). The primary purpose of the audit was to satisfy the Department of Planning, and Environment (DPE) Ministers' Conditions of Approval (CoA) Project Approval number PA 08_0144 (Modification 7), which requires completion of an independent audit every three years from the date of the approval. The audit period assessed in this IEA is 5 December 2019 through to 8 December 2022 (the date the site visit was completed as part of the audit). The audit must:

- (a) be conducted by 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 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; and
- (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals.

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 Overview of Operations and Approvals

The Narrabri Coal Mine is an underground coal mine which was originally approved by the Minister for Planning under Project Approval PA 02_0144 on 26 July 2010 to Narrabri Coal Operations Pty Ltd (NCO). PA 08_0144 MOD 7 was approved in November 2022 with an expiry date of 26 July 2031.

The Narrabri Coal Mine lies within the mining lease (ML) 1609. The Narrabri Mine is a joint venture between Narrabri Coal Pty Ltd (a company 100% owned by Whitehaven Coal Limited) (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 (NCO) (a wholly owned subsidiary of Whitehaven) manages the Narrabri Mine on behalf of the Narrabri Mine Joint Venture (NMJV).

The site holds Environmental Protection Licence (EPL) 12789, which was last varied on 7 September 2022.

1.1.1 Description of primary processes undertaken during the audit period

Current activities at the site include the following:

- Construction and Demolition;
- Exploration;
- Land Preparation;
- Mining Operations;
- Coal Processing and Transport;
- Maintenance Activities;
- Waste Management;

- Subsidence Management; and
- Rehabilitation.

1.1.1.1 Construction and demolition

The following construction activities were conducted during the audit period:

- Development of road networks;
- Subsidence monitoring line relocation for LW110;
- Installation of PED cable;
- Construction of bathhouse and CHPP office block; and
- Commenced brine dam construction.

No demolition was completed during the audit period.

1.1.1.2 Exploration

Exploration drilling was conducted during the audit period as required under the mining lease 1609 and exploration lease 6243 for coal quality, geotechnical and/or hydrogeological evaluation purposes. A detailed review against Exploration Licence 6243 has not been undertaken as part of this IEA as most aspects are considered in subject approvals, EPL and management plans.

1.1.1.3 Land preparation

During the audit period, clearing of vegetation was conducted to facilitate surface gas drainage infrastructure works. Prior to the commencing of any clearing activities, threatened flora surveys and fauna pre-clearing surveys are conducted in accordance with the landscape management plan. Once cleared, soil stripping and stockpiling is conducted in the areas above in order to facilitate gas draining infrastructure works.

1.1.1.4 Mining operations

NCO operations during the reporting period consisted of Stage 2 underground longwall mining using a longwall mining unit and continuous miners, support by shuttle cars and feeder breakers, to support ongoing development of underground roadways, ventilation overcast and belt chambers. During the audit period the longwall mining extracted panels 108, 109 and was operating on 110. Continuous miners extracted 200 Mains and commenced mining of cut and flit panel 201.

Surface features include the Reject Emplacement Area (REA), 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 north of the box-cut Pit Top Area.

1.1.1.5 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 Port of Newcastle. Coarse reject material is transferred to the on-site Reject Emplacement Area.

1.1.1.6 Maintenance activities

Maintenance of plant and equipment occurs within the maintenance workshop which is utilised and managed by NCO maintenance staff. Adjacent to the workshop is a concrete wash bay which is connected to an in-ground oil water separator pit. Bulk diesel storage is provided in the form of two 70,000 L self-bunded aboveground storage tanks. Drainage lines from the refuelling bay sump is

understood to be connected to the wash bay. Sludge waste from the wash bay and refuelling bay is pumped from the oil water separator pits by a third party waste contractors on a routine basis.

1.1.1.7 Waste management

Production wastes generated at the site include mined rock, drill cuttings from exploration and gas drainage activities, coarse and fine reject, brine generated by the Water Conditioning Plant and drill cuttings from surface to in-seam and underground in-seam drilling.

Non-production wastes generated include general domestic waste from onsite buildings, hydrocarbons and oils generated from the maintenance workshop, wash down pad and fuel storage area and treated sanitary wastewater. General wastes are disposed of on a routine basis by a waste contractor. The site recycles cardboards/paper and steel. Waste oils are collected by a third-party waste contractor for offsite treatment and recycling. Sanitary wastewater is disposed via a self-irrigating eco-cycle septic system, which has been approved by Narrabri Shire Council.

Used tyre and wheel assemblies are managed by the equipment supplier as part of the service contract.

Waste segregation was noted to be good during the audit.

1.1.1.8 Water management

Water management at NCO is undertaken in accordance with the approved Water Management Plan. Surface water is managed in a closed loop of ponds located within the rail loop, comprising a series of water storage dams used to collect, store and dispose of pumped out mine water and dirty water run-off, sediment basins, and clean / dirty surface water drains were in place. At the time of the audit, NCO were in the process of constructing an additional brine pond in response to groundwater modelling predictions for the mine.

Licensed surface water discharge points onsite included sediment dam 2 (SD2), sediment dam 4 (SD4), sediment dam 7 (SD7) and sediment dam 8 (SD8). Namoi River (NR1) is licensed however not yet constructed. At the time of the site tour, SD2, SD4 and SD7 did not contain any water.

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

The dams are subject to weekly, monthly and quarterly inspections by a trained NCO employee. Annual and 5 –yearly inspections are undertaken by a Dam Engineer in accordance with the Dams Safety Act.

A pipeline from the Namoi River is the main source of raw water for the mine. NCO holds a number of water licences for water take from sources including the Namoi River, Upper Namoi Zone 5 Namoi Valley Groundwater Source, and 'Aquifer interference' from the Gunnedah-Oxley Basin MDB Groundwater Source. Pumped volumes are metered, and reported to Water NSW, and recorded in Annual Reviews. Records indicate pumped volumes are within the licensed use limits.

1.1.1.9 Subsidence management

The impacts of subsidence are managed through the approved Extraction Management Plan and Subsidence Monitoring Plan as well as subsidence prediction and monitoring of subsidence effects. NCO employs the services of a third-party Subsidence Engineer to undertake subsidence predictions and monitoring.

1.1.1.10 Rehabilitation

Progressive rehabilitation activities have occurred during the audit period and generally decommissioning drill holes, filling in sumps associated with drilling activities, re-spreading topsoil/subsoil over drilling/access tracks and weed management.

1.2 Audit Objectives

The primary objectives of the audit included:

- assess the environmental performance of the project and assess whether it is complying with the requirements in the CoA and any relevant EPL or Mining Lease and Water Access Licences (including any assessment, plan or program required under these approvals);
- review the adequacy of any approved strategy, plan, or program required under the abovementioned consents/approvals; and
- 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.

1.3 Audit Scope

The scope of works in order to complete the Audit includes the following:

- the audit to be carried out in accordance with DP&E's Guidelines for Independent Audits and AS/NZS ISO 19011:2019: Guidelines for quality and/or environmental management systems auditing;
- review of compliance against the documentation identified in CoA (as it relates to the current activities at the Narrabri Mine) which included:
 - document review of compliance against the CoA, statement of commitments, and any other relevant consents/approvals;
 - a site inspection to assess compliance against field implementation of the active CoA;
 - review of supporting plans developed as part of the CoA and assessment of their adequacy towards effective environmental performance;
- review of monitoring results and trends with comparison of monitoring results against regulatory limits and CoA limits (where applicable);
- confirmation 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 Report audit report to verify close-out of actions;
- consultation with the relevant agencies such as Department of Planning, Industry and Environment (DPIE) (various divisions: planning and post approvals, compliance, water, resources, biodiversity and conservation), Environment Protection Authority (EPA), Narrabri Shire Council (NSC) and Narrabri Coal Mine Community Consultative Committee (CCC);
- draft report with results of compliance assessment to be issued for comment to Whitehaven Coal; and
- final report issued for submission to the DPIE.

The audit covers the period 5 December 2019 to 8 December 2022 and is limited to assessing the activities completed during the audit period.

1.4 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 Approval PA 08_0144 (Modification 7) including Statements of Commitments;

- Mining Lease 1609;
- EPL 12789; and
- implementation of approved Management Plans:
 - Noise Management Plan (Sch4, C4.4)
 - Air Quality Management Plan (Sch4, C4.7A)
 - Water Management Plan (Sch4, 4.13)
 - Aboriginal Cultural Heritage Management Plan (Sch4, C4.23)
 - Energy Saving Action Plan (Sch3, C4.30)
 - Greenhouse Gas Minimisation Plan (Sch4, C4.32)
 - Waste Management Plan (Sch4, C4.33)
 - Landscape Management Plan (Sch5, C5.3)
 - Rehabilitation Management Plan (Sch5, C5.4)
 - Mine Closure Plan (Sch 5, C5.5)
 - Environmental Management Strategy (Sch6, C6.1)

1.5 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 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 or financial advice.

2. AUDIT METHODOLOGY

2.1 Methodology and Process

The audit comprised a site inspection during the dates 6 to 8 December 2022, interviews with key personnel, and review of records and other related documentation.

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;
 - list of reference documents and audit criteria;
- an opening meeting was held on 6 December 2022 at site to confirm the audit objectives and scope for the site inspection. Attendees included:
 - Heather McKay (ERM Lead Auditor);
 - Tom Abbott (ERM Support Auditor);
 - Brent Baker (Site Manager – HSE)
 - Shane Rily (Site Environment Superintendent)
 - Ashley Howland (Surface Operations Manager)
 - Lynden Cini (Group Superintendent – Environment);
- Site inspections were undertaken between 6 and 8 December 2022;
- A debrief / closeout meeting was held at the site on 6 December 2022 to discuss initial findings and recommendations. Attendees were:
 - Heather McKay (ERM Lead Auditor);
 - Tom Abbott (ERM Support Auditor);
 - Brent Baker (Site Manager - HSE);
 - Shane Rily (Site Environment Superintendent);
 - Ashley Howland (Surface Operations Manager);
 - Gerald Linde (Site General Manager); and
 - Lynden Cini (Group Superintendent – Environment)
- Preparation of the draft audit report (this report).

2.2 Agency and Community Consultation

ERM consulted with the agencies and stakeholders as required including Department of Planning, and Environment (DPE) (including its various departments such as Compliance, Post approvals, Resources Regulator and Biodiversity and Conservation Division), CCC, New South Wales Environment Protection Authority (NSW EPA), as well as Narrabri Shire Council. Emails were issued on 9 November 2022, with a follow up email submitted on 28 November 2022 to those that had not yet replied. Responses are outlined in *Table 2.1*.

Table 2.1 Agency and Stakeholder Consultation Summary

Agency/Stakeholder	Method	Consultation summary	Response	IEA Response																		
Department of Planning and Environment (DPE) – Compliance	Email on 9 November 2022.	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	Response received on 10 November 2022 outlining the following areas of interest: <ul style="list-style-type: none"> ■ Greenhouse Gas Emissions ■ Biodiversity offsets 	The Auditor was provided with NCO’s GHG emission data reported for FY20, FY21 and FY22 which is shown below: <table border="1" data-bbox="1312 400 2022 847"> <thead> <tr> <th data-bbox="1312 400 1447 592">Narrabri GHG Annual estimate</th> <th data-bbox="1453 400 1547 592">Stage 2 EA (2009_ Annual estimate</th> <th data-bbox="1554 400 1682 592">Safeguard</th> <th data-bbox="1688 400 1800 592">FY20</th> <th data-bbox="1807 400 1912 592">FY21</th> <th data-bbox="1919 400 2022 592">FY22</th> </tr> </thead> <tbody> <tr> <td data-bbox="1312 596 1447 756">Scope 1 Emissions</td> <td data-bbox="1453 596 1547 756">357,890</td> <td data-bbox="1554 596 1682 756">FY20: 527,669 FY21-FY23: 1,116,113</td> <td data-bbox="1688 596 1800 756">507,061</td> <td data-bbox="1807 596 1912 756">384,304</td> <td data-bbox="1919 596 2022 756">519,704</td> </tr> <tr> <td data-bbox="1312 761 1447 847">Scope 2 Emissions</td> <td data-bbox="1453 761 1547 847">52,239</td> <td data-bbox="1554 761 1682 847">N/A</td> <td data-bbox="1688 761 1800 847">76,141</td> <td data-bbox="1807 761 1912 847">71,277</td> <td data-bbox="1919 761 2022 847">69,133</td> </tr> </tbody> </table> <p data-bbox="1312 903 2022 962">NCOs Biodiversity Offsets are secured in perpetuity through Conservation Agreements. Refer to CoA Sch 5 Cl 6.</p>	Narrabri GHG Annual estimate	Stage 2 EA (2009_ Annual estimate	Safeguard	FY20	FY21	FY22	Scope 1 Emissions	357,890	FY20: 527,669 FY21-FY23: 1,116,113	507,061	384,304	519,704	Scope 2 Emissions	52,239	N/A	76,141	71,277	69,133
Narrabri GHG Annual estimate	Stage 2 EA (2009_ Annual estimate	Safeguard	FY20	FY21	FY22																	
Scope 1 Emissions	357,890	FY20: 527,669 FY21-FY23: 1,116,113	507,061	384,304	519,704																	
Scope 2 Emissions	52,239	N/A	76,141	71,277	69,133																	
Department of Planning and Environment (DPE) – Resource Regulator	Email on 9 November 2022	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	Response received on 16 November 2022 confirming that the audit should provide an assessment of compliance with the requirements of Schedule 8A Part 2 - <i>Standard conditions of mining leases</i> as set out	The Auditor reviewed evidence that NCO has submitted a Rehabilitation Management Plan and rehabilitation forward plan to the Resources Regulator in accordance with the standard condition of mining leases. The RMP and forward plan is still to be approved. An annual rehabilitation report was submitted to the regulator in December 2021.																		

Agency/Stakeholder	Method	Consultation summary	Response	IEA Response
Natural Resource Access Regulator (Water)	Email on 9 November 2022	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	<p>in the Mining Regulation 2016.</p> <p>Response received on 17 November 2022 requesting the audit address the following:</p> <ul style="list-style-type: none"> ■ The requirement to prepare and implement management plans that relate to water; ■ The requirement to prepare and implement trigger action response plans for water source impacts; ■ Water Supply availability is clearly defined for the project; ■ Water take at the site via storage, diversion and interception or extraction is clearly documented; ■ Water metering at the site is in accordance with the NSW NON-Urban Metering Framework; ■ Water Access Licences used to 	<p>NCO has prepared and implemented a Water Management Plan at the Premises which documents water sources, management and storage infrastructure, water management monitoring, impact assessment criteria and controls.</p> <p>Water usage complies with current water access licenses based on mine outflow (pumping) records as reported by NCO in Annual Reviews 2019 to 2021.</p>

Agency/Stakeholder	Method	Consultation summary	Response	IEA Response
			<p>account for water take by the project, nominates the work where the water is being taken from; and</p> <ul style="list-style-type: none"> ■ Annual reporting clearly documents <ol style="list-style-type: none"> 1) water take, use and water source impacts; 2) compares results with previous years and 3) identifies exceedances and how these are managed/mitigated. 	
New South Wales Environment Protection Authority (NSW EPA)	Email on 9 November 2022 and 28 November 2022.	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	<p>Response received on 30 November 2022 outlining the following areas of interest:</p> <ul style="list-style-type: none"> ■ Waste management ■ Water management ■ Chemical storage 	<p>The Auditor observed segregation of waste types at the site. Waste receptacles are labelled with the relevant waste types. NCO has prepared and implemented a Water Management Plan at the Premises which documents water sources, management and storage infrastructure, water management monitoring, impact assessment criteria and controls.</p> <p>The Auditor observed all chemicals to be appropriately stored with secondary containment and weather protection where possible. The site engages Namoi Waste to remove rainwater from storage bunds on a daily basis.</p>
Narrabri Shire Council	Email on 9 November 2022	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	<p>Response received on 16 November 2022 outlining the following areas of interest:</p> <ul style="list-style-type: none"> ■ Waste Management, 	<p>The Auditor reviewed evidence that NCO has submitted a response to a Notice to Provide Information and/or Records (Notice 1598692) in relation to the disposal and storage of end-of-life tyres. The response was a letter to the EPA dated 16 September 2020 which addressed each item of required information. The letter indicated that no end-of-life tyres are stored or disposed of at the premises.</p>

Agency/Stakeholder	Method	Consultation summary	Response	IEA Response
			particularly for waste tyres <ul style="list-style-type: none"> ■ Biosecurity (weeds) management 	<p>End-of-life tyres are managed by the supplier as part of the service contract. The Auditor did not observe used tyres stored or disposed at the site</p> <p>NCO employs one FTE for weed management. A third party is also utilised to conduct weed spraying on an as needs basis. Weed treatment is recorded in the site Environment and Rehabilitation Hub in GIS. The Auditor reviewed records related to weed treatments conducted during the audit period.</p>
Community Consultation Committee (CCC)	Email on 9 November 2022	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	Response received on 15 November 2022 confirming no outstanding actions.	N/A

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. The consultation outlining the terms of reference was provided prior to the site inspection to obtain feedback and draw attention to any key issues, within the agreed scope of the audit. The Departmental correspondence is provided in *Appendix B*.

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.
- **Non-compliant (NC):** Failure to meet the audit requirements, failure to achieve the field performance outcomes identified in documentation, or ineffective environmental management of the activity.
- **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 ISO31000:2018. 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.

3. AUDIT FINDINGS

3.1 Previous Audit Follow Up

The last audit was conducted by ERM for the period 1 December 2016 to 4 December 2019. A summary of the 2019 audit findings and their status is summarised below in *Table 3.1*.

Table 3.1 Summary of 2019 Audit Findings

Item No	Assessment Requirement	Comment	2019 Audit Classification	NCO Response/Action	2022 Status
<i>Minister's Conditions of Approval PA 08_0144 (Mod 6)</i>					
Sch.3, C4	<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>(b) 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 associated surface development;</p> <p>(d) include detailed performance indicators for each of the performance measures in Tables 1 and 2;</p> <p>(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 - analyse the relationship between the subsidence effects and impacts under the plan and any ensuing environmental consequences; • a Built Features Management Plan to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which: <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; • 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 	<p>During the auditor inspection significant surface cracking due to mine subsidence was observed that appears to lie outside of the subsidence predictions provided for LW107 to LW110.</p> <p>The Land Management Plan requires permanent cracks greater than 50 mm to be remediated by ripping or filling and cracks greater than 330 mm to be investigated and the subsidence predictions updated. There are many cracks that exceed 50mm (around 50% of all cracks records provided to the auditor) and most of these have no documented treatment. There are eight cracks out of the 73 provided to the auditor that exceed 330 mm in width. None of these cracks are shown to have been investigated or treated.</p>	NC	Review the subsidence monitoring requirements of the Extraction Plan LW107 – LW110, and develop a monitoring guideline for implementation.	Deemed as Compliant .

Item No	Assessment Requirement	Comment	2019 Audit Classification	NCO Response/Action	2022 Status														
	<p>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:</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 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; • Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general; • Heritage Management Plan, which has been prepared in consultation with 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>(i) include a program to collect sufficient baseline data for future Extraction Plans.</p> <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 (e.g. 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>																		
Sch.4, C1	<p>The Proponent shall ensure that the noise generated by the project does not exceed the levels set out in Table 1.</p> <p>Table 1: Impact assessment criteria dB(A)</p> <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th>Day</th> <th>Evening</th> <th colspan="2">Night</th> </tr> <tr> <th>L_{req}(15 minute)</th> <th>L_{req}(15 minute)</th> <th>L_{req}(15 minute)</th> <th>L_{req}(1 minute)</th> </tr> </thead> <tbody> <tr> <td>All privately owned residences</td> <td>35</td> <td>35</td> <td>35</td> <td>45</td> </tr> </tbody> </table>	Location	Day	Evening	Night		L _{req} (15 minute)	L _{req} (15 minute)	L _{req} (15 minute)	L _{req} (1 minute)	All privately owned residences	35	35	35	45	<p>Noise exceedances were recorded during the 2017 and 2019 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>The mine will continue to implement the NMP. Improvement opportunities will be reported in the relevant AR.</p>	<p>Noise exceedances reported during the previous reporting period have been resolved. However, deemed as Non-compliant during this audit as noise exceedances were recorded during the audit period.</p>
Location	Day		Evening	Night															
	L _{req} (15 minute)	L _{req} (15 minute)	L _{req} (15 minute)	L _{req} (1 minute)															
All privately owned residences	35	35	35	45															
Sch.4, C4	<p>The Proponent shall revise the Noise Management Plan for the Stage 1 project to encompass all proposed mine activities and</p>	<p>The updated NMP for Stage 2 , prepared by Spectrum Acoustics, was approved by the Secretary on 11 December 2011. A revised</p>	NC																

Item No	Assessment Requirement	Comment	2019 Audit Classification	NCO Response/Action	2022 Status
	<p>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> <ol style="list-style-type: none"> be prepared in consultation with EPA by a suitably qualified expert whose appointment has been approved by the Secretary; be submitted to the Secretary for approval by 30 June 2011; include a Noise Monitoring Program incorporating: <ul style="list-style-type: none"> real-time noise and temperature inversion monitoring; and attended noise monitoring <p>to monitor the performance of the project;</p> <ol style="list-style-type: none"> include reactive noise control measures to manage noise impacts for sensitive receivers; and <p>include a protocol to establish whether the project is complying with the noise impact assessment criteria in Table 1.</p>	<p>plan was subsequently approved on 5 June 2018.</p> <p>The NMP meets the requirements of the condition.</p> <p>The mine reported Sound Power Levels (SPLs) which exceeded those identified in the NMP in the 2018 Annual Review. DPIE requested additional information in October 2018 which the mine provided. DPIE issued a Warning Letter in December 2018.</p> <p>Real time noise, weather and inversion monitoring is undertaken at two locations to the north and south of the site. Data is recorded in the Sentinex repository.</p> <p>There is no TARP for fan noise, however an alarm is set on the monitors to record when the fan noise frequency is reached.</p> <p>No complaints have been received related to dozer noise. The NMP contains a TARP for dozer noise. The Level 2 trigger response includes limiting operations to critical dozing only and limit the reversing speed.</p>			
SoC 6.4	Record extraction volumes including weekly totals from all pumping bores, and weekly totals from the underground mine and box cut sump.	Extraction volumes are recorded on a monthly basis. NCO reported that it is impractical to do weekly readings.	ANC	Manual weekly readings have commenced and automated data capture options will be investigated.	Deemed as Compliant
SoC 17.2	<p>Prepare or update the following management and monitoring plans;</p> <ul style="list-style-type: none"> Mining Operations Plan Aboriginal Cultural Heritage Management Plan Energy Savings Action Plan Waste Management Plan Water Management Plan Landscape Management Plan Greenhouse Gas Minimisation Plan Gas Drainage & Outburst Management Plan Major Hazard Management Plan Salinity Contamination Contingency Plan Extraction Management Plan Erosion & Sediment Control Plan Noise Monitoring Program 	<p>The majority of the management plans have been developed and implemented and have been verified through the CoA.</p> <p>A standalone Major Hazard Management Plan has not been developed but in accordance with NSW Resources Regulator Code of Practice for Safety Management Systems (SMS) in Mines major and principal hazards are addressed in the site SMS.</p> <p>Water quality incidents are addressed in the Water Management Plan and the Pollution Incident Response Management plan (PIRMP), including response and notification, however these do not specifically make reference to saline contamination or specific response requirements as outlined in SoC 7.26.</p> <p>Outburst principal hazard management plan 25/11/19 – gas drainage design is covered in the plan</p>	ANC	Review the Water Management Plan to confirm that actions for water quality incidents adequately address saline contamination.	Deemed as Compliant

EPL 12789

Item No	Assessment Requirement	Comment	2019 Audit Classification	NCO Response/Action	2022 Status
L3.1	Noise generated at the premises must not exceed the noise limits in the table.	<p>The following exceedances of EPL noise limits were recorded during the audit period:</p> <ul style="list-style-type: none"> 27 June 2017: Point N5, Night – LAeq (15 minute) of 37 dB and Night – LA1 (1 minute) of 46 dB. 29 June 2017: Point N6, Night – LAeq (15 minute) of 38 dB. 07 September 2017: Point N6, Night – LAeq (15 minute) of 36 dB. June 2019: Point N6, Day - LAeq (15 minute) of 42 dB and Point N9, Day - LAeq (15 minute) of 43 (Note: both recorded during non-compliant weather conditions of wind speed > 3 m/s and as such do not represent a non-compliance with the EPL. 04 September 2019: Point N9, Day - LAeq (15 minute) of 39 dB. <p>For the exceedance recorded in September 2019, subsequent investigations by SLR Consulting Australia Pty Ltd (SLR) dated 1 August 2019, exceedances in noise monitoring results were likely attributable to the Main Exhaust Ventilation Fan. Subsequently a Vent Fan Noise Reduction Study conducted by Spectrum Acoustics dated 19 November 2019 assessed noise control options based on technical information for the fans and noise measurements taken in 2014 and 2019. Based on outcomes of the Study, ERM understands that NCO is investigating a number of noise attenuation measures including the installation of a 14 m high acoustic barrier at around the Main Exhaust Ventilation Fan which is expected to reduce noise levels at the receiver point 5 km north of the fans to less than the exceedance criteria limits under Condition 43.1. NCO is progressing the validation of noise modelling assumptions to inform the engineering designs, cost and project management aspects required for construction of the noise abatement installation.</p>	NC	NCO has undertaken further investigations into additional attenuation measures and will continue to implement all reasonable and feasible best practice noise mitigation measures as they are identified. The auditor understands that NCO have conducted design modifications to the fan baffles of the main ventilation fan, which have enabled ongoing routine maintenance.	Noise exceedances reported during the previous reporting period have been resolved. However, deemed as Non-compliant during this audit as noise exceedances were recorded during the audit period.
O1.1	<p>Licensed activities must be carried out in a competent manner</p> <p>This includes:</p> <p>a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and</p> <p>the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.</p>	EPA issued a Penalty Notice to NCO following review of video footage on 5 January 2019 which showed 'large clouds of black coal dust coming off the pit top working area of the Narrabri Coal Miner. That video showed large volumes of coal dust being generated by the Tripper and by bulldozers operating on the coal stockpiles at the premises'. EPA subsequently were of the	NC	<p>Following the issue of the Penalty Notice relating to the dust cloud coming off the pit top working area, it is understood that NCO were required to make a penalty payment to EPA which was made during the previous audit period. No further actions were required relating to this notice.</p> <p>Following the NCO response relating to the Show Cause letter for the disposal of the Oxy 6000 rescuer units at Narrabri Landfill, the Auditor understands that the EPA issued NCO with a Clean Up Notice (Notice</p>	Deemed as Compliant

Item No	Assessment Requirement	Comment	2019 Audit Classification	NCO Response/Action	2022 Status
		<p>opinion that NCO contravened EPL Condition O1.1.</p> <p>EPA issued a Show Cause letter to NCO dated 17 October 2019 which refers to an incident at Narrabri Landfill (located offsite) where the disposal of Oxy 6000 rescuer units that are part of breathing apparatus were disposed of as general solid waste by NOCPL between 2 April and 18 April 2019. Based on review of material safety data sheets (MSDS), EPA suspected that the canisters disposed of were hazardous waste and as such should have been disposed as such. NCO responded to the Show Cause on 25 October 2019 providing information on the clean-up activities undertaken to-date. Further meetings between NCO, EPA and Narrabri Shire Council have been held to try to agree a course of action. No further direction from EPA had been received at the time of the audit.</p>		1593529) on 9 April 2020. Notice 1593529 directed NCO to prepare and submit a detailed Remediation Action Plan. Following the submission of the Remediation Action Plan, EPA issued NCO a Variation of Notice of Clean-Up Action (Variation Notice 1597023) confirming that NCO had completed the required Clean-Up actions. Variation Notice 1597023 directed NCO to conduct bimonthly leachate monitoring between May 2020 and May 2022 and provide the monitoring results to Narrabri Shire Council as they became available. At the completion of the monitoring program NCO provided a report to the EPA demonstrating that the monitoring requirements had been met and provided evidence of completion of all required actions under the Variation Notice. The Auditor also understands that NCO entered into an Enforceable Undertaking with the EPA on 3 April 2020 in relation to the matter. In September 2020 the EPA confirmed that the undertakings required by the Enforceable Undertaking has been satisfied, and advised that NCO had fulfilled its obligations under the Enforceable Undertaking.	
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or 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').	The reporting period under the EPL is 20 February to 19 February each year, given this, the Annual Return for the 2018-19 reporting period was required to be submitted to EPA on 21 April 2019. NOCPL submitted the Annual Return on the 7 May 2019. NOCPL received an Official Caution letter from the EPA dated 24 October 2019.	ANC	No further action required.	Deemed to be Compliant
E2	<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;</p> <p>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>	NCO advised that wind speed is checked when complaints are received to determine whether actions are required to quantify and ameliorate any enhanced actions where wind speed exceeds 3 metres per second at 10 metres above the ground. However, the complaints register reviewed did not make reference to wind speed data at the time of complaints. In addition, there is no process or procedure that requires the wind speed to be documented when a complaint is made nor for additional actions to be raised in accordance with this conditions.	NC	<p>Since the previous IEA, it was noted that a procedure has been developed which requires the wind speed to be documented when a community complaint is made or recorded, as observed in the Procedure for the Recording of Community Complaints, dated 20 April 2020.</p> <p>Upon review of the community complaints summary, it was also noted that wind speed has been recorded in relation to noise impacts</p>	Deemed to be Compliant
<i>Mining Lease 1609</i>					
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.	The Annual Review 2018 refers to a non-compliance with this condition due to NCO being required under the MOP to complete additional testing of the Reject Emplacement Area (REA) by 28 November 2018. The Annual Review notes that additional testing had commenced but had not been completed within the specified timeframe. A Direction	ANC	No further action required.	Deemed as Compliant

Item No	Assessment Requirement	Comment	2019 Audit Classification	NCO Response/Action	2022 Status
		Notice issued by the Resources Regulator required the additional sampling to be completed by 31 July 2019. The report was prepared by ATC Williams and submitted to the Resources Regulator on 31 July 2019.			

3.2 Complaints Summary

Complaints registers for the auditing period were available online and/or for review. Complaints over the reporting period include:

- A total of 60 complaints were recorded during 2019. Of these, 51 were related to noise, three in relation to odour, three in relation to dust, one in relation to odour and noise, one in relation to air quality and one listed as not specified. The majority of complaints are from a single complainant.
- A total of five complaints were recorded in 2020. Of these, all five were related to noise.
- A total of one complaint was recorded in 2021. The complaint was related to odour and the source was determined to be the brine ponds.
- As at 8 December 2022, no complaints have been recorded in 2022.

The detailed summaries as prepared by WCL are provided on the Whitehaven Coal website.

3.3 Incident Summary

Below outlines the incidents recorded during the audit period:

- A total of two noise exceedances were recorded during quarterly monitoring during the audit period. Noting that the exceedance recorded in September 2020 was recorded during non-compliant weather conditions and as such did not represent a non-compliance with the Project Approval;
- EPA issued a Penalty Infringement Notice on 20 February 2020 related to a noise monitoring results where a noise level of 39dB was recorded at monitoring location N9 in September 2019;
- Warning letter issued by DPE in September 2020 for carrying out development not in accordance with the conditions of development consent by breaching Schedule 2 Condition 23 of Project Approval 08_0144, by not implementing Section 3.3 of the Aboriginal Cultural Heritage Management Plan (failure to fence and register a cultural heritage site).
- Notification to DPE relating to exceedance of the groundwater drawdown trigger at P16 on 5 July 2022.

Further information on these events are provided in *Appendix A* of this report.

3.4 Environmental Monitoring Performance

3.4.1 Noise

Quarterly acoustic monitoring was undertaken between 2019 and 2022 by qualified third party contractors, SLR. The following noise exceedances were recorded during the audit period:

- 23 June 2020: Point N6, Night – LAeq (15 minute) of 40 dB
- 8 September 2020: Point N3, Day – LAeq (15 minute) of 39 dB.

(Note: recorded during non-compliant weather conditions of wind speed >3m/s and as such does not represent a non-compliance with the Project Approval).

As part of the Noise Management Plan, following any noise exceedance or noise complaint, the site deploys a portable noise monitor to further assess the impact.

As a result of the exceedance in June 2020, the main vent fan was noted at the dominant noise source from the mine with potential contributions from surface activities above long walled panels. Subsequent modifications to the main vent fan maintenance has reduced noise levels.

Following the September exceedance, night-time drilling activities were suspended. Subsequent monitoring events have recorded noise level with compliance limits.

3.4.2 Air quality

Monthly dust deposition was conducted by ALS during the audit period. The following exceedance of assessment criteria were reported for the audit period:

- Deposited dust exceeding the criteria was measured in December 2021 at ND8 at 18.1g/m²/month.
- 2 June 2021 ND10 measured at 82 ug/m³ – resulting from road works;
- 3 March 2020 ND 10 measured at 62 ug/m³ – likely due to agriculture;
- 9 Jan 2020 ND9 and ND10 measured at 67.3 and 59.7 ug/m³ respectively – due to extraordinary event (bushfires); and
- 22 December 2019 at ND9 and ND10 measured PM10 levels of 85.7 ug/m³ and 87.1 ug/m³, respectively – due to extraordinary event.

All exceedances were investigated and found to be associated with regional events including dust generated from agricultural activities on surrounding properties and Kamilaroi Highway roadworks.

Auditors sighted the weather station onsite which provides the site's meteorological data. Meteorological data from the onsite weather station was provided for the audit period.

3.4.3 Blasting

No blasting was undertaken during the audit period.

3.4.4 Water management

3.4.4.1 Surface water

Surface water management comprising a series of water storage dams used to collect, store and dispose of pumped out mine water and dirty water run-off, sediment basins, and clean / dirty surface water drains were in place and established as per the Water Management Plan (dated 2013). The dams are subject to weekly, monthly and quarterly inspections by a trained NCO employee. Annual and 5 – yearly inspections are undertaken by a Dam Engineer in accordance with the Dams Safety Act.

Licensed surface water discharge points onsite included sediment dam 2 (SD2), sediment dam 4 (SD4), sediment dam 7 (SD7) and sediment dam 8 (SD8).

No significant issues were observed or identified with regards to erosion or sediment run off during the site tour, and none were reported.

3.4.4.2 Groundwater

Groundwater monitoring locations are stipulated within Table 7-1 of the approved WMP (dated March 2013). Under the WMP, depending on their location, piezometers and groundwater bores are required to be monitored on a monthly, quarterly, or annual basis. Groundwater monitoring data provided showed that monitoring is completed within the WMP timeframes.

NCO notified DPE of a breach of the maximum predicted drawdown level at P16 in 2022. As per the TARP process, a hydrologist was engaged to review groundwater monitoring data and investigate the exceedance. It is considered that the groundwater model has under-predicted the impacts at P16. NCO engaged AGE to review the groundwater model and will incorporate revised triggers to the Groundwater Management Plan (to be finalised). Groundwater monitoring field sheets have also been updated to include groundwater levels triggers.

During 2021 increased salinity was noted in a number of deep standpipes following installation of sampling pumps in these bores. The increase in salinity is reported to be due to the change in sampling method and more appropriate purging of the wells.

In response to observed increase in groundwater levels and salinity within monitoring bore P30 at the rail loop dams during 2020, the EPA varied the EPL to include an additional groundwater monitoring

bore and increased frequency of monitoring. Groundwater monitoring is ongoing and supplied to EPA on a quarterly basis. The source of increased water levels and salinity has not been determined but is not considered to originate from the dams.

3.5 Management Plan Adequacy

The Management Plans for the site were reviewed and the adequacy in meeting the relevant approval requirements was assessed in view of current operations at the site. It was noted that a number of management plans have been updated since the original approvals issued under the Project Approval and where Secretary approval has been received the revised management plan has been implemented at the site.

In general, Management Plans were considered to be appropriate for the site's operations at the time of the site visit. The findings of the Management Plan review are outlined in *Table 3.2* and *Appendix A*.

3.6 Environmental Protection Licence

The site operates under Environment Protection Licence (EPL) 12789 issued to Narrabri Coal Operations Pty Ltd. The EPL has been varied four times during the audit period as follows:

- 20 March 2020;
- 14 December 2020;
- 21 August 2021; and
- 7 September 2022

Details of changes to EPL conditions are covered in the EPL Audit Tables present in *Appendix A*.

The site submitted Annual Returns to the EPA, as required for the audit period. The following non-compliances were noted:

2020:

- EPL L4.1 - Exceedance of quarterly noise monitoring at the 'Newhaven' (Point N6) residence to the north of the mine site on 23 June 2020. The main vent fan was nominated as the likely source of the noise exceedance. NCO noted that appropriate notification to regulatory agencies was conducted (EPA and DPIE). Subsequent quarterly monitoring events have recorded noise levels within licence limits due to design modifications to the fan baffle housings which have enabled ongoing routine maintenance of the baffles.

EPL U1.1 –Following the submission of NCO's report titled "Narrabri Coal Pollution Reduction Study – U3 Review of Pit Top Dust Suppression System", EPA reviewed the report and advised that the report did not fully address the requirements of the Pollution Reduction Study. It is noted that this condition has now been removed from the current EPL as the requirements have been addressed.

Findings identified against the site's EPL are outlined in *Table 3.2* and *Appendix A*.

3.7 Mining Lease

Narrabri Coal Mine lies within the mining lease (ML) 1609 issued to Narrabri Coal Pty Ltd, last amended on 1 July 2014.

No non-conformances were noted in relation to ML1609 during the audit period. The Mining Lease conditions and the summary of audit findings are provided in *Table 3.2* and *Appendix A*.

3.8 Compliance with Regulatory Instruments

A compliance check of the CoA, EPL and ML conditions as well as management plan review has been completed and is provided in Appendix A. Non-compliances and observations for each component are summarised in *Table 3.2*.

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-compliance have been colour coded blue.

Table 3.2 Summary of 2022 Audit Findings

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action														
Minister's Conditions of Approval PA 08_0144																		
4.1	<p>The Proponent shall ensure that the noise generated by the project does not exceed the levels set out in Table 1.</p> <p>Table 1: Impact assessment criteria dB(A)</p> <table border="1"> <thead> <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_{Aeq}(1 minute)</th> </tr> </thead> <tbody> <tr> <td>All privately owned residences</td> <td>35</td> <td>35</td> <td>35</td> <td>45</td> </tr> </tbody> </table> <p>Notes:</p> <ul style="list-style-type: none"> To determine compliance with the LA_{eq}(15 minute) limit, noise from the project is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the 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. These noise limits apply to applicable receivers under all meteorological conditions except for any one of the following: <ul style="list-style-type: none"> wind speeds greater than 3 metres/second at 10 metres above ground level; or stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or 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). <p>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.</p>	Location	Day	Evening	Night		L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (1 minute)	All privately owned residences	35	35	35	45	<p>The following exceedances of EPL noise limits were recorded during the audit period:</p> <ul style="list-style-type: none"> 23 June 2020: Point N6 Newhaven, Night - LA_{eq} (15 minute) of 40dB 8 September 2020: Point N3, Day – LA_{eq} (15 minute) of 39 dB and LA₁ of 44dBA <p>(Note: September 2020 recorded during non-compliant weather conditions of stability category G and as such does not represent a non-compliance with the Project Approval).</p> <p>Follow-up monitoring was undertaken on 03 November 2020 in accordance with the requirements of the Noise Management Plan, with monitoring results reporting noise levels below criteria (listed as Inaudible).</p> <p>The auditor sighted evidence of correspondence with the landholder regarding the exceedance on 23/06/20 and follow up correspondence with additional monitoring results on 04/09/20.</p>	NC	Reported NC. No further action required.
Location	Day		Evening	Night														
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (1 minute)														
All privately owned residences	35	35	35	45														
4.18	<p>The Groundwater Monitoring Program must include:</p> <p>(a) further development of the regional and local groundwater model;</p> <p>(b) detailed baseline data to benchmark the natural variation in groundwater levels, yield and quality (including at any privately owned bores in the vicinity of the site);</p> <p>(c) groundwater impact assessment criteria;</p> <p>(d) a program to monitor the impact of the project on groundwater levels, yield and quality;</p> <p>(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>	<p>A Groundwater Monitoring program that meets the requirements is included in the WMP.</p> <p>An annual review of groundwater monitoring is undertaken by Groundwater Exploration Services.</p> <p>NCO notified DPE of a breach of the maximum predicted drawdown level at P16 in 2021. As per the TARP process, a hydrologist was engaged to review groundwater monitoring data and investigate the exceedance. It is considered that the groundwater model has under-predicted the impacts at P16. NCO engaged AGE to review the groundwater model and will incorporate revised triggers to the Groundwater Management Plan (to be finalised). Groundwater monitoring field sheets have also been updated to include groundwater level triggers.</p>	Obs C	Revise the Groundwater Management Plan in accordance with updated predictions following recalibration of the Groundwater Model.														

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
4.25D	The Proponent must implement the approved Shuttle Bus Traffic Control Protocol.	The Shuttle Bus Traffic Control Protocol requires the bus driver to coordinate phone contact with the CHPP control room to receive advice on coal train movements. No records of such contact are maintained to verify this occurs. The protocol also requires that where coal train movements may impact on the bus access to the site, the driver must not queue on the Kamilaroi Highway and Kurrajong Creek Road intersection. Drivers must continue along the highway and park at a safe place to wait the coal train to clear. This requirement has not been tested.	Obs C	It is recommended that NCO develop and maintain records of a verification process to ensure the protocol is being adhered to.
4.30	The Proponent shall revise the Energy Savings Action Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with energy management for the site (Stages 1 and 2) and subsequently implement this revised version of the Energy Savings Action Plan to the satisfaction of the Secretary. This plan must: <ul style="list-style-type: none"> a) be prepared in consultation with OEH; b) be prepared in accordance with the <i>Guidelines for Energy Savings Action Plans</i> (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. 	The effective Energy Savings Action Plan was approved by DPIE in May 2015. The ESAP details 12 management actions developed in the first iteration of the EAP in 2011. These include a range of management and reporting actions for identification of energy savings opportunities and monitoring of effectiveness including, adding ESAP implementation to site management meetings, reporting on monthly energy usage at monthly site meetings, develop and report energy targets, develop a site Energy Management Committee to review and report on energy management initiatives and develop energy efficiency training. Electricity use for FY20 and FY21 was tracked for individual meters and entered into Pulse. For FY22, electricity use has been tracked in a custom-built NGERS tracking platform. Monthly energy reports as referenced in the ESAP were reviewed during the previous IEA however, no evidence of this report being prepared during the current audit period was provided. Whilst there is efforts by site management to monitor and reduce energy consumption it does not appear to be organised as outlines in the ESAP i.e. Energy Management Committee, monthly reporting and setting of targets. The current ESAP is based on energy audits conducted in 2013 and assumptions made prior to production commenced.	NC	It is recommended the ESAP is reviewed and updated to consider actual production data since 2013 and work currently underway to review GHG emissions (see 4.31 below).
6.4	a) The Proponent shall notify the Secretary in writing via the Major Projects website 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.	In response to the notification of breach of the drawdown trigger at P16, DPE recorded a breach of this condition due to NCO becoming aware of the drawdown breach on the 5 July 2022 and notification being provided to DPE on 9 September 2022. No further action has been taken by DPE on this matter to-date. All other indecent notifications have been made within the required timeframe.	NC	Reported NC. No further action required.
Statement of Commitments				
9.18	Ensure that if any further Aboriginal artefacts are uncovered at any time during the life of the mine, work in the vicinity of the subject area ceases and the Proponent follows the procedures recorded in the ACHMP.	Refer CoA Sch 4 Cl 22	NC	Ensure the ACHMP continues to be implemented and employees made aware of requirements of the plan.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action										
Environmental Protection Licence 12789														
L4.1	<p>Noise generated at the premises must not exceed the noise limits in the table below.</p> <table border="1"> <thead> <tr> <th>Locality and location</th> <th>Day - LAeq (15 minute)</th> <th>Evening – LAeq (15 minute)</th> <th>Night – LAeq (15 minute)</th> <th>Night – LA1 (1 minute)</th> </tr> </thead> <tbody> <tr> <td>All privately owned residences</td> <td>35</td> <td>35</td> <td>35</td> <td>45</td> </tr> </tbody> </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>The following exceedances of EPL noise limits were recorded during the audit period:</p> <ul style="list-style-type: none"> 23 June 2020: Point N6, Night - LAeq (15 minute) of 40dB 8 September 2020: Point N3, Day – LAeq (15 minute) of 39 dB (Note: September 2020 recorded during non-compliant weather conditions of wind speed >3m/s and as such does not represent a non-compliance with the Project Approval). <p>For the exceedance recorded in June 2020, mining continuum was noted as the event cause and no community complaints were received at the time of the exceedance. Government agencies were notified as required and subsequent monitoring events have recorded noise levels within the approved noise limits.</p>	NC	<p>Duplicate NC Ref. CoA Sch 4 Cl 1 Reported NC. No further action required.</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										

4. CONCLUSION

An audit of CoA, Mining Lease and Environmental Protection Licence conditions has been completed as well as a check against commitments made in the management plans developed as part of CoA conditions for the site.

Overall, compliance was generally achieved with the audit documents that were reviewed. The number of non-compliances with the statutory conditions and implementation of the management plans is summarised in *Table 4.1* below. It is noted that all non-compliances with statutory instruments have been reported to the appropriate regulator during the audit period.

Table 4.1 Summary of Audit Findings

Review	Non-compliances (NC)	Observations (Obs C)
Statutory Instruments	4 (1 duplicate)	1
Implementation of Plans	1	1

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

**APPENDIX A CONDITIONS OF APPROVAL, ENVIRONMENTAL
PROTECTION LICENCE AND MINING LEASE COMPLIANCE
TABLES**

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

Document details	
Document title	Table A1 Conditions of Approval
Document subtitle	Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7
Project No.	0523817
Date	23 January 2023
Version	Final
Author	Heather McKay, Tom Abbott, Gareth Swarbrick
Client Name	Whitehaven Coal Limited

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
SCHEDULE 2 – ADMINISTRATIVE CONDITIONS					
OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT					
2.1	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.	This audit	Review of management plans, implementation of plans and site inspection to confirm – refer tables of this audit.	Note	
Terms of Approval					
2.2	The Proponent shall carry out the project generally in accordance with the: (a) EA; and (b) conditions of this approval. Note: The general layout of the project is shown in Figures 1 and 2 of Appendix 2.	This audit	<i>Refer to the following report.</i>		
2.3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	Note	Noted	Note	
2.4	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.	Note	NCO has complied with requirements of the Secretary as necessary during the audit period. Further details are provided in the below report.	C	
Limits On Approval					
2.5	The Proponent may undertake mining operations on the site for 21 years from the date of this approval. <i>Note: Under this Approval, the Proponent is required to rehabilitate the site and to perform additional undertakings 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>	Note	Noted	Note	
2.6	The Proponent shall not extract more than 11 million tonnes of ROM coal from the site per calendar year.	Annual Reviews 2019, 2020, 2021 Interview – Environment Superintendent, HSE Manager	2019 – 5.59 Mt 2020 – 6.71 Mt 2021 – 3.31 Mt 2022 (YTD) - 3.14 Mt	C	
2.7	The Proponent shall transport all coal from the site by rail.	CoalTrak records 2019 – 2022 Site observations	All coal is transported by rail.	C	
2.7A	The Proponent may undertake a one off transport of coal by road of an approximate 600 tonne bulk sample of coal in accordance with the procedures, vehicle traffic route and transport operating hours as specified in the modification application 08_0144 MOD 2 and accompanying letter dated 12 December 2011 from Whitehaven Coal Mining Limited.		Outside audit period	NT	
2.8	The Proponent shall not transport any coal reject from the site.	Interview – Environment Superintendent, HSE Manager Site observations	All coal rejects are placed on the REA.	C	
Planning Agreements					
2.9	Within 6 months of this approval, the Proponent shall enter into planning agreements with Narrabri Shire Council (NSC), Gunnedah Shire Council (GSC) and the Minister in accordance with:	Outside audit period	Outside audit period	NT	

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	(a) Division 6 of Part 4 of the EP&A Act; and (b) the terms of the Proponent's offers accepted at NSC's meeting of 16 February 2010, and GSC's meeting of 16 February 2010, which includes the matters set out in Appendix 4. If there is any dispute between the Proponent and either NSC or GSC during the formal drafting of the planning agreements, then any of the parties involved may refer the matter to the Secretary for resolution.				
Surrender of Stage 1 Approval					
2.10	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.	Outside audit period	Outside audit period	NT	
Management Plans/Monitoring Programs					
2.11	With the approval of the Secretary, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis. <i>Note: The conditions of this approval require certain strategies, plans, and programs to be prepared for the project. They also require these documents to be reviewed and audited on a regular basis to ensure they remain effective. However, in some instances, it will not be necessary or practicable to prepare these documents for the whole project at any one time, particularly as these documents are intended to be dynamic and improved over time. Consequently, the documents may be prepared and implemented on a progressive basis, subject to the conditions of this approval. In doing this however, the Proponent will need to demonstrate that it has suitable documents in place to manage the existing operations of the project.</i>	Note	Management plans and monitoring programs have been developed and implemented.	C	
2.12	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.	Interview with Environment Superintendent and HSE Manager Review of updated Management Plans and correspondence with DPIE	Management Plans have been reviewed and updated on a regular basis. A number of management plans were updated and submitted to DPE in anticipation of commencement of Stage 3 of the Project however, since Stage 3 is now on hold, various Stage 2 management plans are in the processes of being reviewed and updated. Stage 2 approved plans continue to be in force until updated plans are approved by DPE.	C	
Structural Adequacy					
2.13	The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. <i>Notes:</i> <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. 	Construction reports	Construction during the audit period has involved a new bathhouse, new CHPP office block and new ATCO (modular building) office block. The bathhouse was constructed in accordance with AS3000 and CHPP office block as per AS4600:2018. The ATCO office block was constructed on an existing building footprint. Under EP&A the above constructions are exempt from requiring a DA.	C	
Demolition					
2.14	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.	Interview with Environment Superintendent and HSE Manager	No demolition has occurred during the audit period.	C	
Operation Of Plant And Equipment					
2.15	The Proponent shall ensure that all plant and equipment used on site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	Interview with Environment Superintendent and HSE Manager	Training and competencies of all employees and contractors are recorded in the 'Onsite' platform. This also included verification of competency (VOC) records	C	

No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations
		Pulse maintenance records - various	<p>for operation of plant and equipment. The level of competency, i.e. trained, assessed, authorised or appointed, is recorded for each individual.</p> <p>Equipment VOC is subject to a 3 year refresher which is notified when logging on to the site. A Trainer Assessor is on crew to complete refreshers.</p> <p>For new skills, the trainee is trained and assessed with practicals over a 2 month period after which a log book is maintained for 12 months. When passed by the assessor, the trainee is signed off by the Training Department and the appointment is approved by the Manager.</p> <p>All training records saved on the server.</p> <p>The Training and Competency Management Plan has been approved by Coal Services.</p> <p>Maintenance scheduling and records are maintained in the Pulse maintenance system. The auditor sighted evidence of maintenance records for a selection of plant and equipment including the rail loop track inspections, dam inspections and dozers inspection and servicing.</p>		

SCHEDULE 3 – ENVIRONMENTAL CONDITIONS – MINING AREA

SUBSIDENCE IMACT PERFORMANCE MEASURES

3.1	<p><i>Note: These conditions should be read in conjunction with section 5 of the revised Statement of Commitments.</i></p> <p>The Proponent shall ensure that mine subsidence does not cause any exceedances of the performance measures in Table 1.</p> <p><i>Table 1: Subsidence Impact Performance Measures</i></p> <table border="1"> <thead> <tr> <th colspan="2">Water Resources</th> </tr> </thead> <tbody> <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 DPIE Water.</td> </tr> <tr> <th colspan="2">Biodiversity</th> </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> </tbody> </table> <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>	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 DPIE 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.	<p>Sighted evidence includes</p> <ul style="list-style-type: none"> Annual Reviews Water Access Licenses Aquifer Interference License Groundwater modelling Environmental monitoring reports Groundwater testing and monitoring Disturbance permits Pre-clearance surveys MOP requirements Ecological Report reports pre-clearance reports piezometers levels extensometer movements ecological reports that note changes to vegetation or geomorphology comparisons of mine water balance against model predictions (Annual reviews) ponding observations, survey measurements and multi-spectral imaging provided in Land Management plans and EcoLogical reports 	<p>Water usage complies with current water access licenses based on mine outflow (pumping) records as reported by NCO in Annual Reviews 2019 to 2021.</p> <p>One environmental exceedance was recorded during the audit period that relates to groundwater use or loss:</p> <ul style="list-style-type: none"> Groundwater monitoring undertaken on 5 July 2022 recorded a drawdown of 35.2 m at site P16 which exceeds the trigger level of a drawdown of 33.35 m by 1.85 m. TARP enacted including notification to relevant agencies. Validation by AGE hydrogeologist Considered to be a localised occurrence Assessed to be most likely due to nearby mining of longwalls panels AGE commissioned to update the groundwater model and reassess trigger values <p>Examination of the data provided in the incident report suggests this downward trend in P16 groundwater level is set to continue thereby resulting in additional exceedances.</p>	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 DPIE 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.												
3.2	The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 2, to the satisfaction of Resources Regulator.	<p>Approved management plans including:</p> <ul style="list-style-type: none"> Extraction Plan & Appendices A to K 	These documents are approved and are undergo continual review. Most LW107-110 documents were	C									

No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations								
	<p>Table 2: Subsidence Impact Performance Measures</p> <table border="1"> <thead> <tr> <th colspan="2">Built Features</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>Notes: 1) The Proponent will be required to define more detailed performance indicators for each of these performance measures in Built Features Management Plans or Public Safety Management Plan (see condition 4 below). 2) Requirements regarding safety or serviceability do not prevent preventative or mitigatory actions being taken prior to or during mining in order to achieve or maintain these outcomes. 3) Compensation required under this condition includes any compensation payable under the Mine Subsidence Compensation Act 1961 and/or the Mining Act 1992.</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.	<ul style="list-style-type: none"> Built Features Management Plan – Appendix E of LW107-110 & LW201-202 EP Public Management Plan – Appendix E of LW107-110 & LW201-202 EP Subsidence Monitoring Plan– Appendix C of LW107-110 & LW201-202 EP <p>Subsidence monitoring data including surface movement survey, piezometric levels and extensometer data. Evidence of updates to some current management plans (LW107 to 110), and subsidence predictions for LW203 to 204 based on subsidence data (updated 12/09/2021).</p> <p>New management plans for subsidence predictions, monitoring and risk assessment, land, water, landscape, built features, public safety and heritage all dated 30/03/2022. New extraction plan and subsidence risk assessment for LW201-202 also dated 30/03/2022.</p>	<p>last updated in 2017 with two updated during the audit period:</p> <ul style="list-style-type: none"> Subsidence Monitoring Program LW107 to LW110 – last updated 4/08/2021 & reviewed 19/01/22 Subsidence Monitoring Plan LW101 to LW106 – last updated 20 July 2021 & reviewed 19/01/22 <p>Documents that should have been updated every 3 years but have not been are:</p> <ul style="list-style-type: none"> Level 2 Qualitative Risk Assessment Report - last updated 30/09/2016 Water Management Plan LW107 to LW110 – last updated 6/04/2017 Public Safety Management Plan LW107 to LW110 – last updated 6/04/2017 Built Features Management Plan LW107 to LW110 – last updated 6/04/2017 <p>However, the Narrabri Coal Management Plan Register dated 16/11/2022 indicates these documents have been reviewed in 2019/2020 but did not require any revision.</p> <p>Subsidence monitoring data was provided to the auditor and uploaded to the Subsidence Portal.</p> <p>Subsidence monitoring data appears to have provided to the Subsidence Engineer who appears to have reviewed the data and recalibrated subsidence predictions accordingly.</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.												
3.3	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 Resources Regulator. Resources Regulator may seek the advice of the SANSW on the matter. Any decision by Resources Regulator shall be final and not subject to further dispute resolution under this approval.	Not aware of any disputes		C									

Extraction Plan

3.4	<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> <ol style="list-style-type: none"> be prepared by a team of suitably qualified and experienced persons whose appointment has been endorsed by the Secretary; be approved by the Secretary before the Proponent carries out any of the second workings covered by the plan; include detailed plans of the proposed first and second workings and any associated surface development; include detailed performance indicators for each of the performance measures in Tables 1 and 2; 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; 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; include the following to the satisfaction of Resources Regulator: <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 analyse the relationship between the subsidence effects and impacts under the plan and any ensuing environmental consequences; a Built Features Management Plan to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which: 	<p>Sighted evidence includes:</p> <p>(a) Document authors include:</p> <ul style="list-style-type: none"> Environmental consultants EcoLogical (EcL) Subsidence engineers Ditton Geotechnical Services (DgS) for LW107-110, LW200-202 and LW Environmental consultants SLR Consulting SCT and Strata Engineering (StE) mine support consultants <p>(b) Program approvals</p> <ul style="list-style-type: none"> All Stage 2 management plans understood to be approved (Mod 7) <p>(a,c,d,e,f,g,h) Management plans:</p> <ul style="list-style-type: none"> Extraction plans for LW 107-110 and LW201-202 (same appendix ids): <ul style="list-style-type: none"> (c) Coal Resource Recovery Plans (Appendix A) (c,e) Subsidence Predictions (Appendix B) updated (d) Subsidence Monitoring (Appendix C) 	<p>During the auditor inspection significant surface cracking due to mine subsidence was observed over LW107 in similar areas to the 2019 auditor inspection and over LW110 in areas not inspected in the 2019 auditor inspection.</p> <p>Inspections by the responsible subsidence engineer appear to be infrequent.</p> <p>The auditor team was shown the new subsidence impact management system called INX InViron which includes:</p> <ul style="list-style-type: none"> details of cracking and other impacts observed during routine inspections, including: <ul style="list-style-type: none"> location by hand-held GPS (built into mobile phone devices) depth by manual measurement photographs changes in recorded features over time date and of remediation when required with photographs of finished works. <p>All data is coordinated in ArcGIS which is accessible on a range of devices including 'smart' phones.</p> <p>Climate data is recorded, managed and shared through a Sentek database system. Thus, system appears to be effective.</p>	C	
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<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; • 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 DPIE 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; • Biodiversity Management Plan, which has been prepared in consultation with BCS and Resources Regulator, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on flora and fauna; • Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general; • Heritage Management Plan, which has been prepared in consultation with BCS and relevant stakeholders for Aboriginal heritage, to manage the potential environmental consequences of the proposed second workings on heritage sites or values; and <p>(i) include a program to collect sufficient baseline data for future Extraction Plans.</p> <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 (e.g. 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"> • (g) Built Features management (Appendix D) • (h) Water Management Plan (Appendix G) • (f) Land Management (Appendix I) • (h) Heritage Management Plan (Appendix J) • LW 107-110 Biodiversity and Land Monitoring Report • Subsidence Pond Management Plan (Feb 2017) <p>(d,g,h) Evidence of subsidence monitoring and performance measures sighted by the auditor includes:</p> <ul style="list-style-type: none"> • summary records are provided for each longwall • subsidence predictions have been updated for each approval stage • evidence sighted of predictions being updated for pillars CF201-205 longwalls LW203-205 dated 12/09/2021 and LW203-206 dated 25/10/2022. • Water Management Plan monitoring including <ul style="list-style-type: none"> • piezometers • water quality • vegetation • changes in topography • water course morphology • groundwater inflows (Annual Reviews) • groundwater table drawdown against predictions (Annual Groundwater Review) • Land and subsidence management plans monitoring: <ul style="list-style-type: none"> • Vegetation changes (LiDAR) • length of streambank erosion ecology (LiDAR) • ponding observations and survey measurements • multi-spectrum imaging • water quality changes • observation records of surface cracking and sinkholes including location, trace length and depth. <p>Heritage Management Plan detailing the location, nature and protection of heritage sites including areas of limited access and/or annexed from mining activities</p>	<p>A selection of identified impacts was chosen from the database and examined during the audit inspection. All of the records examined indicated that remedial works had been completed in pace with mining and within the required completion timeframe of one month.</p> <p>The system was found to be reasonably effective with some exiting features being able to be located during the site inspection in the presence of auditors.</p> <p>There were some issues with the system, however, summarised as follows:</p> <ul style="list-style-type: none"> • the new subsidence management system relies upon mobile phone reception to access the database of mapped features when attempting to relocate and update existing features • simple GPS devices can often exhibit a very low location accuracy due to limited satellite coverage or interference such as dense vegetation or nearby sources of electromagnetic radiation. • Detection of cracking relies heavily on access. However, much of the land above longwalls is heavily vegetated and covered with floor litter making visual detection of cracks problematic <p>Reliance on mobile phone coverage has only recently become possible with the installation of a new transmission tower near the mine site. However, reliance on mobile phone reception should be limited as much as possible to improve the ability to relocated mapped features. Documenting the first occurrence of features should not be as affected as recording GPS location is not dependent on mobile phone coverage.</p> <p>The recoding of surface topography LiDAR appears to be effective in capturing ponding caused by subsidence and other impacts such as changes to vegetation with demonstrated resolution of around 0.1 m.</p> <p>During the on-site inspection the auditor noted:</p> <ul style="list-style-type: none"> • Inspections were being undertaken fortnightly • Additional inspections were being undertaken after 'significant' rainfall events of 38.4 mm over 5 days though this could not be confirmed in the data provided by NCO post -inspection. <p>Note: all built features not owned by Whitehaven Coal lie outside of the 20 mm subsidence limit and are therefore not monitored</p>		
3.5	<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>Sighted evidence includes:</p> <ul style="list-style-type: none"> • (a) Extraction management plans (LW 107-110 & LW201-202) which include: 	<p>Management plans typically mention that an 'adaptive management' approach is required but do not address this specifically. However, sighted evidence of adaptive management techniques includes:</p>	C	

No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations
	(c) a contingency plan that expressly provides for adaptive management.	<ul style="list-style-type: none"> Coal Resources Recovery Management Plan (App A) Subsidence predictions (App B) Subsidence monitoring (App C) Landscape management (App F) Water Management (App G) (b) LW101-110 Rehabilitation Management Plan (App F) (b) LW 107-110 Biodiversity and Land Monitoring Report EcoLogic subsidence impact reports Management plans include <ul style="list-style-type: none"> monitoring & triggers contingency measures remedial measures	<ul style="list-style-type: none"> Review of monitoring data to improve predictions of subsidence, groundwater quantity and quality, height of fracturing; Remediation details are provided in the respective Review of monitoring plans to confirm what parameters should be measured; and Review of triggers. 		

First Workings

3.6	The Proponent may carry out first workings within the underground mining area, other than in accordance with an approved extraction plan, provided that Resources Regulator 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. <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>	Sighted evidence includes: <ul style="list-style-type: none"> Coal Resources Recovery Management Plan (LW107-110 & LW201-202) Subsidence predictions (LW107-110, CF201-202, LW203-206) 	Estimation of the effects of first workings is largely based on experience and the need to make roadways safe for works which inherently means minimal subsidence. This approach is reasonable given experience to date which shows roadway designs have been stable over time.	C	
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Payable of reasonable costs

3.7	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.	Interview with Site Environment Superintendent	Not triggered	NT	
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SCHEDULE 4 – SPECIFIC ENVIRONMENTAL CONDITIONS – SURFACE AREA AND GENERAL

NOISE

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

Impact Assessment Criteria

4.1	The Proponent shall ensure that the noise generated by the project does not exceed the levels set out in Table 1. Table 1: Impact assessment criteria dB(A) <table border="1" data-bbox="281 1564 1202 1732"> <thead> <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_{Aeq}(1 minute)</th> </tr> </thead> <tbody> <tr> <td>All privately owned residences</td> <td>35</td> <td>35</td> <td>35</td> <td>45</td> </tr> </tbody> </table> Notes: <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 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 	Location	Day	Evening	Night		L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (1 minute)	All privately owned residences	35	35	35	45	Annual Reviews 2019, 2020, 2021 EPL monitoring reports – 2019, 2020, 2021, 2022 Quarterly attended noise monitoring reports – 2019, 2020, 2021, 2022 Letter to landholder 28/06/20 and follow up on 04/09/20	The following exceedances of EPL noise limits were recorded during the audit period: <ul style="list-style-type: none"> 23 June 2020: Point N6 Newhaven, Night - LAeq (15 minute) of 40dB 8 September 2020: Point N3, Day – LAeq (15 minute) of 39 dB and LA₁ of 44dBA (Note: September 2020 recorded during non-compliant weather conditions of stability category G and as such does not represent a non-compliance with the Project Approval). Follow-up monitoring was undertaken on 03 November 2020 in accordance with the requirements of the Noise Management Plan, with monitoring results reporting noise levels below criteria (listed as Inaudible).	NC	Reported NC. No further action required.
Location	Day		Evening	Night															
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (1 minute)															
All privately owned residences	35	35	35	45															

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations
	<p><i>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.</i></p> <ul style="list-style-type: none"> • <i>These noise limits apply to applicable receivers under all meteorological conditions except for any one of the following:</i> <ul style="list-style-type: none"> ○ <i>wind speeds greater than 3 metres/second at 10 metres above ground level; or</i> ○ <i>stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or</i> ○ <i>stability category G temperature inversion conditions.</i> • <i>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.</i> • <i>To determine compliance with the $L_{A1(1 \text{ minute})}$ noise limits, noise from the project is to be measured at 1 metre from the dwelling façade. Where it can be demonstrated that direct measurement of noise from the project is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy).</i> • <i>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.</i> 		The auditor sighted evidence of correspondence with the landholder regarding the exceedance on 23/06/20 and follow up correspondence with additional monitoring results on 04/09/20.		

Noise Acquisition Criteria

4.2	<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 border="1"> <thead> <tr> <th>Location</th> <th>Day $L_{Aeq(15 \text{ minute})}$</th> <th>Evening $L_{Aeq(15 \text{ minute})}$</th> <th>Night $L_{Aeq(15 \text{ minute})}$</th> </tr> </thead> <tbody> <tr> <td>All privately owned residences</td> <td>40</td> <td>40</td> <td>40</td> </tr> </tbody> </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 $L_{Aeq(15 \text{ minute})}$	Evening $L_{Aeq(15 \text{ minute})}$	Night $L_{Aeq(15 \text{ minute})}$	All privately owned residences	40	40	40	Interview with Environmental Superintendent and HSE Manager	Noise acquisition criteria have not been triggered during the audit period.	NT	
Location	Day $L_{Aeq(15 \text{ minute})}$	Evening $L_{Aeq(15 \text{ minute})}$	Night $L_{Aeq(15 \text{ minute})}$										
All privately owned residences	40	40	40										

Additional Noise Mitigation Measures

4.3	<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 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 border="1"> <thead> <tr> <th>Location</th> <th>Day $L_{Aeq(15 \text{ minute})}$</th> <th>Evening $L_{Aeq(15 \text{ minute})}$</th> <th>Night $L_{Aeq(15 \text{ minute})}$</th> </tr> </thead> <tbody> <tr> <td>All privately owned residences</td> <td>38</td> <td>38</td> <td>38</td> </tr> </tbody> </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 $L_{Aeq(15 \text{ minute})}$	Evening $L_{Aeq(15 \text{ minute})}$	Night $L_{Aeq(15 \text{ minute})}$	All privately owned residences	38	38	38		Not triggered	NT	
Location	Day $L_{Aeq(15 \text{ minute})}$	Evening $L_{Aeq(15 \text{ minute})}$	Night $L_{Aeq(15 \text{ minute})}$										
All privately owned residences	38	38	38										

Noise Management Plan

No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations
4.4	<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> <ul style="list-style-type: none"> a) be prepared in consultation with EPA by a suitably qualified expert whose appointment has been approved by the Secretary; b) be submitted to the Secretary for approval by 30 June 2011; c) include a Noise Monitoring Program incorporating: <ul style="list-style-type: none"> • real-time noise and temperature inversion monitoring; and • attended noise monitoring <p>to monitor the performance of the project;</p> <ul style="list-style-type: none"> d) include reactive noise control measures to manage noise impacts for sensitive receivers; and e) include a protocol to establish whether the project is complying with the noise impact assessment criteria in Table 1. 	<p>Noise Management Plan WHC_PLN_NAR_NOISE MANAGEMENT PLAN 1 June 2018</p> <p>NCO Dust, Noise and Water 11 (from 2019) – training presentation – advanced for supervisor and basic for workers to be updated to include the updated TARP.</p> <p>Noise monitor and weather station inspection and service records in Sentinex (07/09/22).</p> <p>Noise and Temperature TARP 27/08/20</p> <p>Interview with Environment Superintendent, HSE Manager and Surface Operations Manager</p> <p>Annual Reviews 2019, 2020 and 2021</p>	<p>The updated NMP for Stage 2, prepared by Spectrum Acoustics, was approved by the Secretary on 11 December 2011. A revised plan was subsequently approved on 5 June 2018.</p> <p>The NMP meets the requirements of the condition. Real time noise and inversion monitoring data as required by the NMP was sighted in Sentinex. Training related to noise, dust and water management is provided to all employees.</p> <p>The Noise and Temperature TARP was updated in August 2020 to include Tech Service and Operations as contacts for activation of the TARP.</p> <p>NCO reported Sound Power Levels (SPLs) above the NMP criteria for two dozers in the 2021 annual review. The dozers have been fitted with sound rings which have reduced the SPL to 116dB. Maintenance of SPL of 116dB is included as part of the hire agreement. NCO advised that CAPEX has been raised to replace the dozers with new Komatsu machines which have SPL that is 4dB lower than the current dozers.</p>	C	

Continuous Improvement

4.5	<p>The Proponent shall:</p> <ul style="list-style-type: none"> (a) implement all reasonable and feasible best practice noise mitigation measures; (b) investigate ways to reduce the noise generated by the project, including off-site road and rail noise and maximum noise levels which may result in sleep disturbance; and (c) report on these investigations and the implementation and effectiveness of these measures in the Annual Review, <p>to the satisfaction of the Secretary.</p>	<p>Complaints register 2019 – 2022</p> <p>Annual Reviews 2019, 2020, 2021</p> <p>Quarterly attended noise monitoring 2019,2022</p> <p>Interview with Environment Superintended and HSE Manager</p>	<p>No noise complaints have been received in 2021 and 2022.</p> <p>No additional noise mitigation measures with the exception of addition of sound rings to the dozers as mentioned above have been implemented.</p> <p>Noise monitoring and implementation of the NMP is ongoing.</p>	C	
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AIR QUALITY

Impact Assessment Criteria

4.6	<p><i>Note: These conditions should be read in conjunction with section 11 of the revised Statement of Commitments.</i></p> <p>The Proponent shall ensure that dust emissions generated by the project do not cause additional exceedances of the criteria listed in Tables 4 to 6 at any residence on privately-owned land.</p> <p><i>Table 4: Long term impact assessment criteria for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>^a 90 µg/m3</td> </tr> <tr> <td>Particulate matter < 10 µm (PM10)</td> <td>Annual</td> <td>^a 30 µg/m3</td> </tr> </tbody> </table> <p><i>Table 5: Short term impact assessment criteria for particulate matter</i></p>	Pollutant	Averaging period	^d Criterion	Total suspended particulate (TSP) matter	Annual	^a 90 µg/m3	Particulate matter < 10 µm (PM10)	Annual	^a 30 µg/m3	<p>Annual review 2019, 2020, 2021</p> <p>Dust monitoring reports</p> <p>Interview with Environment Superintendent</p> <p>Correspondence with DPE</p>	<p>Deposited dust exceeding the criteria was measured in December 2021 at ND8 at 18.1g/m2/month. The result was inconsistent with historic results. A review of prevailing wind direction during November and December 2021 was undertaken and established that ND8 was not downwind of the mining operations. This result was considered to be as a result of agricultural activities in the area.</p> <p>The following PM10 exceedances (24 hour) were reported during the audit period</p> <ul style="list-style-type: none"> • 2 June 2021 ND10 measured at 82 ug/m3 – resulting from road works; • 3 March 2020 ND 10 measured at 62 µg/m3 – likely due to agriculture; • 9 Jan 2020 ND9 and ND10 measured at 67.3 and 59.7 µg/m3 respectively – due to extraordinary event; and 	C	
Pollutant	Averaging period	^d Criterion												
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m3												
Particulate matter < 10 µm (PM10)	Annual	^a 30 µg/m3												

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations														
	<table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM10)</td> <td>24 hour</td> <td>^a 50 µg/m³</td> </tr> </tbody> </table> <p><i>Table 6: Long term impact assessment criteria for deposited dust</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td>Deposited dust</td> <td>Annual</td> <td>^b 2g/m²/month</td> <td>^a 4g/m²/month</td> </tr> </tbody> </table> <p><i>Notes to Tables 4-6</i></p> <ul style="list-style-type: none"> <i>a Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all other sources);</i> <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> 	Pollutant	Averaging period	^d Criterion	Particulate matter < 10 µm (PM10)	24 hour	^a 50 µg/m ³	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	Deposited dust	Annual	^b 2g/m ² /month	^a 4g/m ² /month		<ul style="list-style-type: none"> 22 December 2019 at ND9 and ND10 measured PM10 levels of 85.7 µg/m³ and 87.1 µg/m³, respectively – due to extraordinary event. <p>All exceedances recorded in 2019 were investigated and considered to be result of extraordinary regional events.</p>		
Pollutant	Averaging period	^d Criterion																	
Particulate matter < 10 µm (PM10)	24 hour	^a 50 µg/m ³																	
Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level																
Deposited dust	Annual	^b 2g/m ² /month	^a 4g/m ² /month																

Operating Conditions

4.7	<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 project; and 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>Site observations</p> <p>CCTV reviews for TARP activations</p> <p>Interview with Environment Superintendent</p>	<p>The auditor observed activation of dust TARP during a visit to the CHPP control room. This included receipt of observations of visible dust.</p> <p>All Level 4 TARP activations are reviewed by the Environment Superintendent including review of CCTV recordings to verify visual observations. CCTV reviews are documented and maintained on the NCO file server.</p>	C	
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Air Quality Management Plan

4.7A	<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>WHC_PLN_NAR_AIR QUALITY MONITORING PROGRAM Rev2 2015</p>	<p>The AQMP was reviewed in 2016 and submitted to DPE. Comments were received and the plan resubmitted.</p> <p>An update of the AQMP for Stage 3 of the project was submitted to DPE however since Stage 3 is on hold the Stage 2 AQMP will be reviewed and resubmitted to DPE. The 2015 AQMP remains in effect.</p>	C	
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METEOROLOGICAL MONITORING

4.8	<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>Weather data</p>	<p>Weather data has been provided for the audit period.</p>	C	
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TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	(a) complies with the requirements in Approved Methods for Sampling of Air Pollutants in New South Wales (DECC, 2007), or its latest version; and (b) is capable of real-time measurement of temperature lapse rate in accordance with the NSW Industrial Noise Policy, unless a suitable alternative is approved by the Secretary following consultation with the EPA.	Site observations			
WATER MANAGEMENT					
<i>Note: These conditions must be read in conjunction with Section 6 and 7 of the Statement of Commitments.</i>					
Groundwater Model					
4.9	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 DPIE 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.	Narrabri Coal Operations Groundwater Model Five Year Calibration Report Update, Australasian Groundwater and Environment Consultants, August 2021 Letter from DPE, 02/12/2022	The 5-yearly groundwater model calibration was completed and submitted to the DPE and NRAR in September 2020. DPE and NRAR provided feedback in March 2021 and the model resubmitted in August 2021. DPE confirmed acceptance of the updated model in December 2022.	C	
Water Supply					
4.9A	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. <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>	Water Balance Model Report, WRM, 2021	The site water balance was updated in 2021 and indicates the site is not yet in water surplus. Required water is currently provided by harvesting from site dams.	C	
Compensatory Water Supply					
4.9B	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 DPIE Water, and to the satisfaction of the Secretary. 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. 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. If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent shall provide alternative compensation to the satisfaction of the Secretary.	Noted	No compensatory water supply has been required during the audit period.	NT	
Discharges					
4.10	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).	Interview with Environmental Superintendent	There has been no discharge from disturbed areas during the audit period.	NT	
4.11	Any raffinate from the water conditioning plant discharged to the Namoi River must be discharged in accordance with the conditions of an EPL and meet the following criteria: (a) 50 percentile of all samples (volume based) are below 250 mg/l of Total Dissolved Solids; (b) 100 percentile of all samples (volume based) are below 350 mg/l of Total Dissolved Solids; and (c) pH values of all sampled water to be between 6.5 and 8.5.	Interview with Environmental Superintendent	There has been no discharge of raffinate during the audit period	NT	

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
4.12	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.		Outside audit period	NT	
Water Management Plan					
4.13	<p>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 DPIE Water by suitably qualified expert/s whose appointment/s have been approved by the Secretary and include a:</p> <ul style="list-style-type: none"> a) Site Water Balance; b) Erosion and Sediment Control Plan; c) Surface Water Monitoring Plan; d) Raffinate Discharge and Transfer Control and Monitoring Plan; e) Groundwater Monitoring Program; and f) Surface and Groundwater Response Plan, setting out the procedures for: <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>	<p>Water Management Plan, Issue 4, March 2013</p> <p>Annual Groundwater Review 2021, Groundwater Exploration Services, March 2022</p>	<p>The Water Management Plan as endorsed meets the requirements of this condition.</p> <p>The WMP includes a TARP which details the surface water and groundwater response plan. Other plans required by this condition are included in the WMP and discussed below.</p>	C	
Site Water Balance					
4.14	<p>The Site Water Balance must:</p> <ul style="list-style-type: none"> (a) include details of: <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; (b) describe measures to minimise water use by the project; and (c) be reviewed and recalculated each year in the light of the most recent water monitoring data. 	<p>Water Management Plan, Issue 4, March 2013</p> <p>Water Balance Model Report, WRM, 2021</p>	<p>The WMP includes the Site Water Balance which includes the required details.</p> <p>The site water balance was updated in 2021</p>	C	
Erosion and Sediment Control					
4.15	<p>The Erosion and Sediment Control Plan must:</p> <ul style="list-style-type: none"> (a) be consistent with the requirements of <i>Managing Urban Stormwater: Soils and Construction</i> manual (Landcom, 2004), or its latest version; (b) identify activities that could cause soil erosion and generate sediment; (c) describe measures to minimise soil erosion and the potential for transport of sediment to downstream waters; (d) describe the location, function, and capacity of erosion and sediment control structures; and (e) describe what measures would be implemented to monitor and maintain the structures over time. 	<p>Water Management Plan, Issue 4, March 2013</p>	<p>An E&SCP that meets the requirements is included in the WMP.</p> <p>The audit team observed deployment of erosion and sediment control equipment during the site inspection.</p>	C	
Surface Water Monitoring Program					
4.16	<p>The Surface Water Monitoring Plan must include:</p> <ul style="list-style-type: none"> (a) detailed baseline data on surface water flows and quality in creeks and other water bodies that could be affected by the project; (b) surface water impact assessment criteria; (c) a program to monitor the impact of the project on surface water flows and quality; (d) procedures for reporting the results of this monitoring. 	<p>Water Management Plan, Issue 4, March 2013</p>	<p>A SWMP that meets the requirements is included in the WMP.</p>	C	

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Raffinate Discharge and Transfer Control and Monitoring Plan					
4.17	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.	Interview with Environment Superintendent and HSE Manager	No raffinate has been discharged during the audit period.	NT	
Groundwater Management Plan					
4.18	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, yield and quality (including at any privately owned bores in the vicinity of the site); (c) groundwater impact assessment criteria; (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; (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 (g) procedures for reporting the results of this monitoring.	Water Management Plan, Issue 4, March 2013 Annual Groundwater Review 2021, Groundwater Exploration Services, March 2022 Lodgement of Groundwater Trigger Notification, 09/09/21 DPE correspondence 28/09/21	A Groundwater Monitoring program that meets the requirements is included in the WMP. An annual review of groundwater monitoring is undertaken by Groundwater Exploration Services. NCO notified DPE of a breach of the maximum predicted drawdown level at P16 in 2021. As per the TARP process, a hydrologist was engaged to review groundwater monitoring data and investigate the exceedance. It is considered that the groundwater model has under-predicted the impacts at P16. NCO engaged AGE to review the groundwater model and will incorporate revised triggers to the Groundwater Management Plan (to be finalised). Groundwater monitoring field sheets have also been updated to include a record of groundwater levels.	Obs C	Revise the Groundwater Management Plan in accordance with updated predictions following recalibration of the Groundwater Model
Evaporation / Storage Ponds					
4.19	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.	Sample of dam inspection records Annual Groundwater Review, Groundwater Exploration Services, March 2022	The dams are subject to weekly, monthly and quarterly inspections by a trained NCO employee. Annual and 5-yearly are undertaken by a Dam Engineer in accordance with the Dams Safety Act. Groundwater monitoring is also around the dams to assess any leakage from the dams.	C	
Brine Storage Ponds					
4.20	The Proponent shall ensure that the integrity of the low permeability layers lining the brine storage ponds is maintained and achieves a permeability of less than 1×10^{-14} m/s whenever these storage ponds are in use.				
Review of Brine Management and Beneficial Use of Water and Brine					
4.21	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.	Preliminary Assessment of Beneficial Use Options for Narrabri Coal, WRM, June 2018 Interview with Environment Superintendent and HSE Manager	The next beneficial use options review is due to be undertaken in 2024.	NT	

HERITAGE

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

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Aboriginal Cultural Heritage Management Plan					
4.22	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.	Annual Reviews 2019, 2020, 2021 WHC_PLN_NAR_Aboriginal Cultural Heritage Management Plan, Issue 4, June 2019 Interview with Environment Superintendent and HSE Manager	No Aboriginal objects have been destroyed, damaged or defaced during the audit period. NCO received a warning letter from DPE on 09/09/20 in relation to an incident occurring in November 2017. The breach related to the failure to implement the ACHMP following identification of a potential site or artefact of Aboriginal Cultural Heritage significance in the approval area. The investigation determined that the ACHMP had not been implemented in 2017 on report of the artefact due to an ambiguity in the ACHMP, being that the artefact was not identified during a survey and it was not established how the artefact was located as there were no operations within the area and the area was not subject to a detailed Aboriginal cultural heritage survey. The artefact has since been registered with AHIMS and fencing installed around the site and DPE notified of the site. NCO has updated the ACHMP for Stage 3 however as Stage 3 is now on hold a further update to the Stage 2 ACHMP will be required.	C	
4.23	The Proponent shall revise the Aboriginal Cultural Heritage Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with Aboriginal cultural heritage management for the site (Stages 1 and 2) and subsequently implement this revised version of the Aboriginal Cultural Heritage Management Plan to the satisfaction of the Secretary. This plan must: (a) be submitted the Secretary by 30 June 2011; (b) be prepared in consultation with the BCS, the Narrabri Local Aboriginal Land Council and the Narrabri Goomeroi Aboriginal Corporation; (c) include a protocol for the ongoing consultation and involvement of Aboriginal communities in the conservation and management of Aboriginal heritage on site; and (d) describe the measures that would be implemented to protect Aboriginal sites on the mine site, (in particular all known Aboriginal sites on lands overlying Longwalls 1-3 and sites 10b, 38, 39 and 106-112), or any new Aboriginal objects or skeletal remains that are identified during the project.	WHC_PLN_NAR_Aboriginal Cultural Heritage Management Plan, Issue 4, June 2019 DPIE Approval dated 3 October 2019	The ACHMP in effect was revised and approved by DPIE 3 October 2019. Consultation with appropriate stakeholders is included in the plan. The ACHMP addresses the requirements of the condition – Section 3 of the plan relates to condition (d).	C	
4.24	Prior to undertaking any activities involving surface disturbance or vegetation removal for the lands overlying Longwalls 8-26, the Proponent shall undertake a detailed Aboriginal cultural heritage survey in consultation with the local Aboriginal community and BCS, and to the satisfaction of the Secretary. The Secretary may approve this survey being undertaken in several stages, as mining progresses.		Outside audit period	N/A	

TRANSPORT

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

Mine Access Road Intersection

4.25	The Proponent shall maintain the Mine Access Road Intersection with Kurrajong Creek Road and the Kamilaroi Highway in consultation with NSC and to the satisfaction of TfNSW.	Interview with Environment Superintendent and HSE Manager	Maintenance undertaken during the audit period has been repair of pot holes which was observed during the site inspection.	C	
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Shuttle Bus Traffic Control Protocol

4.25A	Unless otherwise agreed by the Secretary following consultation with TfNSW, the Proponent must ensure that at least 15 employees, calculated as a weekly average, are transported to and from the site by shuttle bus during each of the morning and evening peak traffic periods of 05:30 am to 07:30 am and 5:30 pm to 7:30 pm.	Bus monitoring records 21-28/11/22	Bus monitoring records show an average of 20 passengers per shift.	C	
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TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
4.25B	Should the modification application 08_0144 MOD 7 workforce requirements increase above 15 employees per shift, the Proponent must ensure that an equivalent number of additional employees are transported to and from the site by shuttle bus for each shift during peak traffic periods, as required by condition 25A. <i>Note: The modification application 08_0144 MOD 7 EA assumed that approximately 15 employees would be required for each shift (split between day and night). Therefore approximately 30 employees would be rostered on at any one time within a 24 hour period.</i>	Bus monitoring records 21-28/11/22	Master Mine provide the bus as part of the contract for the cut and flit contract. Australian Drilling Services also provide a bus	C	
4.25C	The Proponent must prepare a Shuttle Bus Traffic Control Protocol for the project to the satisfaction of the Secretary. The protocol must: (a) be submitted to the Secretary for approval prior to the commencement of bord and pillar mining operations in Longwalls 201 or 202; and (b) include: • a code of conduct for shuttle bus drivers; • appropriate communication measures to ensure that shuttle bus drivers are notified when a coal train movement on the Werris Creek Mungindi Railway impacts the level crossing at Kurrajong Creek Road (LXM 534); • appropriate procedures to ensure that shuttle bus drivers do not queue within the turning/ deceleration lanes at the Kamilaroi Highway/ Kurrajong Road intersection when coal train movements impact LXM 534; • nominated routes for shuttle buses accessing the site; and • a monitoring and reporting program to audit shuttle bus movements and employee numbers against the requirements of condition 25A and 25B.	WHC-STD-NAR-SHUTTLE BUS TRAFFIC CONTROL PROTOCOL, V1 11/01/2022 DPE approval dated 23/03/22	The Shuttle Bus Traffic Control Protocol was approved by DPE in March 2022.	C	
4.25D	The Proponent must implement the approved Shuttle Bus Traffic Control Protocol.	WHC-STD-NAR-SHUTTLE BUS TRAFFIC CONTROL PROTOCOL, V1 11/01/2022 Interview with Environment Superintendent and HSE Manager	The Shuttle Bus Traffic Control Protocol requires the bus driver to coordinate phone contact with the CHPP control room to receive advice on coal train movements. No records of such contact are maintained to verify this occurs. The protocol also requires that where coal train movements may impact on the bus access to the site, the driver must not queue on the Kamilaroi Highway and Kurrajong Creek Road intersection. Drivers must continue along the highway and park at a safe place to wait the coal train to clear. This requirement has not been tested.	Obs C	It is recommended that NCO develop and maintain records of a verification process to ensure the protocol is being adhered to.
Greylands and Scratch Roads					
4.26	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 NSW T&I (Fisheries) and to the satisfaction of NSC; and b) fund the maintenance of those sections of these roads that it uses to an all-weather unsealed road standard.	Interview with Environment Superintendent and HSE Manager	No mine infrastructure is located on Greylands or Scratch Roads. Scratch Road is used for access for routine ecology and groundwater monitoring.	NT	
Gunnedah Traffic Management Study					
4.27	The Proponent shall contribute, on an equitable basis with other coal project rail users, to the costs of an independent Traffic Management Study analysing the impacts of increased rail traffic on road safety and congestion due to increased closure of rail level crossings within Gunnedah, prepared to the satisfaction of GSC. <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>		Outside audit period.	N/A	

VISUAL IMPACT

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
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Note: These conditions should be read in conjunction with section 14 of the Statement of Commitments.

Visual Amenity

4.28	The Proponent shall minimise the visual impacts of the project to the satisfaction of the Secretary.	Complaints register 2019-2022	No complaints related to visual impacts have been received during the audit period.	C	
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Lighting Emissions

4.29	The Proponent shall ensure that: a) no outdoor lights shine above the horizontal; and b) all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting</i> .	Complaints register 2019-2022	No complaints related to lighting have been received. Any update to lighting review? No update to lighting review required since 2019 Additional lighting installed in the car park is all LED. All operations are in daylight hours other than CHPP.	C	
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ENERGY EFFICIENCY AND GREENHOUSE GAS

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

Energy Saving Action Plan

4.30	The Proponent shall revise the Energy Savings Action Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with energy management for the site (Stages 1 and 2) and subsequently implement this revised version of the Energy Savings Action Plan to the satisfaction of the Secretary. This plan must: a) be prepared in consultation with BCS; b) be prepared in accordance with the <i>Guidelines for Energy Savings Action Plans</i> (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 Savings Action Plan, Rev 4, August 2014. Electricity tracking data Interview with Environment Superintendent and HSE Manager	The effective Energy Savings Action Plan was approved by DPIE in May 2015. The ESAP details 12 management actions developed in the first iteration of the EAP in 2011. These include a range of management and reporting actions for identification of energy savings opportunities and monitoring of effectiveness including, adding ESAP implementation to site management meetings, reporting on monthly energy usage at monthly site meetings, develop and report energy targets, develop a site Energy Management Committee to review and report on energy management initiatives and develop energy efficiency training. Electricity use for FY20 and FY21 was tracked for individual meters and entered into Pulse. For FY22, electricity use has been tracked in a custom-built NGERS tracking platform. Monthly energy reports as referenced in the ESAP were reviewed during the previous IEA however, no evidence of this report being prepared during the current audit period was provided. Whilst there is efforts by site management to monitor and reduce energy consumption it does not appear to be organised as outlines in the ESAP i.e. Energy Management Committee, monthly reporting and setting of targets. The current ESAP is based on energy audits conducted in 2013 and assumptions made prior to production commenced.	NC	It is recommended the ESAP is reviewed and updated to consider actual production data since 2013 and work currently underway to review GHG emissions (see 4.31 below).
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Gas Drainage

4.31	The Proponent shall implement all reasonable and feasible measures to minimise the greenhouse gas emissions from the underground mining operations to the satisfaction of the Secretary.	Narrabri Mine Greenhouse Gas Minimisation Plan Stage 2 Longwall Project, June 2012 Interview with Environment Superintendent and HSE Manager	The current GHG Minimisation Plan was approved by DPE in 2012. NCO is in the process of preparing a new GHG Plan due for submission to DPE in early 2023. NCO has engaged Palaris to map the site carbon footprint and identify abatement opportunities.	C	
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No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations
			A review of the GHG emissions forecast for Stage 3 will also be conducted.		
4.32	<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> <ol style="list-style-type: none"> be prepared in consultation with BCS; identify options for minimising greenhouse gas emissions from underground mining operations, with a particular focus on capturing and/or using these emissions; investigate the feasibility of implementing each option; propose the measures that would be implemented in the short to medium term on site; and include a research program to inform the continuous improvement of the greenhouse gas minimisation measures on site. 	<p>Narrabri Mine Greenhouse Gas Minimisation Plan Stage 2 Longwall Project, June 2012</p> <p>Interview with Environment Superintendent and HSE Manager</p>	<p>GHG minimisation activities undertaken during the audit period include:</p> <ul style="list-style-type: none"> Offset of all Scope 2 emissions through energy supply contracts; Internal online tracking system to incorporate tracking of fugitive emissions in real time; and Installation of a new CH4 sensor to improve accuracy of measurement. <p>Further GHG minimisation opportunities will be identified as part of the engagement of Palaris referenced above.</p>	C	

WASTE

Waste Minimisation

4.33	<p><i>Note: These conditions should be read in conjunction with section 3 of the revised Statement of Commitments.</i></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 Secretary. This plan must:</p> <ol style="list-style-type: none"> be submitted to the Secretary for approval prior to 30 June 2011; identify the various waste streams of the project; describe what measures would be implemented to reuse, recycle, or minimise the waste generated by the project; ensure irrigation of treated wastewater is undertaken in accordance with <i>Environmental Guidelines: Use of Effluent by Irrigation</i> (DEC, 2004), or its latest version; and include a program to monitor the effectiveness of these measures. 	<p>WHC-PLN-NAR-Waste Management Plan, Version 4, 29/05/2020</p> <p>DPE Approval 19/10/2020</p> <p>Annual Reviews 2019, 2020, 2021</p> <p>Various completed environment checklists</p> <p>Purchase order for litter collection 10/9/21</p>	<p>A revision of the Waste Management Plan was approved by DPE in October 2020.</p> <p>Improvements made to waste management processes during the audit period include integration of housekeeping audits in the site compliance management tool CMO which generates a checklist and schedules weekly completion.</p> <p>The environmental checklist is completed on a weekly basis by each area and recorded in Pulse.</p> <p>NCO has engaged the local Aboriginal group to conduct monthly litter picking around the site.</p> <p>Monthly waste collection reports are provided by Namoi Waste and reviewed as part of the Annual Review preparation.</p>	C	
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SCHEDULE 5 - REHABILITATION AND OFFSETS

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

Rehabilitation Objectives

5.1	<p>The Proponent shall rehabilitate the site to the satisfaction of the Secretary and Resources Regulator in accordance with the rehabilitation objectives in Table 1.</p> <p><i>Table 1: Rehabilitation Objectives</i></p> <table border="1"> <thead> <tr> <th>Domain</th> <th>Rehabilitation Objective</th> </tr> </thead> <tbody> <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; with a 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> </tbody> </table>	Domain	Rehabilitation Objective	Surface Facilities Area	Set through condition 4 below	Other land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: <ul style="list-style-type: none"> comprised of local native plant species; with a landform consistent with the surrounding environment 	Built features	Repair/restore to pre-mining condition or equivalent	Community	Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment	<p>Extraction Plans – Appendix F Narrabri Coal Mine, Rehabilitation Management Plan for Large Mines, July 2022</p> <p>EcoLogical Biodiversity Monitoring Reports 2019, 2020, 2021</p> <p>Annual Reviews 2019, 2020, 2021</p>	<p>Rehabilitation objectives are documented in the Rehabilitation Plans for each Extraction Plan and in the Rehabilitation Management Plan prepared under the Mining Amendment (Standard Conditions of Mining Leases – Rehabilitation) Regulation 2021.</p> <p>Rehabilitation monitoring is carried out by EcoLogical and reported in the annual monitoring reports and the Annual Reviews.</p>	C	
Domain	Rehabilitation Objective														
Surface Facilities Area	Set through condition 4 below														
Other land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: <ul style="list-style-type: none"> comprised of local native plant species; with a landform consistent with the surrounding environment 														
Built features	Repair/restore to pre-mining condition or equivalent														
Community	Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment														

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%;"></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>		Ensure public safety				
	Ensure public safety						
Progressive Rehabilitation							
5.2	To the extent that mining operations permit, the Proponent shall carry out rehabilitation progressively, that is, as soon as reasonably practicable following the disturbance.	<p>Mining Operations Plan Amendment B, 29/11/2021</p> <p>Narrabri Coal Mine, Rehabilitation Management Plan for Large Mines, July 2022</p>	<p>Progressive rehabilitation is documented in the MOP and RMP.</p> <p>Rehabilitation is carried out as soon as practicable. Ecologists are on site every 2 weeks to monitor rehabilitation sites and works completed are documented using Survey 123 and recorded in the NCO Environmental and Rehabilitation Hub in ArcGIS.</p> <p>Aerial survey and mapping is conducted by EcoLogical and documented in the Annual Reviews and Annual Monitoring Reports.</p>	C			
Landscape Management Plan							
5.3	<p>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 Secretary and Resources Regulator. 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 DPIE Water, BCS and NSC; and</p> <p>(d) include a:</p> <ul style="list-style-type: none"> • Rehabilitation Management Plan; and • Mine Closure Plan. 	Mining Operations Plan Amendment B, 29/11/2021	The MOP incorporates the Landscape Management Plan, Rehabilitation Management Plan and Mine Closure Plan required by this condition.	C			
Rehabilitation Management Plan							
5.4	<p>The Rehabilitation Management Plan must include:</p> <p>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; • 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>Mining Operations Plan Amendment B, 29/11/2021</p> <p>Weed Management Dashboard – NCO Environment Hub</p> <p>Weed Treatment Reports</p> <p>Site observations</p>	<p>The MOP meets the requirements of this condition.</p> <p>The auditor sighted records of weed treatment and weed contractor reports confirming actions taken to control weeds in accordance with the MOP.</p> <p>The auditor sighted evidence of implementation of rehabilitation at the site including management of topsoil, vegetation and habitat.</p>	C			

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<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 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></p>				
Mine Closure Plan					
5.5	<p>The Mine Closure Plan must:</p> <ol style="list-style-type: none"> define the objectives and criteria for mine closure; investigate options for the future use of the site; provide a detailed methodology for decommissioning the site's evaporation/storage ponds and the treatment of any accumulated salt within or around those ponds; investigate ways to minimise the adverse socio-economic effects associated with mine closure, including reduction in local and regional employment levels; describe the measures that would be implemented to minimise or manage the on-going environmental effects of the project; and describe how the performance of these measures would be monitored over time. 	<p>Mining Operations Plan Amendment B, 29/11/2021</p> <p>Narrabri Coal Mine, Rehabilitation Management Plan for Large Mines, July 2022</p>	<p>The Mine Closure Plan is integrated into the MOP and RMP which meets the requirements of this condition.</p> <p>The RMP was in the process of being updated to bring the rehabilitation objectives statement in line with the Resource Regulator's guidelines and is due to be submitted to DPE by 13 January 2023.</p>	C	
Offsets					
Biodiversity Offset Strategy					
5.6	<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> <ol style="list-style-type: none"> be prepared in consultation with BCS; be submitted to the Secretary for approval by 31 December 2010, or as otherwise agreed by the Secretary; provide a detailed assessment of offset proposal/s involving the property/ies (agreed to by BCS) 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; include and assess proposals to offset impacts to the Inland Grey Box EEC, <i>Bertya opposens</i>, and foraging habitat for the Superb Parrot; include proposals on offsetting both direct and indirect impacts (ie edge effects) of the project; and determine the best overall combination of lands to provide a suitable offset. 	<p>Biodiversity Offset Strategy, Rev 3, July 2019</p>	<p>The Biodiversity Offset Strategy has been prepared in accordance with this condition.</p>	C	
5.7	<p>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.</p>	<p>WHC Conservation Agreement Status Schedule v5, 05/08/21</p> <p>Interview with Group Superintendent – Biodiversity</p> <p>Narrabri CA Cohort Annual Report 2021</p>	<p>The Biodiversity Offset Conservation Agreements for Narrabri offset areas registered between September 2019 and July 2021.</p> <p>In accordance with requirements of the Conservation Agreements, WHC submits an annual report to BCT on the required management activities. BCT feedback on the 2021 report (dated 30 May 2022) notes that management activities have been satisfactorily completed. It was noted that further evidence for certain activities was required and this action was closed out in an email from BCT dated 23 November 2022.</p>	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
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SCHEDULE 6 - ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

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

6.1	<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> <ul style="list-style-type: none"> a) be submitted to the Secretary for approval prior to 30 June 2011; b) provide the strategic context for environmental management of the project; c) identify the statutory requirements that apply to the project; d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project e) describe the procedures that would be implemented to: <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 f) include a clear plan depicting all the monitoring currently being carried out in the project area. 	<p>WHC-PLN-NAR-Environmental Management Strategy V4, 29/5/2020</p> <p>DPE Approval dated 13/10/20</p>	<p>The EMS was revised and approved by DPE in 2020. The approved EMS meets the requirements of this condition.</p>	C	
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Management Plan Requirements

6.2	<p>The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <ul style="list-style-type: none"> (a) detailed baseline data; (b) a description of: <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; (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; (d) a program to monitor and report on the: <ul style="list-style-type: none"> • impacts and environmental performance of the project; • effectiveness of any management measures (see (c) above); (e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the project over time; (g) a protocol for managing and reporting any: <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 (h) a protocol for periodic review of the plan. 	<p>Review of management plans</p>	<p>Management plans generally meet this requirement, except as where otherwise identified in this report.</p>	C	
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Revision of Strategies, Plan and Programs

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
6.3	<p>Within 3 months of the submission of an:</p> <ol style="list-style-type: none"> audit under condition 7 of schedule 6; incident report under condition 4 of schedule 6; and annual review under condition 5 of schedule 6; and any modification to the conditions of this approval (unless the conditions require otherwise), <p>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 and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</i></p>	<p>Narrabri Coal_Management Plan Register_16112022</p> <p>Interview with Environment Superintendent and HSE Manager</p>	<p>Reviews are undertaken as required and documented. It is noted that a number of management plans were updated in anticipation of commencement of Stage 3 of the Project. Stage 3 is currently on hold and as such, the existing Stage 2 plans may need to be updated and submitted for approval to ensure they remain current.</p>	C	

REPORTING

Incident

6.4	<p>The Proponent shall notify the Secretary in writing via the Major Projects website 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.</p>	<p>Examples of incident notification</p> <p>Letter from DPE dated 28/09/22</p>	<p>In response to the notification of breach of the drawdown trigger at P16, DPE recorded a breach of this condition due to NCO becoming aware of the drawdown breach on the 5 July 2022 and notification being provided to DPE on 9 September 2022. No further action has been taken on this matter to-date. All other indecent notifications have been made within the required timeframe.</p>	NC	Reported NC. No further action required.
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Regular

6.5	<p>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.</p>	<p>Review of NCO website</p>	<p>Monitoring reports are provided on the website.</p>	C	
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Annual Review

6.6	<p>By the end of March each year, the Proponent must submit a review of the environmental performance of the project for the previous calendar year to the satisfaction of the Secretary. This review must:</p> <ol style="list-style-type: none"> describe the development (including any rehabilitation) that was carried out in the past year, and the development that is proposed to be carried out over the next year; 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: <ul style="list-style-type: none"> relevant statutory requirements, limits or performance measures/criteria; monitoring results of previous years; and relevant predictions in the EA and Extraction Plan; identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; identify any trends in the monitoring data over the life of the project; identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and describe what measures will be implemented over the next year to improve the environmental performance of the project. <p><i>Note: The "Post Approval Requirements for State Significant Developments - Annual Review Guideline 2015, NSW Government, October 2015" (or its latest version) provides a reporting framework to integrate the reporting requirements of the Annual Review required by the Department under the project approval and the Annual Environment Management Report (AEMR) required by Resources Regulator under the Mining Lease.</i></p>	<p>Annual Reviews and records of submission 2019, 2020 and 2021</p>	<p>Annual reviews are prepared and submitted as required.</p>	C	
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INDEPENDENT ENVIRONMENTAL AUDIT

6.7	<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>Independent Environmental Audit 2019, Narrabri Coal Mine</p>	<p>Previous audit reported sighted. This audit also satisfies this condition.</p>	C	
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<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>(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>				
6.8	<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>	<p>Letter from DPE dated 06/09/19</p> <p>Letter of submission from NCO dated 06/02/20</p>	<p>The 2019 IEA was submitted to DPE on 06/02/20 in accordance with the submission date agreed with DPE in a letter dated 06/09/19.</p>	C	
COMMUNITY CONSULTATIVE COMMITTEE					
6.9	<p>The Proponent shall maintain a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary, in general accordance with the <i>Guideline for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007)</i>, 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>CCC meeting minutes</p>	<p>CCC meetings are currently held on a quarterly basis. Meeting minutes are distributed and uploaded to the NCO website.</p>	C	
ACCESS TO INFORMATION					
6.10	<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 conditions of this approval, or any approved plans and programs; • a complaints register, updated on a monthly basis; • minutes of CCC meetings; • the annual reviews of the project; • any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit; • any other matter required by the Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>	<p>Review of website</p>	<p>All documents available on the website</p>	C	
SCHEDULE 7 - ADDITIONAL PROCEDURES FOR AIR QUALITY AND NOISE MANAGEMENT					
NOTIFICATION OF LANDOWNERS					
7.1	<p>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.</p>	<p>Notification letter dated 23/06/20</p>	<p>Noise monitoring reports were provided to landowners in accordance with this condition.</p>	C	

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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
7.2	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.	Interview with Environment Superintendent and HSE Manager	Exceedance of PM10 and deposited dust were as a result of extraordinary events or off-site sources and were not notified to landowners.	C	
INDEPENDENT REVIEW					
7.3	<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 with Environment Superintendent and HSE Manager	None requested	NT	
7.4	<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> <p>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.</p>	Interview with Environment Superintendent and HSE Manager	Not triggered	NT	
LAND ACQUISITION					
7.5	<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 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>(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 	Interview with Environment Superintendent and HSE Manager	No requests received during the audit period.	NT	

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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<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 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> <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:</p> <p>(a) consider submissions from both parties; (b) determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above; (c) prepare a detailed report setting out the reasons for any determination; and (d) provide a copy of the report to both parties and the 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 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>				
7.6	The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.		Not triggered	NT	
7.7	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.		Not triggered	NT	

Table A.2: Statement of Commitments

Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
1. General Project Development						
Desired Outcome: All approved activities are undertaken in the area(s) nominated on the approved plans and figures (unless moved slightly to avoid industrial trees).						
1.1	Survey and mark the boundaries of the areas of disturbance on the ground.	Prior to surface disturbance in nominated areas.	Review of disturbance permits and survey reports.	Areas of planned disturbance are surveyed as part of pre-clearance assessment.	C	
1.2	(If not already surveyed), commission an ecologist and/or archaeologist (along with representatives of the Aboriginal community) to advise of any constraints posed by threatened flora or fauna, or archaeological sites.	Prior to surface disturbance in nominated areas.	Review of disturbance permits and survey reports	Areas of planned disturbance are subject to heritage and ecological survey prior to clearance.	C	
1.3	Relocated or redesign the area of disturbance (if mine safety is not compromised) to avoid sites of ecological or heritage significance.	Prior to surface disturbance in nominated areas.	Review of disturbance permits and survey reports	Areas of planned disturbance are subject to heritage and ecological survey prior to clearance.	C	
1.4	Align access to sites of surface disturbance following advice from ecologist and/or archaeologist.	Prior to surface disturbance in nominated areas.	Review of disturbance permits and survey reports	Areas of planned disturbance are subject to heritage and ecological survey prior to clearance.	C	
1.5	Advise relevant personnel on restrictions placed on activities by identification of sites of ecological or heritage significance and management requirements.	Prior to surface disturbance in nominated areas.	Review of disturbance permits and survey reports	Areas of planned disturbance are subject to heritage and ecological survey prior to clearance.	C	
2. Operating Hours						
Desired Outcome: Management of site activities in accordance with the approved operating hours.						
2.1	Undertake vegetation clearing/soil removal within the hours of: 7:00am to 10:00pm / 7 days.	Continuous as required.	Interview with Environment Superintendent and HSE Manager	Team operates on day shift.	C	
2.2	Undertake construction within the Pit Top Area within the hours of: 7:00am to 10:00pm / 7 days.	Continuous.	Interview with Environment Superintendent and HSE Manager	Construction is undertaken during day shift	C	
2.3	Undertake construction of the Reject Emplacement Area and Brine Storage Ponds within the hours of: 7:00am to 10:00pm / 7 days.	Continuous.	Interview with Environment Superintendent and HSE Manager	Construction is undertaken during day shift	C	
2.4	Undertake ventilation shaft construction and gas drainage installation within the hours of: 24 hours / 7 days.	As required.	Interview with Environment Superintendent and HSE Manager	Site is operational 24 hours / 7 days	C	
2.5	Undertake ventilation and gas drainage operations within the hours of: 24 hours / 7 days.	Continuous.	Interview with Environment Superintendent and HSE Manager	Site is operational 24 hours / 7 days	C	
2.6	Undertake mining operations within the hours of: 24 hours / 7 days.	Continuous.	Interview with Environment Superintendent and HSE Manager	Site is operational 24 hours / 7 days	C	
2.7	Undertake coal crushing screening and processing operations within the hours of:	Continuous.	Interview with Environment	Site is operational 24 hours / 7 days	C	

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
	24 hours / 7 days.		Superintendent and HSE Manager			
2.8	Undertake CPP reject disposal within the hours of: 7:00am to 10:00pm / 7 days. Contingent hours of operation will be 24 hour / 7 days to account for those periods of elevated reject production.	Continuous.	Interview with Environment Superintendent and HSE Manager	Specialised Civils Team operates the reject area on day shift, Monday – Friday	C	
2.9	Undertake rail loading and transportation within the hours of: 24 hours / 7 days	Continuous.	Interview with Environment Superintendent and HSE Manager	Site is operational 24 hours / 7 days	C	
2.10	Undertake raw materials / supply delivery within the hours: 7:00am to 10:00pm / 7 days	Continuous.	Interview with Environment Superintendent and HSE Manager	Stores delivery hours are set as 7am to 10pm and confirmed by email to the Stores Supervisor. Parking place is provided for trucks to wait for gates to open.	C	

3. Waste Management

Desired Outcome: Minimisation of the potential risk of environmental impact due to general waste creation, storage and/or disposal.

3.1	Dispose all paper and general waste in suitable waste receptacles.	Ongoing.	Site observations	The audit team observed appropriate receptacles around the site.	C	
3.2	Collect general waste bins as required to eliminate potential for environmental harm and place contents in large, lidded waste storage receptacles or dumpsters to await removal by licenced contractor.	Ongoing.	Site observations Namoï Waste EPL	General waste collected in 3m ³ waste bins Open skips for large general waste, steel etc. Waste removed by Namoï Waste which is a licensed contractor.	C	
3.3	Collect industrial waste fortnightly, or more frequently if required.	At least fortnightly.	Namoï Waste reports	Industrial bins collected every 4 days. General waste is collected a number of times per week.	C	
3.4	Install separate containers for the collection of recyclable items and despatch off site at appropriate intervals.	Ongoing.	Site observation Interview with Environmental Superintendent	There is separate collection of cardboard and steel. Pallets are separated on site for recycling Drum crusher is available on site.	C	
3.5	Employ a licensed waste collection contractor for all general waste / garbage at least on a weekly basis.	Ongoing.	Waste contractor licenses	Licensed waste contractors are used.	C	
3.6	Collect waste oils and grease and pump to bulk storage tanks.	As required.	Site observations	Waste oils and grease are collected in bulk tanks in the yard outside the maintenance workshop	C	
3.7	Collect all parts/packaging and transfer to the site workshop for disposal or recycling.	As required.	Site observations	The audit team observed hydraulic hose bins, industrial waste bins and a cardboard crate.	C	
3.8	Install adequate toilet and ablution facilities within the mine facilities area for the site workforce and visitors.	Initial activities of site establishment phase.	Site observations	Bathroom facilities are provided.	C	
3.9	Install a self irrigating septic sewage system approved by Narrabri Shire Council.	Initial activities of site establishment phase.	Interview with Environmental Superintendent	Septic system is in place.	C	
3.10	Service facilities by a licenced sewage collection / disposal contractor.	As required.	Namoï Waste reports	Narrabri septic services contracted by Namoï Waste who services the septic system once per week.	C	

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
Desired Outcome: Minimisation of the potential risk of environmental impact due to coal reject storage and/or disposal.						
3.11	Characterise coal rejects to establish whether any deleterious products would be produced by leachate during emplacement.	Within initial month of production of CPP reject and annual thereafter, if relevant.	Outside audit period	Outside audit period	N/A	
3.12	Dispose of coal rejects within the nominated Reject Emplacement Area, constructed immediately to the west of the Pit Top Area.	Continuous.	Site observations	Verified by observations	C	
3.13	Construct the Reject Emplacement Area as a series of 20m wide, elongated (north-south oriented) cells commencing on the eastern side (with a compacted base with a permeability $<1 \times 10^{-9}$ m/sec if elevated salinity or other deleterious contaminant is identified as likely to be present within the leachate - see Commitment 3.11).	Continuous.	REA Basal Liner Construction Guidelines, July 2019 Narrabri Mine Rejects Emplacement Area Capping Assessment & Closure Design, November 2019	The basal liner construction guidelines defines base permeability of 1×10^{-9} m/s.	C	
3.14	Construct drainage features for each cell to divert clean water around and capture and store sediment-laden water generated by run-off from the disturbed areas.	Prior to the commencement of each cell.	Narrabri Mine Rejects Emplacement Area Capping Assessment & Closure Design, November 2019	Section 3.1.4 describes the stormwater management and diversion of dirty water to the sediment basins.	C	
3.15	Strip and store topsoil from each cell for future re-spreading over the final landform or re-spread immediately following stripping.	Prior to the commencement of each cell.	Site observations	The audit team observed topsoil stored at the REA.	C	
3.16	Paddock-dump, spread by bulldozer and then compact the coal reject to form typical lifts of about 1.5m thick. The maximum height of the reject emplacement will be restricted to 15m, ie. 10 lifts with final side slopes not exceeding 14°.	Continuous.	Narrabri Mine Rejects Emplacement Area Capping Assessment & Closure Design, November 2019	Section 3.2.3 of the REA Capping and Closure Design describes the landform development in accordance with this commitment.	C	
3.17	Install up to four lysimeters on the downslope side of the Reject Emplacement Area. (If saline leachate is generated by CPP reject).	As the structure is constructed, if required.	Interview with Environmental Superintendent	Leachate has not been generated	NT	
Minimisation of the potential risk of environmental impact due to saline waste creation, storage and/or disposal.						
3.18	Line each dam or pond designed to hold either raw groundwater or processed brine with a HDPE liner with a permeability of $<1 \times 10^{-14}$ m/sec.	Prior to the commencement of water discharge into pond or dam.		Outside audit period	N/A	
3.19	Confirm by QA inspection of the liner that the nominated permeability is achieved.	Prior to the commencement of water discharge.		Outside audit period	N/A	
3.20	Prohibit vehicular access to the walls of the lined dam or pond.	Continuous.	Site observations	The audit team observed that vehicle access is not permitted on the dam walls.	C	
3.21	Remove impermeable liner at completion of mining and dispose of to a facility licenced to accept saline waste.	Following removal of all saline groundwater or brine from the dam/pond.	Not triggered	Not triggered	NT	
3.22	Inspect, sample and analyse ground beneath each dam or pond to confirm no leakage has occurred over the life of the pond.	Prior to final rehabilitation.	Not triggered	Not triggered	NT	
3.23	(should saline contamination be identified), Remove and dispose of saline contaminated material (within the backfilled box cut).	As required and prior to final rehabilitation.	Not triggered	Not triggered	NT	

4. Rehabilitation

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
Desired Outcome: Decommission and remove the infrastructure and services no longer required for ongoing activities on the land of the Mine Site.						
4.1	Confirm the proposed final land use of the Mine Site lands and identify the infrastructure and services to be retained to support this land use.	As part of the Mine Closure Plan for the mine.	Mine Closure Plan	As per mine closure plan	C	
4.2	Demolish or deconstruct and remove infrastructure and services not required by the confirmed future land use.	Prior to relinquishment of Mining Lease.	Not triggered	Not triggered	NT	
Desired outcome: The creation of a stable final landform on the Pit Top Area (and surrounding long-term disturbance areas, ie, ventilation shaft areas, Reject Emplacement Area and brine storage ponds), available for the proposed future uses(s) of agriculture, and/or nature conservation.						
4.3	Stabilise all earthworks, drainage lines and disturbed areas no longer required for mine-related activities in order to minimise erosion and sedimentation, and to reduce the visibility of the activities from adjacent properties and the local road network.	As required.	Rehabilitation Plan	As per rehab plan	C	
4.4	Provide a low maintenance, stable and safe landform that blends with the surrounding topography and which is commensurate with re-established agricultural land uses.	Prior to mine closure.	Not triggered	Not triggered	NT	
4.5	Ensure any areas of disturbance that require profiling meet the requirements of the final landform.	As area becomes available.	Rehabilitation Management Plan	As per rehab plan	C	
4.6	Replace subsoil and topsoil over areas of disturbance in the same order and approximately the same depth as it was removed.	As area becomes available.	Rehabilitation Management Plan	As per rehab plan	C	
4.7	Ensure the most appropriate crop/pasture species are planted in the areas with returned for agricultural use.	As area becomes available.	Rehabilitation Management Plan	As per rehab plan	C	
4.8	Conduct ongoing rehabilitation monitoring and maintenance throughout and beyond the operation.	Ongoing.	EcoLogical Biodiversity Monitoring Annual Reports	Annual monitoring is conducted of the rehabilitated areas.	C	
Desired outcome: The progressive rehabilitation of disturbance associated with the Mining Area, ie gas drainage and temporary ventilation activities, to create a stable final landform available for the proposed future use(s) of agricultural, forestry and/or nature conservation.						
4.9	Restrict areas of disturbance to the areas identified and marked in accordance with Commitments 1.1 to 1.5.	Ongoing.	Review of disturbance permits and survey reports Interview with Environment Superintendent	Area of disturbance is restricted as far as possible.	C	
4.10	Remove gas drainage equipment and backfill and cap each remaining bore hole in accordance with the former NSW Department of Primary Industries – Mineral Resources EDG01 guideline “Borehole Sealing Requirements on Land: Coal Exploration”.	At completion of gas drainage activities.	Rehabilitation Management Plan Annual Reviews	Gas drainage equipment is removed as describes in the RMP and reported in the Annual Review	C	
4.11	Allow water retained within the sump(s) to evaporate, excavate any consolidated drill cuttings and fines, remove the plastic liner and backfill each sump.	At completion of gas drainage activities.	Rehabilitation Management Plan	Gas drainage equipment is removed as describes in the RMP and reported in the Annual Review	C	
4.12	Respread previously stripped and stockpiled topsoil and vegetation over the backfilled sumps and other cleared areas.	At completion of gas drainage activities.	Annual Reviews	Gas drainage equipment is removed as describes in the RMP and reported in the Annual Review	C	
4.13	Complete periodic inspections of rehabilitated sites to confirm a return to the vegetation of the surrounding landform.	Annually.	Eco-Logical Biodiversity Monitoring Annual Reports	Annual monitoring is conducted of the rehabilitated areas.	C	

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
4.14	(Unless required for future access to monitor or manage subsidence related impacts), close, cross-rip and respread previously cleared vegetation over access tracks.	Once no longer required for site inspection purposes.	Rehabilitation Management Plan EcoLogical Biodiversity Monitoring Annual Reports	Access tracks are rehabilitated in accordance with the RMP.	C	

Desired outcome: Cracking or surface deformation is identified promptly and remediated such that general rehabilitation objectives are not compromised. See *Commitments 5.1 to 5.7*.
Prevent any noxious weed infestation.

4.15	Obtain certification from plant supplier / contractor that equipment imported to the Mine Site has been cleaned and is free of soil and vegetation.	Prior to movement of equipment from hardstand of the working areas.	Introduction to Site Surface Fixed Plant Form	Verified via CoA	C	
4.16	Undertake campaign weed spraying over the Pit Top Area and areas of surface disturbance of the Mining Area in consultation with the I&I NSW-Agriculture and/or the local Noxious Weeds Inspector.	Prior to the stripping of the topsoil.		Verified via CoA	C	

5. Subsidence Management

Desired Outcome: Identify and remediate surface cracks to minimise impacts on local hydrology, ecology and soils are minimised.

5.1	Inspect the identified 'cracking zones' above each longwall panel to identify occurrence of cracks.	During and for a period of up to 2 years following mining of each longwall panel.	INX InViron Subsidence management system and ArcGIS database demonstrated to auditors, EcoLogic subsidence reports.	Note comments above on the limitations of relying upon smartphones in areas of limited mobile phone reception.	C	The current approval implies that all impacts from the project are identified. For example, Clause 5 (g) of the Mod 7 approval calls for a Subsidence Monitoring Program to "analyse the relationship between the subsidence effects and impacts under the plan and any ensuing environmental consequences" to the satisfaction of the Resource Regulator. Currently Rehabilitation and Land Management Plans state that the field surveys are based on "a stratified random and targeted design". It is recommended that NCO provide details of inspection areas to assist the Resource Regulator in assessing whether the inspection coverage undertaken by NCO is sufficient.
5.2	Rip the surface over cracks not filled in by natural processes.	Continuous and as required.	Evidence shown before and after treatment in the form of photos, database record extracts and EcoLogic subsidence reports, affected land mapping.	Note comments above on the limitations of relying upon smartphones in areas of limited mobile phone reception.	C	
5.3	(For larger cracks for which surface ripping will not completely fill) fill with subsoil material sourced from stockpiles maintained at nearby gas drainage or ventilation sites, or within the footprint of the Reject Emplacement Area.	Continuous and as required.	Evidence shown in the form of database record extracts and EcoLogic subsidence reports.	Note comments above on the limitations of relying upon smartphones in areas of limited mobile phone reception.	C	

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
5.4	Undertake a detailed condition assessment of the 3 rd order waterways within the predicted subsidence zone to enable assessment of changes post mining.	Prior to commencing longwall mining.	LiDAR provided Biodiversity Monitoring Report	Note comments above on the limitations of relying upon smartphones in areas of limited mobile phone reception.	C	
5.5	Inspect local drainage lines above the active and completed longwall panels. Monitoring should access any restriction of flows and hence restriction of fish passage to facilitate appropriate restorative measures.	As required.	Ecological Biodiversity reports – cross sections and POIs, inspection record database extracts, field inspection sheets and EcoLogic subsidence reports, affected land mapping.	Note comments above on the limitations of relying upon smartphones in areas of limited mobile phone reception.	C	
5.6	Undertake water quality sampling from watercourses within the subsidence impact zone to determine any impacts on sediment loading and other parameters including salt loads.	During creek flow events.	Water Quality pond monitoring. Inspection record database extracts and field inspection sheets. Biodiversity reports – cross sections and POIs	Note comments above on the limitations of relying upon smartphones in areas of limited mobile phone reception.	C	
5.7	Note the effects of any ponding and commission a hydrologist or ecologist to recommend remedial actions should the area of ponding encroach upon sites of conservation or heritage significance.	During and for a period of up to 2 years following mining of each longwall panel.	Subsidence Pond Management Plan Inspection record database extracts and field inspection sheets, affected land mapping.	Note comments above on the limitations of relying upon smartphones in areas of limited mobile phone reception.	C	
Desired outcome: Identify and minimise the impacts of the subsidence-induced erosion on the local environment.						
5.8	Inspect areas of the Mine Site susceptible to landslip or accelerated erosion, e.g. drainage lines and steeply slopped areas of exposed Purlawaugh Formation derived subsoils.	Quarterly following mining activities which may provide subsidence.	Biodiversity and Land Monitoring Report – areas noted. Area inspected as part of SI. Field inspection sheets and Inspection record database extracts		C	
5.9	(In the event of large-scale slope instability), undertake appropriate stabilisation works e.g. installation of deep sub-surface drainage trenches or construction of strategic catch drains along slope crests.	Continuous and as required.	Area over LW 203/206 in Extraction Plan – not mined yet		C	
5.10	(In the event of erosion within Mine Site watercourses), stabilise the damaged or eroded banks (in accordance with an Erosion and Sediment Control Plan for the Longwall Project).	Continuous and as required.	Biodiversity and Land Monitoring Report – areas noted.		C	
Desired outcome: Identify and minimise the impacts of valley closure and uplift ('upsidence') induced erosion on the local environment.						
5.11	Establish survey lines along ephemeral drainage gullies and along gully crests and monitor during and after mining of each longwall panel to identify any signs of cracking or 'upsidence'.	Prior to the commencement of mining each longwall panel.	Survey lines, Subsidence predictions (App B), Biodiversity and Land Monitoring Reports.	DGS reports report closure and subsidence effects derived from monitoring data. It is noted that 'Figure 3d' of DGS Report NAR-004/8 which refers to upsidence is mis-referenced or missing.	C	

TABLE A1 CONDITIONS OF APPROVAL

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
5.12	Review predictions of 'upside' and valley crest movements after each longwall is completed.	Following completion of each longwall.	DGS reports.	DGS reports report closure and subsidence effects derived from monitoring data.	C	
5.13	In the event that 'upside' results in surface cracking or erosion), undertake remedial works identified by <i>Commitments 5.1 to 5.7</i> .	Continuous and as required.	Biodiversity and Land Monitoring Reports, crack management, EcoLogic subsidence inspections, inspection record database extracts.	No remedial works specific to upside have been required to date as these effects have been small. Some increased effects due to closure are likely to have occurred but appear to be accommodated by subsidence monitoring, inspection and management.	C	
Desired outcome: Identify and minimise the impacts of ponding on the local environment.						
5.14	Sample ponded water to determine if there is any increase in salinity.	Quarterly for a period of up to 2 years upon identification of subsidence induced ponding.	Subsidence Pond Management Plan. Field inspection sheets.		C	
5.15	Inspect the water courses over the subsidence zone to identify the location and extent of ponding.	Quarterly for a period of up to 2 years following identified subsidence.	Biodiversity and Land Monitoring Reports, Subsidence Pond Management Plan, LiDAR analysis, Multispectral analysis. Field inspection sheets and inspection record database extracts.		C	
5.16	For ponding where there is little or no vegetation of conservation significance monitor the location and extent of ponding. (If ponded area continues to increase in area, encroaches on vegetation of conservation significance or there is an increase in water salinity), excavate a channel to reduce the gradient change over the retained chain pillars. The excavation will be undertaken in accordance with an Aboriginal Cultural Heritage Management Plan and vegetation clearing procedures.	Continuous and as required.	Subsidence Pond Management Plan. Field inspection sheets and inspection record database extracts. Pre-clearing reports.		C	
Desired outcome: Identify and minimise the impacts of far field displacement on local infrastructure.						
5.17	Monitor surface features (such as culverts) within 800m of the eastern edge and 1.5km of the western edge of the Mining Area.	Prior to mining that may result in subsidence at the relevant structure.	N/A	Such surface features that are not owned by NCO lie outside the approved monitoring area.	NT	Update the extraction plan to show extent of land owned by NCO.
5.18	(In the event of damage to surface structures such as pipes, culverts, water tanks, dams or other soil or water conservation structures), repair the damaged infrastructure or provide appropriate compensation.	Continuous and as required.	N/A	Such surface features that are not owned by NCO lie outside the approved monitoring area.	NT	
Desired outcome: Identify and manage the impacts of subsidence on the local property infrastructure (including residences).						
5.19	Commission a dilapidation survey and inspection of all structures on non-project related land within the Mine Site by a qualified building consultant.	Prior to mining that may result in subsidence at the relevant structure.	N/A	Such surface features that are not owned by NCO lie outside the approved monitoring area.	NT	
5.20	Use the dilapidation survey and subsequent report in an individual property subsidence management plans (IPSMP) (or similar as required under any Extraction Plan requirements) prepared for each non-project related property to be impacted (to provide fair and reasonable outcomes between the affected property owner and the Proponent).	Prior to mining that may result in subsidence at the relevant structure.	N/A	Such surface features that are not owned by NCO lie outside the approved monitoring area.	NT	

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
5.21	<p>Each IPSMP will address the following issues.</p> <ul style="list-style-type: none"> Timing and scale of predicted impacts. Monitoring on the affected property during mining. Timing for any remaining disconnection of services. <p>Post-mining inspection and reporting.</p>	Prior to mining that may result in subsidence at the relevant structure.	N/A	Such surface features that are not owned by NCO lie outside the approved monitoring area.	NT	

Desired outcome: Prepare and implement a Subsidence Monitoring Program (or similar as required under any Extraction Plan requirements) which includes the following element.

5.22	<p>Prepare a Subsidence Monitoring Program (or similar as required under any Extraction Plan requirements) which includes the following elements.</p> <ul style="list-style-type: none"> A transverse subsidence line across the northern and southern panels. The lines will be installed to at least the middle of the next adjacent longwall before undermining occurs. A longitudinal line extending in-by and out-by from the starting and finishing point of each panel, for a minimum distance equal to the cover depth. A survey line along the riparian management zone of Kurrajong and Pine Creeks and their tributaries over the Mine Site. A minimum of three monitoring pegs space 10 m apart in a line or triangle at any feature of interest, e.g. dam, walls, archaeological sites, to measure subsidence, tilt and strain. Visual inspections and mapping of damage before, during and after mining. 	Prior to the commencement of mining in each longwall panel.	<p>Subsidence monitoring procedure provided.</p> <p>3D data for transverse and creek survey lines 107, 108, 109, B, D, H and L. Data complies with commitment of longitudinal, transverse and creek surveys. Additional survey at key features such as heritage sites sighted on a subsidence monitoring network plan. All data at 10 m spacing except transverse lines B & D.</p> <p>EcoLogic subsidence impact reports.</p> <p>Field inspection sheets and inspection record database extracts.</p>	The committed accuracy of +/- 3 mm is not evidenced in the documents provided. However, discussions with the surveyor indicate industry practice including regional control points is being adopted to minimise survey error.	C	Include details of regional network for verifying regional baseline and the achieved survey accuracy in the subsidence monitoring procedure or other relevant report.
5.23	Place monitoring survey pegs between 10 m and 20 m apart with a minimum of two baseline surveys of subsidence and strain completed before mine subsidence effects occur.	Prior to the commencement of mining in each longwall panel.	<p>Subsidence monitoring procedure provided.</p> <p>All data at 10 m spacing except transverse lines B & D. Two baselines sighted per survey line.</p>		C	
5.24	Prepare and implement and Extraction Management Plan to manage subsidence impact(s) to the satisfaction of I&I NSW and DoP.	Prior to Longwall mining commencing.	Extraction plans examined and approval confirmed (Mod 7).		C	

6. Groundwater

Desired Outcome: Minimise the volume of mine in-flow to the underground workings.

6.1	Seal the mine drifts and ventilation shaft using in strata grouting or hydrophobic sealant.	At time of Mine Closure.	Not triggered	Not triggered	NT	
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Desired Outcome: Manage mine-in flows to minimise the potential for contamination of surface catchments.

TABLE A1 CONDITIONS OF APPROVAL

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
6.2	Divert groundwater accumulating in the underground workings to designated sumps for pumping to surface.	Ongoing.	Mine Operations Plan	Groundwater is collected in sumps as per the MOP	C	
6.3	Discharge groundwater pumped from the underground sumps into Dam A1 only.	Ongoing.	Water Management Plan	Groundwater is diverted to Dam A1	C	
Desired Outcome: Implement a comprehensive and ongoing groundwater monitoring program.						
6.4	Record extraction volumes including weekly totals from all pumping bores, and weekly totals from the underground mine and box cut sump.	Weekly.	Water NSW portal	Real time telemetry on pumping bores, underground mine and box cut sump.	C	
6.5	Record Volumes of water introduced to the mine for longwall operation and other requirements.	Weekly.	Spreadsheet flow meter readings	Weekly records of underground feed, water treatment plant, Namoi bore and river levels.	C	
6.6	Record the groundwater quality (EC and pH) discharged from the underground workings and water supply bores.	Monthly.	Spreadsheet flow meter readings	Weekly records of underground feed, water treatment plant, Namoi bore and river levels.	C	
6.7	Sample and analyse water from all pumping bores and underground pumping stations.	Monthly.	Spreadsheet flow meter readings	Weekly records of underground feed, water treatment plant, Namoi bore and river levels.	C	
6.8	Record (by manual monitoring, or continuous automated monitoring) the standing water levels of piezometers P1 to P27 and WB1 to WB8 (and others as constructed).	Monthly initially and hence quarterly when stable flow established.	Annual Groundwater Reviews Groundwater monitoring spreadsheet	Standing water levels are recorded for all piezometers and bores.	C	
6.9	Monitor the flow rate and water quality of the spring discharge from "Mayfield Spring".	Monthly initially and hence quarterly when stable flow established.	Interview with Environment Superintendent	Water not utilised – no flow	NT	
6.10	Install additional multi-level vibrating wire piezometers over LW1 to LW3 to obtain detailed data as to the impact of mine subsidence on the groundwater of the various strata above the underground workings.	Prior to commencement of longwall mining.	Water Management Plan Annual Groundwater Reviews	Multi-level vibrating wire piezometers have been installed prior to longwall mining.	C	
6.11	Collect data from the vibrating wire piezometers and compare against initial groundwater and subsidence modelling.	Data collected continuously and downloaded and analysed quarterly.	Water Management Plan Annual Groundwater Reviews	Data is analysed on an ongoing basis.	C	
6.12	Commission an experienced hydrogeologist to collate and review the monitoring data collected annually in order to assess the impacts of the project on the groundwater environment, and to compare any observed impacts with those predicted from groundwater modelling (see also Commitment 16.11).	Annually.	Annual Groundwater Reviews	Annual reports are prepared by Groundwater Exploration Services Pty Ltd	C	
6.13	Develop the groundwater monitoring program in consultation with the Proponent's consultant hydrogeologist, the Department of Environment, Climate Change and Water - Office of Water and those groundwater users potentially affected by the Longwall Project. (see also Commitment 16.12).	Prior to commencement of longwall mining.	Water Management Plan	The groundwater monitoring program is detailed in the Water Management Plan.	C	
6.14	Complete an initial audit of the groundwater model predictions against monitoring data.	6 months after the commencement of longwall mining.	Outside audit period	Outside audit period	N/A	

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
6.15	Recalibrate the groundwater model based on groundwater model audit and generate confirmatory forward impact predictions made. Include in all forward impact predictions the impact of brine re-injection at the conclusion of mine operations and check against initial predictions. (also required for Mine Closure Plan).	6 months after the commencement of longwall mining, every 5 years thereafter, and at least 12 to 18 months prior to cessation of mining.		Verified via CoA	C	
6.16	Carry out regular reviews of the groundwater model predictions against monitoring data.	Every 5 years (or more frequently if in-flows deviate significantly from predictions).		Verified via CoA	C	
6.17	Should the recalibrated model show groundwater inflows beyond those cases described in the EA, a separate detailed impact assessment will be conducted and mitigating measures determined.	Every 5 years (or more frequently if in-flows deviate significantly from predictions).		Verified via CoA	C	
Desired Outcome: Preparation of a contingency plan in the event that the availability or quality of groundwater is reduced for local groundwater users.						
6.18	Undertake remedial action if groundwater drawdown attributable to the mine reduces the saturated thickness of any non-project related bore by 15% or more. In the event that an existing water supply is deemed (by the hydrogeologist) to be adversely affected by the Longwall Project, the Proponent will mitigate, or compensate for this impact through the provision of a replacement water supply.	As required.		Not triggered	NT	
6.19	Undertake remedial action if the water quality of the dewatering discharge indicates an inflow salinity of more than 20% above that predicted by Aquaterra (2009).	As required.	Not triggered	Not triggered	NT	
6.20	Ensure all monitoring bores are licenced with the NSW Office of Water. All Form A's associated with the bores will be submitted to NOW at the time drilling is undertaken.	At time of drilling.	Outside audit period	Outside audit period	N/A	
6.21	Ensure the project is appropriately licensed for all groundwater make and use in accordance with required licensing arrangements through the NOW.	As required.	Water management Plan	Water access licenses and works approvals are in place.	C	
7. Surface Water						
Desired Outcome: Minimisation of changes to existing drainage patterns of the Mine Site.						
7.1	Retain selected surface water structures such as the farm dams and diversion swales to allow for continued water management across the Pit Top Area.	During construction period.	Outside audit period	Outside audit period	N/A	
Desired Outcome: Prevention of discharge of sediment-laden water from the Pit Top Area.						
7.2	Direct runoff collected within potentially contaminated catchments of the coal processing area and Reject Emplacement Area to storage basins (SB1, SB2 and SB3).	Ongoing.	Water Management Plan Site observations	Runoff collection is described in the WMP.	C	
7.3	Dewater storage basins SB1, B82 and SB3 and discharge the water to Dam A 1 (or Dams C or D) to ensure no discharge or overflow.	Ongoing.	Interview with Environmental Superintendent	Not required	NT	
7.4	Design and construct the storage basins to provide the capacity nominated by WRM (2009).	Prior to commencement of longwall mining.	Water Management Plan	As described in the WMP	C	
7.5	Design and construct the sediment dams to provide sufficient water settlement and sediment storage zones to contain the 5 day 90%ile storm event.	Prior to commencement of longwall mining.	Water Management Plan	Water Management Plan	C	
7.6	Dewater sediment dams within 5 days of significant rainfall event.	With 5 days.	Interview with Environmental Superintendent	Dewatering has not been required.	NT	

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
7.7	Direct all water from wash-down areas and workshops to oil/water separators and containment systems. The oily fraction will be placed in a containment system for removal, as necessary.	Ongoing.	Site observations	Oil/water separators were observed in the yard servicing the wash-down facilities, refuelling and waste oil storage areas.	C	
7.8	Ensure all storage tanks are either self-bunded tanks or bunded with an impermeable surface and have a capacity to contain a minimum 110% of the largest storage tank capacity.	Ongoing.	Site observations	Storage tanks were observed to be adequately bunded.	C	
7.9	Restrict refuelling, oiling and greasing of designated areas, away from drainage and where spill kits are readily available.	Ongoing.	Site observations	Oil/water separators were observed in the yard servicing the wash-down facilities, refuelling and waste oil storage areas. Spill kits were available	C	
7.10	Discharge all groundwater into Dam A1, and either use without processing in selected areas on site or process through the Water Conditioning Plant to produce fresh water raffinate and concentrated brine.	Ongoing.	Water Management Plan	All groundwater pumped from underground is collected in Dam A1 which the main feed for the conditioning plant.	C	
7.11	Construct storages for saline groundwater (Dam A 1) and brine (Dams A2, A3, B2 and BR1 to BR5 [as required]) using in-situ material which have an average depth of 5m and batter slopes of ~1:3 (V:H).	Dams A2, A3 and B2 Prior to commencement of mine dewatering and BR1 to BR5 as required.	Dam Safety Committee D1 Forms Dam Operation and Maintenance Manual	Dams are constructed as required.	C	
7.12	Line all dams to be used to store groundwater or brine with HDPE liner (permeability 1×10^{-14} m/sec).	Prior to commencement of mine dewatering.	Dam Operation and Maintenance Manual	Dams are constructed as required.	C	
7.13	Maintain at least 0.5m freeboard in each brine storage (sufficient to cater for design 1 in 100 year ARI event).	Ongoing.	Dam Operation and Maintenance Manual	Dams are constructed as required.	C	
7.14	Commence construction of brine storage ponds from 12 months prior to the anticipated requirement to accept brine discharge.	As required.	Outside audit period	Outside audit period	N/A	
7.15	Ensure all storages used for the storage of treated raffinate are constructed using a compacted clay lining, to an average depth of 5m and with batter slopes of ~1:3 (V:H).	Prior to commencement of use for raffinate storage.	Dam Operation and Maintenance Manual	Dams are constructed as required.	C	
7.16	Maintain discharge water quality from the Water Conditioning Plant at the 100%ile limit of 350mg/LTDS.	During discharge events to the Namoi River.	Interview with Environment Superintendent	No water has been discharged	NT	
7.17	Develop, in consultation with the DECCW, a routine discharge quality and continuous discharge volume monitoring program and incorporate these requirements into a revised Site Water Management Plan.	At least 6 months prior to initial discharge.	Interview with Environment Superintendent	No water has been discharged	NT	
7.18	Maintain the pH level of water discharged beyond ML1609 within the range 6.5-8.0.	During discharge events.	Interview with Environment Superintendent	No water has been discharged	NT	

Desired Outcome: Prevention of discharge of dirty, contaminated or saline water from the progressive disturbance areas of the Mining Area.

7.19	<p>Prepare and implement a general Erosion and Sediment Control Plan (ESCP) (in accordance with the requirements of Landcom, 2004) to manage surface water flows within each gas drainage or ventilation shaft area. The ESCP will provide for the following management.</p> <ul style="list-style-type: none"> – Prior to disturbance, the area will be marked out and 'no-go' zones identified. – If located on or adjacent to a natural drainage line, a diversion bank will be constructed up-slope of the area to be disturbed. – the requirement for a sediment basin will be determined, using the Revised Universal Soil Loss Equation (RUSLE). 	Prior to the commencement of gas drainage or ventilation shaft construction.	Water Management Plan	Verified via CoA	C	
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TABLE A1 CONDITIONS OF APPROVAL

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> - If a sediment basin is required, i.e. soil loss >200Uha/year, the sediment basin design capacity will be calculated. - Soil will stockpiled away from natural drainage lines. - Sediment fencing will be installed along the down-slope boundaries of the disturbed areas. - All sediment control structures will be regularly inspected and repaired. 					
7.20	Store potential contaminants, e.g. drilling fluid, hydrocarbons, within bunded areas away from natural drainage lines.	Ongoing.	Site observations	Potential contaminants were observed to be stored in bunded areas away from surface drains.	C	
7.21	Ensure all contaminated liquids are contained in lined sumps at each drill site.	Ongoing.	Memo to tech services manager Brad Elvy 14/11/19	Drill sumps are not lined – drill sumps will have to be lined or unlined sumps will be decommissioned and rehabilitated and replaced by aboveground tanks. No drilling over the last month.	C	
7.22	Discharge any groundwater to a lined sump, with this water immediately directed to Dam A1 within the Pit Top Area.	Ongoing.	Water Management Plan	Groundwater is discharged to a lined sump and then to Dam A1.	C	
Desired outcome: Minimisation of impact from dirty water contamination event.						
7.23	Sample water discharging from licensed discharge points and analyse the water for suspended solids, turbidity, electrical conductivity, oil and grease, and pH.	With 24 hours of discharge.	Interview with Environment Superintendent Monitoring reports	No water has been discharged	NT	
7.24	In the event monitoring confirms pollution has occurred, one or more of the following measures will be adopted. <ul style="list-style-type: none"> - The DECCW will be advised. Salient preceding weather information will also be provided. - Additional flocculants will be used to expedite settlement of sediments. - Plans will be set for the subject sediment dam will be enlarged or an additional sediment dam will be constructed downstream which will become the new site discharge point and monitoring location. 	Within 7 days.	Not triggered	Not triggered	NT	
Desired Outcome: Minimisation of impact from hydrocarbon contaminated water event.						
7.25	Undertake the following actions (in the event of a major hydrocarbon spill). <ul style="list-style-type: none"> - Collect the contaminated soil at the site of the spill and transport to an approved waste depot or designated 'land farming' area of the Mine Site. - Construct pits around the spill with sufficient hydraulic gradient to capture seepage water and contaminated material. - Pump out water captured in pits. Monitor the local groundwater for signs of contamination.	As required.		No spills have been reported during the audit period	NT	
Desired Outcome: Minimisation of impact from saline contamination event.						
7.26	Prepare a formal contingency plan for a saline contamination event. The plan may include one or a combination of the following measures. <ul style="list-style-type: none"> - Dewatering from the underground workings will be transferred to an 	Prior to commencement of longwall mining.		Refer SoC 17.2		

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
	<p>intact and lined storage structure (or ceased) along with any water remaining in the breached pond.</p> <ul style="list-style-type: none"> - The breached pond or pipe will be repaired immediately and inspected by a suitably qualified person prior to re-integration into the saline water management system. - The water cart will be used to transfer non-saline water to the area of the spill to flush and dilute the water discharged. As far as practical, at least 4 times the - Volume of the spilled water will be used to flush the downstream environment. - Downstream vegetation will be monitored for any impacts of increased salinity and treated appropriately. 					
Desired Outcome: Minimisation of erosion and sedimentation.						
7.27	Maintain a ground cover of vegetation at 70% or better over areas disturbed but no longer required by the project.	Ongoing.	Annual Monitoring Reports	Ground cover is measured and reported in the annual monitoring reports.	C	
7.28	Armour the banks of the rail loop with ballast in flood zone (larger diameter competent rock).	Ongoing.	Not triggered	Not triggered	NT	
7.29	Inspect the banks of the rail loop and remediate erosion damage within Kurradjong Creek Tributary 1.	Following flood events.	Not triggered	Not triggered	NT	
Desired Outcome: Ensure no additional salt load is added to the Namoi River catchment as a consequence of the Longwall Project.						
7.30	Participate in, as required, the development of a salt accounting protocol with the DoP, DECCW and NOW.	Prior to any discharge to the Namoi River.	Interview with Environment Superintendent	No discharge has taken place during the audit period.	NT	
7.31	Enter into an agreement for, and contribute sufficient funds to the 'Cap and Pipe the Bores' Program to ensure that there is a sufficient salt 'credit' for the Proponent to offset all planned salt discharges over the life of the mine. (Any agreement that NCOPL enters in relation to this matter will include the opportunity to 'trade' or otherwise dispose of salt credit in excess of that required to offset salt load attributable to mine water discharges.)	Prior to any discharge to the Namoi River.	Interview with Environment Superintendent	No discharge has taken place during the audit period.	NT	
7.32	Should the Cap and Pipe Bores Program prove not to be viable, develop an alternate Green Offset program in consultation with NOW and DECCW.	Prior to any discharge to the Namoi River.	Interview with Environment Superintendent	No discharge has taken place during the audit period.	NT	
Desired Outcome: Identification of alternative methods of disposal/use of brine.						
7.33	Initiate a study by a recognized firm of engineering consultants to investigate the technical and economic viability of alternative methods of disposal (or use) of brine and raffinate produced by the on-site Water conditioning plant.	Initial report to be developed within 3 years of project approval, with a revised report prepared every 5 years thereafter.		Verified via CoA	C	
Desired Outcome: Implement a comprehensive and ongoing surface water monitoring program.						
7.34	Monitor surface water quality for pH, EC, TDS, TSS, Total Organic Carbon at locations upstream and downstream of the Pit Top Area on Kurradjong and Pine Creeks and their tributaries.	Quarterly during surface flow events.		No discharge during the audit period	NT	
7.35	Record the volume and quality (pH, EC, TDS, TSS, Total Organic Carbon) of water extracted and discharged to the Namoi River.	Weekly.		No discharge during the audit period	NT	

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
7.36	Monitor the quality of water within the Brine Storage Ponds.	Quarterly.	Surface water and wet weather monitoring report ALS reports	Monitoring is conducted monthly	C	
7.37	Prepare and implement contingency plans in the event elevated levels of heavy metals are recorded.	Quarterly.	Water Management Plan	TARP contained in WMP	C	
Desired Outcome: Avoidance of structures in drainage lines to prevent fish passage.						
7.38	Construction of drainage line crossings will be undertaken in accordance with the policy and guideline document of the I&I NSW "Why do fish need to cross the road?"	As required.	Surface Disturbance Form	Permit to disturb procedure has aquatic checks if there is potential aquatic fauna or semi-permanent pools. Where there are aquatic environment works must include fish passage	C	
8. Ecology						
Desired Outcome: Manage disturbance within the Pit Top Area to minimise disturbance to flora and fauna of conservation significance.						
8.1	Clearly identify the boundaries of disturbance within the Pit Top Area and progressive disturbance associated with ventilation and gas drainage infrastructure. Ensure no clearing occurs outside these boundaries.	Prior to clearing (see also <i>Commitments 1.1 and 1.2</i>).	Mine Operations Plan	As per MOP	C	
8.2	Avoid disturbance to the vegetation of Community 3 along Kurrajong Creek Tributary 1.	During clearing.	Interview with Environmental Superintendent	Not triggered	NT	
8.3	Disperse and spread cleared native vegetation around disturbed areas to provide habitat, increase the seed bank and to provide a mulch material for nutrient cycling and water retention purposes.	Ongoing.	Site observations	The audit team observed the use of cleared vegetation as habitat and mulch	C	
8.4	Strip all groundcover vegetation with the topsoil to ensure maximum retention of nutrients and native seeds to facilitate rapid vegetation of the soil stockpiles.	Ongoing.	Site observations	Stripped topsoil was observed during the site inspection.	C	
Desired Outcome: Manage progressive disturbance over the Mine Site to minimise disturbance to flora and fauna of conversation significance.						
8.5	Clearly identify the boundaries of proposed disturbance. As far as practicable avoid disturbance to the vegetation of Community 3 along watercourses of the Mine Site.	Prior to clearing the nominated area(s).	Surface Disturbance Form	The Audit team sighted examples of pre-clearance forms confirming boundaries of proposed clearance.	C	
8.6	Commission a qualified ecologist to complete a pre-clearance survey of nominated areas of disturbance (to identify whether any threatened species, population or community or their habitat is present).	Prior to clearing the nominated area(s).	Surface Disturbance Form EcoLogical pre-clearance surveys	Requirement for an ecology survey is included in the permit to disturb form and undertaken as required. The audit team sighted examples of pre-clearing surveys conducted by EcoLogical.	C	
8.7	Include an assessment of whether aquatic or fish habitat is present within the drainage features to be traversed by the access road and/or power line corridors. The location of access tracks will be determined in conjunction with an ecologist after inspecting each proposed route and determining the path with least impact on environmental values.	Prior to clearing the nominated area(s).	Surface Disturbance Form	Permit to disturb and pre-clearing surveys	C	
8.8	(In the event that an EEC or threatened species or population is identified), relocate or reorientate proposed disturbance, if practicable.	Prior to clearing the nominated area(s).	Interview with Environmental Superintendent	The audit team was advised that disturbance tries to avoid habitat trees	C	
8.9	If the relocation or re-orientation of the area to be disturbed is not practicable (for reasons of mine I operational safety), the consultant ecologist will relocate any fauna species residing within the area to be cleared.		Interview with Environmental Superintendent	The audit team was advised that relocation is undertaken only if required during pre-clearing survey	C	
8.10	Retain all substantial habitat trees, wherever possible.	During construction.	Outside audit period	Outside audit period	N/A	

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
8.11	Undertake any tree-felling in accordance with a Tree Felling Protocol. The Tree Felling Protocol will be developed by a qualified ecologist and will include, but not necessarily be limited to a description of: <ul style="list-style-type: none"> - the best time of the year for felling; - pre-felling mapping of habitat trees; - inspections of trees on the day of felling; - procedures for the safe removal of fauna species; - a relocation/release protocol; and - a protocol for the assessment and salvaging of tree hollows. 	During construction.	Outside audit period	Outside audit period	N/A	
8.12	Disperse and spread cleared native vegetation around disturbed areas to provide habitat, increase the seed bank and to provide a mulch material for nutrient cycling and water retention purposes.	Following clearing if areas available, otherwise when revegetation area available.	Site observations	The audit team observed the use of cleared vegetation as habitat and mulch	C	
8.13	Strip all groundcover vegetation with the topsoil to ensure maximum retention of nutrients and native seeds to facilitate rapid vegetation of the soil stockpiles.	Ongoing.	Site observations	Stripped topsoil was observed during the site inspection.	C	
8.14	Re-site all hollows from hollow-bearing trees removed where practicable.	Ongoing.	Eco-logical pre-clearance surveys	The audit team sighted examples of pre-clearance surveys where tree hollows had been re-sited.	C	
Desired Outcome: Minimise long term impact on flora and fauna on and around the Mine Site.						
8.15	Implement a weed management strategy, in consultation with the Livestock Heath and Pest Authority and the Narrabri Shire Council weeds officer, for the retained or rehabilitate natural vegetation within the Mine Site.	To be developed in the Landscape Management Plan for the Project in accordance with the Stage 1 conditional requirement.		Verified via CoA	C	
8.16	Implement a feral animal management program to lower the predator impact upon small terrestrial native species.	In accordance with Landscape Management Plan.		Verified via CoA	C	
8.17	Inspect the sediment dams, evaporation ponds and brine storage ponds for fauna during the course of regular maintenance and operational inspections.	Ongoing.		Verified via CoA	C	
8.18	Undertake regular reviews of the revegetation program to ensure it remains relevant.	Annually.	Annual Monitoring Reports Annual Reviews	Rehabilitation monitoring reports are prepared annually Reviewed in the MOP and annual review.	C	
8.19	Time clearing within woodland communities, where practicable, to avoid fauna breeding seasons.	Ongoing.	EcoLogical pre-clearance surveys	Clearing is undertaken to avoid breeding seasons	C	
8.20	Undertake progressive and final rehabilitation across the Project Site to recreate a final land use of agriculture and native vegetation.	Ongoing.	Rehabilitation Management Plan	Rehabilitation objectives are set out in the RMP.	C	
Desired Outcome: Ensure the biodiversity value of the Mine Site and surrounding areas is maintained or improved.						
8.21	Establish and implement a Biodiversity Offset Management Plan to the satisfaction of the DoP (and in consultation with the DECCW), to account for the area disturbed by the Longwall Project and in particular regard for Bertya Opponents, the Superb Parrot and Inland Grey Box EEC.	Within 9 months of Project Approval.		Outside audit period	N/A	

9. Indigenous Heritage

Desired Outcome: Employees and contractors who are sensitive to, and respectful of, the Aboriginal heritage on the Mine Site.

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
9.1	Involve all site employees and contractors in an awareness program re: Aboriginal Heritage Issues.	At Site Induction (and re-induction).	WHC generic induction sighted	Aboriginal heritage issues are included in the Whitehaven Coal and Narrabri surface inductions. All employees and contractors are required to complete both inductions.	C	
Desired Outcome: Ensure protection of Aboriginal sites and artefacts of scientific significance (Aboriginal Sites 10, 19, 38 and 39).						
9.2	Identify the boundaries of Aboriginal Sites 10, 19 38 and 39, design surface disturbing activities such as gas drainage operation, ventilation and access road construction to provide a buffer of at least 10m from the site fencing.	Prior to any surface disturbance within 100 m of the nominated sites.		Verified via CoA	C	
9.3	Erect a sign on the fencing identifying an "Environmental Protection Zone".	Prior to any surface disturbance within 100 m of the nominated sites.	Site observations	The audit team observed appropriate fencing	C	
9.4	Prohibit access to these sites by locating all surface disturbance (including roads) at least 10 m from these fence off areas.	Prior to any surface disturbance within 100 m of the nominated sites.	Aboriginal Cultural Heritage Management Plan	10m buffer is described in the ACHMP	C	
9.5	Remove the fencing (erected as nominated in Commitment 9.3) to allow the return of grazing to reduce the potential grass-fire hazard.	Following the completion of surface disturbance in the vicinity of the protected site.	Aboriginal Cultural Heritage Management Plan	Fencing is removed as required.	C	
Desired Outcome: Manage identified Aboriginal sites and artefacts (of Panels 1 to 7) in accordance with agreed management principles.						
9.6	For Aboriginal Sites 10, 19, 38, 39, design surface disturbing activities such as gas drainage operation, ventilation and access road construction to provide a buffer of at least 10 m from the site fencing.	Prior to any surface disturbance.	Aboriginal Cultural Heritage Management Plan	10m buffer is described in the ACHMP	C	
9.7	For all other Aboriginal sites, design surface disturbing activities such as gas drainage operations, ventilation and access road construction to avoid wherever possible the identified Aboriginal sites.	Prior to any surface disturbance within 100 m of any other Aboriginal site.	Aboriginal Cultural Heritage Management Plan	As above	C	
9.8	In the event that one of the Aboriginal sites (other than Aboriginal Sites 10, 19, 38 and 39) cannot be avoided, commission an archaeologist and invite representatives of registered Aboriginal stakeholder (Gomerioi and Narrabri LALC) to salvage the artefacts identified at the affected site ("the Salvage Area").	Prior to salvage.	Aboriginal Cultural Heritage Management Plan Interview with Environmental Superintendent	No salvaging has been required	NT	
9.9	Undertake a full analysis of the material salvaged from within the Salvage Area by allowing the archaeologist to take the artefacts for further analysis.	Following salvage and prior to any surface disturbance.		No salvaging has been required	NT	
9.10	Return the salvaged artefacts to the authorised Aboriginal organisation.	Within 21 days of salvage.		No salvaging has been required	NT	
9.11	Place the salvaged artefacts in the care and control of the Aboriginal organisation agreed to by Narrabri LALC and Gomerioi. (The Proponent (if required) has agreed to provide an interim 'keeping place' in a designated storage facility with the Pit Top Area until such time as a suitable location is identified and agreed to by Narrabri LALC and Gomerioi).	Following salvage.		No salvaging has been required	NT	
9.12	Commission the preparation of a report ("Salvage Report") including full descriptions of the salvaged material, and an interpretation of the archaeological record within the Salvage Area.	Following salvage.		No salvaging has been required	NT	
9.13	Provide copies of the Salvage Report to Narrabri LALC, Gomerioi and the DECCW.	Within 3 months of salvage.		No salvaging has been required	NT	
Desired Outcome: Manage Aboriginal sites and artefacts (within the remaining Mining Area) in accordance with agreed management principles.						

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
9.14	As mining approaches the completion of Panels 1 to 7, undertake a further detailed field survey, involving representatives of the registered Aboriginal stakeholders, above the Mining Area to be disturbed over the ensuing 7 years.	At least 12 months prior to completion of mining in Panel 7.	Interview with Environmental Superintendent	Field surveys are undertaken prior to disturbance in collaboration with RAPs. Aboriginal cultural heritage assessment have been completed as required.	C	
9.15	Identify and protect through fencing and signage, those sites determined to be of high scientific significance as agreed and determined in consultation between the Proponent, the registered Aboriginal stakeholders and the archaeologist.	Prior to surface disturbance associated with Panel 8.	Site observations Surface Disturbance form	The audit team observed appropriate fencing. All surface disturbance is assessed through the Surface Disturbance form and RAPs consulted as appropriate.	C	
9.16	In the event that an identified site cannot be avoided, commission an archaeologist and invite representatives of registered Aboriginal stakeholders (Gomerioi and Narrabri LALC) to salvage the identified artefacts. All salvage is to be undertaken as per <i>Commitments 9.9 to 9.13</i> above.	Prior to surface disturbance.	Aboriginal Cultural Heritage Management Plan	The procedure is described in the ACHMP and has been implemented as required.	C	

Desired Outcome: Manage Aboriginal heritage values in accordance with agreed management principles.

9.17	Prepare, in consultation with the registered Aboriginal stakeholders and the DECCW, an updated Aboriginal Heritage Cultural Management Plan (ACHMP). The ACHMP will include: <ul style="list-style-type: none"> - protocols and procedures to ensure that all commitments (see Commitments 9. 1 to 9.20) are implemented in full; - consultation and communication framework between the Proponent, registered Aboriginal stakeholders and the DECCW; - the accountabilities and responsibilities of the Proponent and registered Aboriginal stakeholders; and - All legal reporting requirements nominated by the DECCW. 	Within 6 months of receiving Project Approval.	Outside audit period	Outside audit period	NT	
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Desired Outcome: Appropriate protection and/or salvage of Aboriginal sites and artefacts identified beyond the identified beyond the Aboriginal sites defined during previous field surveys.

9.18	Ensure that if any further Aboriginal artefacts are uncovered at any time during the life of the mine, work in the vicinity of the subject area ceases and the Proponent follows the procedures recorded in the ACHMP.	In the event of an Aboriginal site or artefact being identified.		Refer to CoA	NC	Ensure the ACHMP continues to be implemented and employees made aware of requirements of the plan.
9.19	Wherever possible, if a tree is identified as having culturally made scars, it is retained in situ and protected.	In the event of a scarred tree being identified.	Interview with Environmental Superintendent	None identified during audit period	NT	
9.20	Ensure that, where it is not possible to retain a scarred tree <i>in-situ</i> , the tree is cut down to preserve the scar, and relocated into a designated protected area. All activity associated with cutting of the tree and preservation of the scar is to be conducted in consultation with the Aboriginal stakeholders and the archaeologist.	In the event of a scarred tree being identified.	Interview with Environmental Superintendent	None identified during audit period	NT	

10. Noise

Desired Outcome: All activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.

10.1	Ensure that the approved hours of operation are adhered to.	Ongoing.		Verified via CoA	C	
10.2	Use equipment with lower sound power levels in preference to more noisy equipment.	Ongoing.		Verified via CoA	C	
10.3	Regularly service all equipment used on-site to ensure the sound power levels remain at or below the levels used in the modelling to assess generated noise levels and compliance with the criteria.	Ongoing.		Verified via CoA	C	

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
10.4	Maintain a dialogue between the Proponent and surrounding neighbours and the local community to ensure any concerns over construction, operational or transport noise are addressed.	Ongoing.		Verified via CoA	C	
Desired outcome: Noise generated by construction activities does not DECCW nominated criteria nor significantly impact on neighbouring landowners and/or residents.						
10.5	Ensure that all equipment emits sound power levels consistent with the schedules in Appendix A of Spectrum Acoustics (2009).	Ongoing.		Verified via CoA	C	
10.6	Restrict the operation of a maximum of two (2) scrapers during construction operations under temperature inversion conditions, to one of the following areas only. <ul style="list-style-type: none"> the longwall unit assembly area; the ROM coal pad area; the Reject Emplacement Area; or the Brine Storage Area. 	During construction phase.		Outside audit period	N/A	
10.7	Undertake noise monitoring at the private residences most likely to be affected by construction noise.	As required during construction works with real time noise monitoring and attended quarterly monitoring.		Verified via CoA	C	
10.8	In the event that noise monitoring confirms exceedance of noise criteria at privately owned residences, where noise mitigation measures prove ineffective, negotiated agreements will be sought with the affected parties in accordance with the Industrial Noise Policy	As required if exceedances cannot be mitigated.		Verified via CoA	C	
10.9	In accordance with the Noise Management Plan and to account for inversion impacts, develop an operational protocol in consultation with the DECCW to clearly define operational procedures to be adopted during inversion conditions to minimise impact at adjoining privately owned residences.	Within 3 months of approval.		Verified via CoA	C	
Desired outcome: Noise generated by operational activities does not exceed DECCW nominated criteria more significantly impact on neighbouring landowners and/or residents.						
10.10	Fully enclose the rotary breaker within a shed (or similar) clad with tilt-up aerated concrete panels, or similar.	Prior to commencement of coal processing.		Verified via CoA	C	
10.11	Enclose the coal processing plant with clad steel sheeting and line 50% of the internal surface with acoustic insulation.	Prior to commencement of coal processing.		Verified via CoA	C	
10.12	Refrain from using the bulldozer on the Reject Emplacement Area in both the morning and evening periods.	During temperature inversion conditions.		Verified via CoA	C	
10.13	Limit the number of truck movements to the Reject Emplacement Area to 1 load per 15 minute period.	During temperature inversion conditions.		Verified via CoA	C	
10.14	Ensure specific noise attenuation is provided to surface drills when operating over LW1 to LW3 and LW24 to LW26 to achieve a sound power level of 109dB (A).	Prior to surface drilling (under inversion conditions) above the nominated longwall panels.		Verified via CoA	C	
10.15	Update the existing Noise Management Plan.	Within 6 months of approval.		Verified via CoA	C	
Desired outcome: Noise generated by transport activities does not exceed DECCW nominated criteria nor significantly impact on neighbouring landowners and/or residents.						
10.16	Ensure strict adherence to hours of operation, including transport activities.	Ongoing.		Verified via CoA	C	
10.17	Instruct all project employees and contractors to enter and exit the Mine Site in a courteous manner and without causing undue traffic noise.	On inductions (and re-induction).		Verified via CoA	C	
10.18	Maintain the on-site road network to limit body noise from empty trucks travelling on internal roads.	Ongoing.		Verified via CoA	C	

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
Desired outcome: Blasting undertaken that complies with the nominated DECCW criteria.						
10.19	Ensure that all blasts are designed by a suitably qualified and experienced blasting engineer or shot-firer and that each blast is designed to ensure compliance with the relevant assessment criteria or conditional requirements.	As required.		No blasting has been conducted	NT	
Desired outcome: Implementation of an appropriate noise monitoring program to ensure continuing compliance with the DECCW guideline levels during longwall mining operations.						
10.20	Undertake attended noise monitoring at the residences most likely to be affected by Longwall Project generated noise. "Bow Hills" "Belah Park" "Naroo" "Matilda" ¹ "Oakleigh" "Haylin View" "Newhaven" "Merrilong" ¹	Quarterly.		Verified via CoA	C	
10.21	Increase the frequency of monitoring during the first winter (May to September) of mining operations proposed under this approval. This will also incorporate real time noise monitoring as required under the Stage 1 modification approval.	Monthly.		Outside audit period	N/A	
10.22	Review and submit noise monitoring results to the DECCW.	Annually.		Verified via CoA/EPL	C	
11. Air Quality						
Desired outcome: Site activities are undertaken without exceeding DECCW air quality criteria or goals.						
11.1	Minimise the extent of clearing across the Mine Site including the campaigns to construct the area for reject emplacement and construct brine storage ponds.	Ongoing.		Verified via CoA	C	
11.2	Retain cleared trees and branches on the margins of cleared areas for use in stabilising disturbed areas once they are no longer required.	Ongoing.		Verified via CoA	C	
11.3	Undertake soil stripping at times when most appropriate (such as when there is sufficient soil moisture to prevent significant lift-off of dust and at times other than periods of high winds).	Ongoing.		Verified via CoA	C	
11.4	Operate water sprays on all continuous miners, the longwall unit and the breaker feeder to minimise dust creation underground.	Ongoing.		Verified via CoA	C	
11.5	Apply water to the coal at the feed hopper, crusher and at all conveyor transfer and discharge points.	Ongoing.		Verified via CoA	C	
11.6	Fit all surface conveyors with appropriate cleaning and collection devices to minimise the amount of material falling from the return conveyor belts.	Prior to commencement of coal processing.		Verified via CoA	C	
11.7	Enclose the rotary breaker (see Commitment 10.10).	Prior to commencement of coal processing.		Verified via CoA	C	
11.8	Partially enclose all surface conveyors to minimise dust lift off.	Prior to commencement of coal processing.		Verified via CoA	C	
11.9	Cease construction of the brine storage ponds when the prevailing winds are from the northwest quadrant.	Ongoing.		Verified via CoA	C	
11.10	Apply water onto stockpiles and hardstand areas.	Ongoing.		Verified via CoA	C	
11.11	Progressively rehabilitate areas of disturbance including gas drainage areas.	Ongoing.		Verified via CoA	C	
11.12	Progressively rehabilitate areas no longer required for operational purposes.	Ongoing.		Verified via CoA	C	
Desired outcome: Minimise the potential for spontaneous combustion of the coal stored and handled on site.						
11.13	Minimise the length of time coal is held in stockpiles.	Ongoing.	Spontaneous Combustion in Surface Coal	Stockpiles are inspected on a minimum of 24 hour basis. In the event combustion is identified the TARP will be initiated.	C	

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
			Stockpiles Procedure, DATED 3 June 2013			
11.14	Monitor coal stockpiles for signs of spontaneous combustion.	Ongoing.	Spontaneous Combustion in Surface Coal Stockpiles Procedure, DATED 3 June 2013	Stockpiles are inspected on a minimum of 24 hour basis. In the event combustion is identified the TARP will be initiated.	C	
11.15	Immediately report incidents to the appropriate authorities.	Ongoing.	Stockpile Heating and Spontaneous Combustion TARP, dated 23 March 2017	If an uncontrolled event is identified, the PIRMP would be activated, requiring Notification to appropriate authorities (i.e. fire authority, EPA etc.)	C	
11.16	Extinguish fire by removal from stockpile, spreading and saturation with water.	In the event of ignition.	Stockpile Heating and Spontaneous Combustion TARP, dated 23 March 2017	Included in procedure – hot coal rolled out and sprayed with water	C	

Desired outcome: Ensure no employee's health is adversely affected as a result of employment at the Longwall Project.

11.17	Install underground ventilation system to provide fresh air to employees.	Ongoing and as required.		Verified by CoA		
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Desired outcome: Minimise greenhouse gas, other gas and odour emissions through reduction in diesel consumption.

11.18	Optimise and schedule vehicle operations to minimise vehicle movements.	Ongoing.		Verified by CoA	C	
11.19	Maintain engines according to manufacturer's guidelines and keep tyres at optimum pressure.	Ongoing.		Verified by CoA	C	
11.20	Minimises vehicle idling time.	Ongoing.		Verified by CoA	C	
11.21	Prepare an updated Energy Savings Action Plan (ESAP).	Within 12 months of Project Approval.		Verified by CoA	C	

Desired outcome: Implementation of an appropriate air quality monitoring program to ensure continuing compliance with DECCW guideline levels.

11.22	Monitor deposited dust levels at 8 sites (ND1 to ND8).	Monthly.		Verified by CoA	C	
11.23	Monitor PM ₁₀ levels at 2 sites (ND9 to ND10).	1 in 6 days as per DECCW schedule.		Verified by CoA	C	
11.24	Review and submit dust monitoring results to relevant government agency.	Annually.		Verified by CoA/EPL	C	

12. Soils and Land Capability

Desired outcome: Maintenance of soil value for rehabilitation and minimisation of soil loss through erosion.

12.1	Strip topsoil to a depth of 15 cm and strip subsoil to a depth of 25 cm (where sufficient soil depths are available).	During soil stripping operations.	Interview with Environment Superintendent	There are no stockpiles above longwalls – only at the REA for capping the final landform	C	
12.2	Avoid stripping or replacing under wet conditions.	During soil stripping operations.	Interview with Environment Superintendent	The audit team was advised that soil stripping is not undertaken during wet conditions	C	
12.3	Stockpile topsoil and subsoil separately with topsoil stockpiles not exceeding 2m in height and subsoil stockpiles not exceeding 3m in height.	During stockpiling operations.	Site observations	The audit team observed separate stockpiles at the REA that appeared to be not exceeding 2m for topsoil and 3m for subsoil.	C	
12.4	Carefully select soil stockpile locations to avoid subsequent movement, to ensure that the soil structure is not degraded.	During soil stripping operations.	Site observations	All stockpile are within the REA footprint	C	

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
12.5	Position soil stockpiles to prevent surface water runoff coming into contact with the soil stockpiles.	During soil stockpiling operations.	Site observations	Stockpile appeared to be positioned to avoid surface runoff.	C	
12.6	Construct soil stockpiles with a 'rough' surface to assist in runoff control and seed retention and germination.	During soil stockpiling operations.	Site observations	Stockpiles were observed to have a rough surface.	C	
12.7	Construct up slope water diversion banks to direct overland surface water flow away from soil stockpiles.	During soil stockpiling operations.	Site observations Narrabri Mine Rejects Emplacement Area Capping Assessment & Closure Design, November 2019	Upslope water diversion banks were observed to be in place.	C	
12.8	Install protective earthworks such as straw bale or contour bank protection to protect the soil stockpile from overland flow as required.	Following stockpile construction.	Interview with Environmental Superintendent	The audit team was advised that straw bales or contour banks are used where required.	C	
12.9	Install silt-stop fencing or similar protection immediately down slope of stockpiles and retain until such time as they develop a stable cover of vegetation.	Following stockpile construction.	Site observations	Silt fences were observed on site.	C	
12.10	Sow soil stockpiles with stabilising groundcover species.	Following stockpile construction.	Site observations	Topsoil stockpile at REA is seeded.	C	
12.11	Retain soil conservation structures, or if disturbed, reinstate these structures to maintain pre-mining soil and water management on the Mine Site.	Ongoing.	Interview with Environment Superintendent Site observations	Re-instatement carried out as required.	C	
Desired outcome: Minimise erosion on the Mine Site as a consequence of subsidence.						
12.12	Inspect drainage lines, predicted surface cracking zones and other areas of the Mine Site susceptible to erosion, ie. soils of the Purlawaugh Formation on slopes >10°.	At least quarterly.		Refer to SoC 5		
12.13	Undertake remedial actions on areas of accelerated erosion, eg. reinstatement or realignment of contour banks, regrading of channels, sowing of cover crops, etc.	Ongoing as required.	Interview with Environment Superintendent	The audit team was advised that remedial action are undertaken as required.	C	
Desired outcome: Ensure no tunnelling erosion occurs as a consequence of pipeline channel excavation.						
12.14	Replace soil material in the reverse order to that removed, ie. lower subsoil layers, upper subsoil layers then topsoil	When under construction.		Outside audit period	NT	
Desired outcome: Remediate contaminated soils.						
12.15	Excavate and remove soils contaminated with hydrocarbons or saline water.	Within one month of contamination occurring.	Hydrocarbon management plan 2013 and reviewed Sep 2019	Contaminated soils are removed to the bioremediation pad and then to the rejects area or removed offsite. And initiating the PIRMP No reportable spills in the audit period.	C	
12.16	(If the contamination is widespread) Remove contaminated material to facility licensed to accept the nominated contamination.	Within one month of contamination occurring.		Not triggered	NT	
12.17	(If the hydrocarbon contamination is limited in area) Remove to a designated 'land farming' location (away from natural drainage) for bio-remediation of hydrocarbon contaminated material.	Within one month of contamination occurring.		Not triggered	NT	

13. Transportation

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Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
Desired Outcome: All motorists travel safely to and from the Mine Site with minimal disruption to Kamilaroi Highway or Kurrajong Creek Road Traffic.						
13.1	Transport coal entirely by rail.	Ongoing.		Verified by CoA	C	
13.2	Erect appropriate road signage.	As required.	Site observations	Appropriate road signage was observed	C	
13.3	Ensure all employees and contractors are regularly informed about the safe driving requirements to and from the mine site.	On induction and ongoing.		Information on safe driving and speeding is included in regular tool box briefings.	C	
13.4	Instruct all employees regarding the possible scenario where the rail crossing is closed at shift change-over and requirement for patience whilst the crossing is closed.	On induction.		In NCO induction	C	
13.5	Transport all oversize loads with all necessary permits.	As required.		As required	C	
13.6	Manage the maintenance of the Mine Access Road, Kurrajong Creek Road, North Western Branch Railway Crossing.	Ongoing for the life of the mine.	Site observations	The mine access road was observed to be in good condition	C	
Desired outcome: An improved understanding of the cumulative impacts of increased rail traffic on all stakeholders impacted by increased rail traffic to Port Newcastle.						
13.7	Work co-operatively with the relevant authorities, and as required ARTC, in terms of financial and in kind commitment of resources (to be agreed with the relevant authority and on an equitable basis with other rail users) in a study into the cumulative impacts of increased rail traffic from all sources.	When commissions by the relevant authority.		Not triggered	NT	
Desired outcome: An understanding of the implications of the cumulative impacts of increased rail traffic, on traffic flow in and about the township of Gunnedah.						
13.8	Work co-operatively with Gunnedah Shire Council in terms of financial and in-kind commitment of resources (to be agreed with Gunnedah Shire Council and on an equitable basis with other rail uses) in an Integrated Traffic Management Study to be commissioned by Gunnedah Shire Council.	When commissioned by Gunnedah Shire Council.		Not triggered	NT	
14. Visual						
Desired Outcome: The operation of the Siding Springs Observatory is not affected by project operations.						
14.1	Use soft lighting on the Pit Top Area to minimise impact on surrounding residents while allowing for evening maintenance and deliveries / night train loading activities.	Night-time operations.		No complaints received	NT	
Desired Outcome: Restriction of vantage points of project activities from neighbouring residences and public roads.						
14.2	Maintain the perimeter amenity bund and vegetate with native grasses, shrubs and trees.	During the site establishment phase.		Outside audit period	N/A	
14.3	Construct and vegetate a bund wall around the ventilation shaft areas to restrict the visibility of the activities from neighbouring residences.	During the site establishment phase.		Outside audit period	N/A	
14.4	Rehabilitate and revegetate all areas no longer required for site operations to ensure the maximum area of grassed paddock is present.	Ongoing.		Verified via CoA	C	
14.5	Construct / paint the load-out bin above the rail load-out area and site buildings in a grey / green hue to limit their overall visibility.	During the site establishment phase.		The load out bin was observed to be of a grey/green hue.	C	
15. Community Contributions						
Desired Outcome: Keep surrounding land owners and land users informed about site activities.						
15.1	Maintain the Community Consultative Committee or similar and include local community representatives.	Ongoing.	CCC meeting minutes	The CCC is maintained and meetings are held on a quarterly basis	C	
15.2	Provide regular newsletters regarding project progress and operations.	Ongoing.	CCC meeting minutes	CCC minutes are published on the website	C	

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Action No	Action	Timing	Reference/ Evidence	Comments	Compliance Status	Recommendations
			NCO Website	News section on the website contains community newsletters		
Desired Outcome: Contribute to the Local Community through appropriate contributions to Community Enhancement Activities.						
15.3	Provide funding of \$100,000 to the Gunnedah Shire Council Community Enhancement fund. Funding to be spread out equally over 5 annual instalments.	For 5 years.		Outside audit period	N/A	
15.4	Provide funding of \$1,500,000 to the Narrabri Shire Council Community Enhancement Fund. Funding to be provided in two instalments over two years.	2 years.		Outside audit period	N/A	
16. Environmental Monitoring						
Desired Outcome: Implement a comprehensive and ongoing surface water monitoring program.						
16.1	Monitor surface water quality for: pH, EC, TDS, TSS, Total Organic Carbon at locations upstream and downstream of the Pit Top Area on Kurrajong and Pine Creeks and their tributaries (See also <i>Commitment 7.27</i>).	Quarterly during surface flows.		<i>Verified via CoA</i>	C	
16.2	Record the volume and quality (pH, EC, TDS, TSS, Total Organic Carbon) of water extracted and discharged to the Namoi River (see also <i>Commitment 7.28</i>).	Weekly.		<i>Verified via CoA</i>	C	
16.3	Record extraction volumes including weekly totals from all pumping bores and weekly totals from underground and open cut sump (see also <i>Commitment 6.4</i>).	Weekly.		<i>Verified via CoA</i>	C	
16.4	Record Volumes of water introduced to the mine for longwall operation and other requirements (see also <i>Commitment 6.5</i>).	Weekly.		<i>Verified via CoA</i>	C	
16.5	Record the groundwater quality (EC and pH) discharged from the underground workings and water supply bores (See also <i>Commitment 6.6</i>).	Monthly.		<i>Verified via CoA</i>	C	
16.6	Sample and analyse water from all pumping bores and underground for the following parameters. <ul style="list-style-type: none"> EC, TDS, TSS and pH. Calcium, magnesium, sodium and potassium. Carbonate, bicarbonate, sulphate and chloride. Aluminium, arsenic, boron, cobalt, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, silver, selenium, zinc. Ammonia, nitrate, phosphorus, reactive phosphorus (see also <i>Commitment 6.7</i>). 	Quarterly.		<i>Verified via CoA</i>	C	
16.7	Record (by manual monitoring, or continuous automated monitoring) the standing water levels of piezometers P1 to P27 and WB1 and WB8 (and others as constructed) (see also <i>Commitment 6.8</i>).	Monthly initially and Quarterly after first 12 months.		<i>Verified via CoA</i>	C	
16.8	Monitor the flow rate and water quality of the spring discharge from "Mayfield Spring" (see also <i>Commitment 6.9</i>).	Monthly initially and Quarterly after first 12 months.		<i>Verified via CoA</i>	C	
16.9	Install additional multi-level vibrating wire piezometers over LW1 to LW3 to obtain detailed data as to the impact of mine subsidence on the groundwater of the various strata above the underground workings (see also <i>Commitment 6.10</i>).	Prior to commencement of longwall mining.		<i>Verified via CoA</i>	C	
16.10	Collect data from the vibrating wire piezometers and compare against initial groundwater and subsidence modelling predictions (see also <i>Commitment 6.11</i>).	Data collected continuously and downloaded and analysed quarterly.		<i>Verified via CoA</i>	C	

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
16.11	Commission an experienced hydrogeologist to collate and review the monitoring data collected annually in order to assess the impacts of the project on the groundwater environment, and to compare any observed impacts with those predicted from groundwater modelling (see also <i>Commitment 6.12</i>).	Annually.		Verified via CoA	C	
16.12	Develop the groundwater monitoring program in consultation with the Proponent's consultant hydrogeologist, the Department of Environment, Climate Change and Water – Office of Water and those groundwater users potentially affected by the project (see also <i>Commitment 6.13</i>).	Prior to commencement of longwall mining.		Verified via CoA	C	

Desired Outcome: Implementation of an appropriate noise monitoring program to ensure continuing compliance with DEC guideline levels.

16.13	Undertake attended noise monitoring at the residences most likely to be affected by Longwall Project generated noise. "Bow Hills" "Belah Park" "Naroo" "Matilda" "Oakleigh" "Haylin View" "Newhaven" "Merrilong" (see also <i>Commitment 10.20</i>)	Quarterly.		Verified via CoA	C	
16.14	Increase the frequency of monitoring during the first winter (May to September) of construction or mining operations. (see also <i>Commitment 10.21</i>) This will also incorporate real time noise monitoring in accordance with requirements under the Stage 1 modification approval.	Monthly.		Verified via CoA	C	
16.15	Review and submit noise monitoring results to the DECCW. (see also <i>Commitment 10.22</i>).	Annually.		Verified via CoA/EPL	C	

Desired Outcome: Implementation of an appropriate air quality monitoring program to ensure continuing compliance with DEC guideline levels.

16.16	Monitor deposited dust levels at 8 sites (ND1 to ND8). (see also <i>Commitment 11.22</i>).	Monthly.		Verified via CoA	C	
16.17	Monitor PM ₁₀ levels at 2 sites (ND9 to ND10). (see also <i>Commitment 11.23</i>).	1 in 6 days as per DECCW schedule.		Verified via CoA	C	
16.18	Review and submit dust monitoring result to relevant government agency. (see also <i>Commitment 11.24</i>).	Annually.		Verified via CoA/EPL	C	

17. Documentation

Desired Outcome: A systematic set of documents are in place to guide the planning and implementation of all environmental management strategies.

17.1	Incorporate the environmental procedures in an on-site management system.	Prior to relevant activity.		A management system is implemented	C	
17.2	Prepare or update the following management and monitoring plans; <ul style="list-style-type: none"> • Mining Operations Plan • Aboriginal Cultural Heritage Management Plan • Energy Savings Action Plan • Waste Management Plan • Water Management Plan • Landscape Management Plan • Greenhouse Gas Minimisation Plan • Gas Drainage & Outburst Management Plan • Major Hazard Management Plan • Salinity Contamination Contingency Plan • Extraction Management Plan • Erosion & Sediment Control Plan 	Various and as nominated by project approval.		All management plans are developed and documented.	C	

TABLE A1 CONDITIONS OF APPROVAL

Compliance with Ministers Conditions of Approval PA 08_0144 MOD 7

Action No	Action	Timing	Reference/Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> Noise Monitoring Program 					
17.3	Incorporate relevant environmental data and information in Annual Environmental Management Reports.	Annually.		Annual reviews	Environmental data is incorporated into the annual reviews.	C
18. General						
Desired Outcome: All buildings meet necessary building codes and specifications.						
18.1	Construct all buildings with certification by Narrabri Shire Council.	During site establishment phase.		Outside audit period	N/A	
18.2	Implement a policy encouraging employment of local district personnel, with arrangements for training and certification.	Prior to commencement of project.		Outside audit period	N/A	
18.3	Include environmental issues in the site induction process for new employees and/or contractors.	Prior to commencement of project.		Outside audit period	N/A	
18.4	Develop and incorporate an environmental training program to ensure all employees and contractors are environmentally responsible and follow all relevant site-specific procedures.	Prior to commencement of project.		Outside audit period	N/A	
18.5	Include environmental issues in the agenda for toolbox meetings with employees and/or contractors.	Ongoing.		There is no regular agenda item in toolbox talks, items are included as required or if there is an issue.	C	

TABLE B1 EPL

Compliance with Environment Protection Licence (EPL) 12789

Document details	
Document title	Table B1 EPL
Document subtitle	Compliance with Environment Protection Licence (EPL) 12789
Project No.	0523817
Date	23 January 2023
Version	Final
Author	Heather Mckay, Tom Abbott
Client Name	Whitehaven Coal Limited

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations									
1 ADMINISTRATIVE CONDITIONS														
A1 What the licence authorises and regulates														
A1.1	<p>This license authorises the carrying out of the scheduled development work listed below at the premises listed 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> <table border="1"> <thead> <tr> <th>Scheduled Activity</th> <th>Fee Based Activity</th> <th>Scale</th> </tr> </thead> <tbody> <tr> <td>Coal works</td> <td>Coal works</td> <td>>5000000 T annual handing capacity</td> </tr> <tr> <td>Mining for coal</td> <td>Mining for coal</td> <td>>5000000 T annual handing capacity</td> </tr> </tbody> </table>	Scheduled Activity	Fee Based Activity	Scale	Coal works	Coal works	>5000000 T annual handing capacity	Mining for coal	Mining for coal	>5000000 T annual handing capacity	Annual Reviews 2019, 2020, 2021 CHPP Daily Report, dated 7 December 2022	Annual ROM coal from site for reporting period: <ul style="list-style-type: none"> 2019- 5.59MT 2020- 6.71MT 2021- 3.37MT 2022 (YTD) – 3.14MT 	C	
Scheduled Activity	Fee Based Activity	Scale												
Coal works	Coal works	>5000000 T annual handing capacity												
Mining for coal	Mining for coal	>5000000 T annual handing capacity												
A2 Premises or plant to which this licence applies														
A2.1	<p>The licence applies to the following premises:</p> <p>Premises Details NARRABRI COAL OPERATIONS 10 KURRAJONG CREEK ROAD BAAN BAA 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).</p>	Note	Noted	Note										
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>(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>	Note	Noted	Note										

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations																				
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> <p>Air</p> <table border="1"> <thead> <tr> <th>EPA ID no.</th> <th>Type of monitoring point</th> <th>Type of discharge point</th> <th>Location description</th> </tr> </thead> <tbody> <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 "EPL 12789 Monitoring Locations" dated 21/02/2017 – EPA DOC17/131971</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> </tbody> </table>	EPA ID 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 "EPL 12789 Monitoring Locations" dated 21/02/2017 – EPA DOC17/131971	23		Gas Drainage Network	Pre-drainage and Goaf Gas drainage network associated with the underground mining operations.	EPL Monitoring Reports 2019 to 2022	Current monitoring points are included in both the EPL Monitoring Reports and the Current Environmental Monitoring Locations map.	C									
EPA ID 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 "EPL 12789 Monitoring Locations" dated 21/02/2017 – EPA DOC17/131971																						
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>	Note	Noted	Note																					
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 point.</p> <p>Water and Land</p> <table border="1"> <thead> <tr> <th>EPA ID no.</th> <th>Type of monitoring point</th> <th>Type of discharge point</th> <th>Location description</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>Wet weather discharge Discharge water quality monitoring</td> <td>Wet weather discharge Discharge water quality monitoring</td> <td>Discharge point on northern side of mine boundary labelled as "SD4" on Figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.</td> </tr> <tr> <td>12 (removed 19 January 2017)</td> <td>Wet weather discharge Discharge water quality monitoring</td> <td>Wet weather discharge Discharge water quality monitoring</td> <td>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.</td> </tr> <tr> <td>13</td> <td>Wet weather discharge Discharge water quality monitoring</td> <td>Wet weather discharge Discharge water quality monitoring</td> <td>Discharge point on south eastern side of mine boundary labelled as "SD2" on Figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.</td> </tr> <tr> <td>14</td> <td>Ambient Water Quality Monitoring</td> <td></td> <td>Upstream of mine discharge point on Kurrajong Creek Tributary 1 labelled as</td> </tr> </tbody> </table>	EPA ID 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 "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.	12 (removed 19 January 2017)	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 "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.	14	Ambient Water Quality Monitoring		Upstream of mine discharge point on Kurrajong Creek Tributary 1 labelled as	EPL Monitoring Reports 2019 to 2022	Based on review of the Monitoring Report for 2022, all current monitoring points with are included in the EPL Monitoring Reports.	C	
EPA ID 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 "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.																						
12 (removed 19 January 2017)	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 "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.																						
14	Ambient Water Quality Monitoring		Upstream of mine discharge point on Kurrajong Creek Tributary 1 labelled as																						

Item	Assessment Requirement			Reference/ Evidence	Comments	Compliance	Recommendations
				"KC1US" on Figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
15	Ambient Water Quality Monitoring			Downstream of mine discharge point on Kurrajong Creek Tributary 1 labelled as "KC1DS" on Figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
16	Ambient Water Quality Monitoring			Upstream of mine discharge point on Kurrajong Creek Tributary 2 labelled as "KC2US" on Figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
17	Ambient Water Quality Monitoring			Downstream of mine discharge point on Kurrajong Creek Tributary 2 labelled as "KC2DS" on Figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
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 "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
19	Ambient Water Quality Monitoring			Upstream location of Kurrajong Creek labelled as "KCUS" on figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
20	Ambient Water Quality Monitoring			Upstream location of Kurrajong Creek labelled as "KCDS" on figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
21	Ambient Water Quality Monitoring			Northern portion of mining area in Pine Creek labelled as "PCa" on figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
22	Ambient Water Quality Monitoring			Monitoring point in Pine Creek Tributary 1 labelled as "PC1" on figure titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971."			
24 (added as of 18 June 2019)	Water Quality Monitoring	Water Quality Monitoring		Discharge point at Namoi River Labelled as NR1 on Map titled			

Item	Assessment Requirement			Reference/ Evidence	Comments	Compliance	Recommendations
				"EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.			
25 (added as of 18 June 2019)	Ambient Water Quality Monitoring	Ambient Water Quality Monitoring	Ambient Water Quality Monitoring	Discharge point at Namoi River Labelled as NRUS on Map titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.			
26 (added as of 18 June 2019)	Ambient Water Quality Monitoring	Ambient Water Quality Monitoring	Ambient Water Quality Monitoring	Ambient Water Quality Ambient Water Quality Discharge point at Namoi River Monitoring Labelled as NRDS on Map titled "EPL 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.			
27 (added as of 18 June 2019)	Wet Weather Discharge Discharge water quality monitoring	Wet Weather Discharge Discharge water quality monitoring	Wet Weather Discharge Discharge water quality monitoring	Wet Weather Discharge Wet Weather Discharge point at Ventilation Shaft Discharge water quality Discharge water quality Labelled as SD8 on Map titled "EPL monitoring 12789 Monitoring Locations" dated 21/02/2017, EPA DOC17/131971.			
28 (added as of 7 September 2022)	Ground Water Monitoring Bore			As shown in Report "EPL 12789 Technical advise for Hydrology" existing Groundwater monitoring network mark P28(DOC20/555691).			
29 (added as of 7 September 2022)	Ground Water Monitoring Bore			As shown in Report "EPL 12789 Technical advise for Hydrology" existing Groundwater monitoring network mark P29(DOC20/555691).			
30 (added as of 7 September 2022)	Ground Water Monitoring Bore			As shown in Report "EPL 12789 Technical advise for Hydrology" existing Groundwater monitoring network mark P30(DOC20/555691).			
31 (added as of 7 September 2022)	Ground Water Monitoring Bore			As shown in Report "EPL 12789 Technical advise for Hydrology" existing Groundwater monitoring network mark P31(DOC20/555691).			
32 (added as of 7 September 2022)	Ground Water Monitoring Bore			As shown in Report "EPL 12789 Technical advise for Hydrology" existing Groundwater monitoring network mark P32(DOC20/555691).			
33 (added as of 7 September 2022)	Ground Water Monitoring Bore			As shown in Report "EPL 12789 Technical advise for Hydrology" existing Groundwater monitoring			

Item	Assessment Requirement			Reference/ Evidence	Comments	Compliance	Recommendations
			network mark P33(DOC20/555691).				
	34 (added as of 7 September 2022)	Ground Water Monitoring Bore	As shown in Report "EPL 12789 Technical advise for Hydrology" existing Groundwater monitoring network mark P34(DOC20/555691).				
	35 (added as of 7 September 2022)	Ground Water Monitoring Bore	Approximately 200m SW of bore at location 30 known as P58				
P1.4	Point W1 in the table, is identified in this license for the purpose of monitoring of weather parameters at that point. Point W2 in the table, is identified in this license for the purpose of monitoring Inversion conditions.			EPL Monitoring Reports 2019 to 2022	Observed to be present on monitoring maps provided and in place during site audit.	C	
	EPA ID no.	Type of monitoring point	Location of description				
	W1	Weather analysis					
	W2 (added as of 18 June 2019)	Measurement of Inversion conditions	Inversion tower identified as "W2" on map titled "EPL 12789 Monitoring Locations" dated 21/02/2017 - EPA DOC 17/131971.				
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.			EPL Monitoring Reports 2019 to 2022	No exceedances, leaks or significant spills were reported during the audit period.	C	
L2 Concentration Limits							
L2.1	For each monitoring/discharge point or utilisation area specified in the table/s 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.			EPL Monitoring Reports 2019 to 2022	<p>Surface water discharge is understood to have occurred at the following points during the audit period:</p> <ul style="list-style-type: none"> ■ Points 11, 13 in November 2021 ■ Points 11, 13 in December 2021 ■ Points 11, 13 in August 2022 ■ Points 11, 13, 18 in September 2022. ■ Points 11, 13, 18 in October 2022 ■ Points 11, 13, 18 in November 2022 <p>It is noted that exceedances for Total Suspended Solids (TSS) occurred in September 2022, October 2022 and November 2022 however the TSS concentration limit did not apply as per EPL12789 Condition L2.5(a) as the</p>	C	

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations																																																
			controlled discharge occurred solely as a result of rainfall exceeding 38.4 over a consecutive 5-day period.																																																		
L2.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	Note	Noted	Note																																																	
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/s.	Note	Noted	Note																																																	
L2.4	<p>Water and/or Land Concentration Limits</p> <p>Points 11, 13, 18, 27</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Unit 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> </tbody> </table> <p>Points 11, 13, 18, 24, 27</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Unit 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>pH</td> <td>pH</td> <td>-</td> <td>-</td> <td>-</td> <td>6.5-8.5</td> </tr> </tbody> </table> <p>Points 11, 13, 18, 27</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Unit 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>Total suspended solids</td> <td>Milligrams per litre</td> <td>-</td> <td>-</td> <td>-</td> <td>50</td> </tr> </tbody> </table> <p>Point 24</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Unit 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>Total dissolved solids</td> <td>Milligrams per litre</td> <td>250</td> <td></td> <td></td> <td>350</td> </tr> </tbody> </table>	Pollutant	Unit of measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Oil and grease	Milligrams per litre	-	-	-	10	Pollutant	Unit of measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	pH	pH	-	-	-	6.5-8.5	Pollutant	Unit of measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Total suspended solids	Milligrams per litre	-	-	-	50	Pollutant	Unit of measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Total dissolved solids	Milligrams per litre	250			350	<p>EPL Monitoring Reports 2019 to 2022</p> <p>Interviews with Environmental Superintendent</p>	<p>Surface water discharge is understood to have occurred at the following points during the audit period:</p> <ul style="list-style-type: none"> ■ Points 11, 13 in November 2021 ■ Points 11, 13 in December 2021 ■ Points 11, 13 in August 2022 ■ Points 11, 13, 18 in September 2022 ■ Points 11, 13, 18 in October 2022 ■ Points 11, 13, 18 in November 2022 <p>It is noted that in September 2022, exceedances for Total Suspended Solids (TSS) at Point 11 and Point 18 were reported, however the TSS concentration limit did not apply as per EPL12789 Condition L2.5(a).</p> <p>It is noted that in October 2022, exceedances for Total Suspended Solids (TSS) at Points 11, 13 and 18 were reported, however the TSS concentration limit did not apply as per EPL12789 Condition L2.5(a).</p> <p>It is noted that in November 2022, exceedances for Total Suspended Solids (TSS) at Points 11, 13 and 18 were reported, however the TSS concentration limit did not apply as per EPL12789 Condition L2.5(a).</p>	C	
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L2.5	<p>The Total Suspended Solids concentration limits specified for Points 11, 13, 18 and 27 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 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>	Note	<p>Noted. Triggered during the following periods:</p> <ul style="list-style-type: none"> ■ September 2022; ■ October 2022; and ■ November 2022 	Note																																																	

L3 Waste (new section as 7 September 2022)

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations										
L3.1	The licensee is permitted to receive hollow logs and tree stumps generated from Kamilaroi Highway upgrade works carried out in December 2020.	Note	Noted	Note											
L3.2	Green waste generated from the Kamilaroi Highway upgrade works is to be stored on the premises in a clearly defined area and is to be used for ecological rehabilitation purposes and velocity reducing features within the landscape only.	Observed during site walkover	The auditor sighted the green waste storage area which is located approximately 2.8 km west of the pit top.	C											
L3.3	Green waste generated from the Kamilaroi Highway upgrade works is to be placed in a manner that will not pollute land or waters.	Observed during site walkover		C											
L4 Noise limits															
L4.1	Noise generated at the premises must not exceed the noise limits in the table below. <table border="1" data-bbox="281 646 1350 793"> <thead> <tr> <th>Locality and location</th> <th>Day - LAeq (15 minute)</th> <th>Evening – LAeq (15 minute)</th> <th>Night – LAeq (15 minute)</th> <th>Night – LA1 (1 minute)</th> </tr> </thead> <tbody> <tr> <td>All privately owned residences</td> <td>35</td> <td>35</td> <td>35</td> <td>45</td> </tr> </tbody> </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	EPL Monitoring Reports 2019 to 2022 Annual Reviews 2019, 2020, 2021 Quarterly attended noise monitoring reports – 2019, 2020, 2021, 2022	The following exceedances of EPL noise limits were recorded during the audit period: <ul style="list-style-type: none"> 23 June 2020: Point N6, Night - LAeq (15 minute) of 40dB 8 September 2020: Point N3, Day – LAeq (15 minute) of 39 dB (Note: September 2020 recorded during non-compliant weather conditions of wind speed >3m/s and as such does not represent a non-compliance with the Project Approval). For the exceedance recorded in June 2020, mining continuum was noted as the event cause and no community complaints were received at the time of the exceedance. EPA and DPE were notified as required and subsequent monitoring events have recorded noise levels within the approved noise limits.	NC	Duplicate NC Ref. CoA Sch 4 Cl 1 Reported NC. No further action required.
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											
L4.2	The noise limits identified in the above table do not apply at privately owned residences that are: a) identified as residences subject to acquisition or noise mitigation on request within the Project Approval; or b) subject to a private agreement, relating to the noise levels, between the licensee and the land owner.	Note	Both N6 and N9 are private residences.	Note											
L4.3	For the purpose of the table above: a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays; b) Evening is defined as the period from 6pm to 10pm; c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.	Note	Noted	Note											
L4.4	Determining compliance 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 property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or	SLR Monitoring Report, dated 12 October 2022	Noted to be compliant based on observations made onsite, review of sample Noise Monitoring Reports and the Current Environmental Monitoring Locations.	C											

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations
	<ul style="list-style-type: none"> 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>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 facade.</p> <p>c) with the noise limits in the Noise Limits table, the noise measurement equipment must be located:</p> <ul style="list-style-type: none"> i) at the most affected point at a location where there is no 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. 				
L4.5	<p>The noise limits set out in the Noise Limits table apply under all meteorological conditions except for the following:</p> <ul style="list-style-type: none"> a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or c) Stability category G temperature inversion conditions. <p>For the purposes of this condition:</p> <ul style="list-style-type: none"> i) Data recorded by the meteorological station identified as EPA Identification Point(s) WW1 must be used to determine meteorological conditions; and ii) Temperature inversion conditions (stability category) are to be determined by direct measurement over a minimum 50m height interval as referred to in Part E2 of Appendix E of the "New South Wales Industrial Noise Policy" dated January 2000 ISBN 0 7313 2715 2. 	Note	Noted	Note	
L4.6	<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>	SLR Monitoring Reports	<p>Review of sample SLR noise monitoring reports identify low frequency noise components being evaluated as per the NSW Noise Policy for Industry (2017). Whilst Condition L4.6 states that the NSW Industrial Noise Policy (2000) should apply, justification for the use of NSW Noise Policy for Industry (2017) was provided through reference to Clause 8 under the 'Implementation and transitional arrangements for the Noise Policy for Industry (2017)' prepared by EPA. Clause 8 states "that "The NSW Industrial Noise Policy (2000) will continue to apply where it is referenced in existing statutory instruments (such as consents and licences), except for the NSW Industrial Noise Policy Section 4 modifying factors, which will be transitioned to the Noise Policy for Industry (2017) Fact Sheet C through a NSW Industrial Noise Policy application note. This approach has been taken because the Noise Policy for Industry (2017) modification factor approach reflects more recent understanding of the impact of tonal and low-frequency noise on the community."</p>	C	
L5 Blasting					
L5.1	<p>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.</p>	Interview with Environmental Superintendent	Not triggered – no blasting conducted during audit period	NT	

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations
L5.2	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.	Interview with Environmental Superintendent	Not triggered – no blasting conducted during audit period	NT	
L5.3	The airblast overpressure level from blasting operations listed in Conditions L4.1 and L4.2 must not be exceeded at any point within 30 metres of any non-project related residential building or other noise sensitive location.	Interview with Environmental Superintendent	Not triggered – no blasting conducted during audit period	NT	
L5.4	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 are not to be taken into account in determining whether or not the limit has been exceeded.	Interview with Environmental Superintendent	Not triggered – no blasting conducted during audit period	NT	
L5.5	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.	Interview with Environmental Superintendent	Not triggered – no blasting conducted during audit period	NT	
L5.6	The ground vibration peak particle velocity limits listed in Conditions L4.5 and L4.4 must not be exceeded at any point within 3.5 metres of any non-project related residential building or other noise sensitive location.	Interview with Environmental Superintendent	Not triggered – no blasting conducted during audit period	NT	
L5.7	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).	Interview with Environmental Superintendent	Not triggered – no blasting conducted during audit period	NT	
L5.8	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.	Interview with Environmental Superintendent	Not triggered – no blasting conducted during audit period	NT	

4 Operating Conditions

O1	Activities must be carried out in a competent manner				
O1.1	Licensed activities must be carried out in a competent manner This includes: 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.	EPA Provide Information and/or Records (Notice 1598692) NCO Response to Notice 1598692, dated 16 September 2020.	On 18 August 2020, EPA issued Notice to Provide Information and/or Records (Notice 1598692) to investigate whether Licence Condition O1 was contravened in relation to the disposal of end of life tyres generated by activities at Narrabri Coal Operations. In response to Notice 1598692, NCO submitted a response to EPA indicating that no end-of-life equipment tyres and light vehicle/road vehicle stored, or disposed of, at the premises. When underground mine vehicles, and surface mine equipment require a tyre replacement, entire wheel is removed and taken off-site to a service provider for repair or to coordinate disposal. Light vehicles are driven from the premises to the relevant service provider for scheduled maintenance. Where light vehicles wheels are required to be changed at the premises due to puncture and/or other damage, the entire wheel (i.e. tyre and rim) is removed and replaced with the spare wheel stowed on the vehicle. The	C	

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations
			removed wheel is taken off-site for the service provider to repair or coordinate disposal.		
O2	Maintenance of plant and equipment				
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	As per CoA, Condition 2.15	As per CoA, Condition 2.15	C	
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.	As per CoA, Condition 4.6 EPA Provide Information and/or Records (Notice 1589797) EPA Licence Variation 1582323, dated 3 December 2019 EPA Licence Variation 1622604, dated 7 September 2022	On 3 February 2020, EPA issued Notice to Provide Information and/or Records (Notice 1589797) relating to complaints received by the EPA relating to alleged dust emissions. The complaints allege that on 15 September 2018, 18 December 2019, 28 December 2019 and 8 January 2020 coal dust was seen leaving the premises. It was noted during the previous IEA that the EPA issued a Licence Variation on 3 December 2019 requiring a Pollution Reduction Programme (PRP). The objective of the PRP was to investigate the potential use of chemical veneers to suppress dust from coal stockpiles by 31 March 2020 and to engage a suitably qualified person to undertake a quality control audit and report on dust suppression systems (fixed and mobile) in operation at the pit top area. The PRP addressing the Pit Top Dust Suppression Systems was submitted to the EPA on 15 June 2020 in a report titled 'Narrabri Coal Pollution Reduction Study – U3 Review of Pit Top Dust Suppression System'. The auditor notes that following the PRP submission on 15 December 2020, the EPA requested further information to determine the effectiveness of the current suppression systems. NCO addressed the additional information request and submitted the updated report to EPA on 22 December 2021. The Auditor notes that as part of the most recent licence variation, the condition requiring NCO to review Pit Top Dust Suppression systems was removed from the EPL12789 as requirements have been addressed. At the time of the audit, NCO was noted to implement a trigger action response plan (TARP) as a dust control measure, which varies or ceases operations depending on wind speeds and weather conditions. Wetting down of roadways and stockpiles was also observed to occur.	C	
O4	Other operating conditions				

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations												
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 premises and which are likely to cause harm to the environment.	Pollution Incident Response Management Plan dated July 2022 Annual PIRMP Test Report 2020, 2021, 2022	Review of the PIRMP for the sites indicates that it covers legislative requirement and considers the major pollution risks across the facility. The PIRMP has been tested on a 12 month basis during the audit period. It was noted that various scenarios have been tested which included the overflowing of Dam (SB3), a spontaneous combustion event at the ROM stockpile and a structural failure at Dam C.	C													
O4.2	The licensee must keep the PIRMP on the premises at all times.	Observation during site walkover	A hard copy of the PIRMP is kept at reception and electronically, dated 22 October 2020.	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.	Note	Noted	Note													
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.	EPL Monitoring Reports 2012 to 2022	Monitoring records were observed to be maintained back to 2012.	C													
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.	Example sighted for deposited dust and surface water chain of custody documentation SLR Noise Monitoring Reports	Records were observed to be maintained as required.	C													
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 sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	ALS Current Best Method documentation, dated 7 June 2019	The ALS Current Best Method Documentation describes the particulates sampling procedure as per the Australian Standard 3580.10:2003 as required under Sampling Method AM-19.	C													
M2.2	Air monitoring requirements Point 3 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Particulates – deposited matter</td> <td>Grams per square metre per month</td> <td>Once a month (min. of 4 weeks)</td> <td>AM-19</td> </tr> </tbody> </table>	Pollutant	Units of measure	Frequency	Sampling method	Particulates – deposited matter	Grams per square metre per month	Once a month (min. of 4 weeks)	AM-19	EPL Monitoring Reports 2019 to 2022	Sampling of particulates is undertaken on a monthly basis. The maximum recorded concentration for monitoring was 9.7 g/m ² /month in February 2020.	C					
Pollutant	Units of measure	Frequency	Sampling method														
Particulates – deposited matter	Grams per square metre per month	Once a month (min. of 4 weeks)	AM-19														
M2.3	Water and/or Land Monitoring Requirements Point 11, 12, 13, 18, 27 Auditor Note: 27 added as of 18 June 2019 Auditor Note: 12 was removed 19 January 2017 Auditor Note: pH measured at special frequency 2 was removed 7 September 2022 <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Conductivity</td> <td>Microsiemens per litre</td> <td>Special Frequency 1</td> <td>In Situ</td> </tr> <tr> <td>Oil and Grease</td> <td>Milligrams per litre</td> <td>Special Frequency 1</td> <td>Grab sample</td> </tr> </tbody> </table>	Pollutant	Units of measure	Frequency	Sampling method	Conductivity	Microsiemens per litre	Special Frequency 1	In Situ	Oil and Grease	Milligrams per litre	Special Frequency 1	Grab sample	EPL Monitoring Reports 2019 to 2022.	Monitoring conducted during discharge events from Discharge Points 11, 13, 18 and 27. Discharge events during the audit period occurred in November 2021, December 2021, August 2022, September 2022, October 2022 and November 2022.	C	
Pollutant	Units of measure	Frequency	Sampling method														
Conductivity	Microsiemens per litre	Special Frequency 1	In Situ														
Oil and Grease	Milligrams per litre	Special Frequency 1	Grab sample														

Item	Assessment Requirement				Reference/ Evidence	Comments	Compliance	Recommendations
	pH	pH	Special Frequency 1	In Situ				
	Total organic carbon	Milligrams per litre	Special Frequency 1	Grab sample				
	Total suspended solids	Milligrams per litre	Special Frequency 1	Grab sample				
	Point 14, 15, 16, 17, 19, 20, 21, 22							
	Pollutant	Units of measure	Frequency	Sampling method				
	pH	pH	Special Frequency 2	In Situ				
	POINT 14,17,16,15,19,20,21,22							
	Auditor Note: this section added as of 7 September 2022							
	Pollutant	Units of measure	Frequency	Sampling method				
	Conductivity	microsiemens per centimetre	Special Frequency 2	In situ				
	Oil and Grease	milligrams per litre	Special Frequency 2	Grab sample				
	Total organic carbon	milligrams per litre	Special Frequency 2	Grab sample				
	Total suspended solids	milligrams per litre	Special Frequency 2	Grab sample				
	Point 24, 25, 26							
	Auditor Note: 24, 25 and 26 added as of 18 June 2019							
	Pollutant	Units of measure	Frequency	Sampling method				
	pH	pH	Special Frequency 3	In Situ				
	Total dissolved solids	Milligrams per litre	Special Frequency 3	Grab sample				
	POINT 28,29,30,31,32,33,34,35							
	Auditor Note: this section added as of 7 September 2022							
	Pollutant	Units of measure	Frequency	Sampling method				
	Bicarbonate	milligrams per litre	Quarterly	Representative sample				
	Calcium	milligrams per litre	Quarterly	Representative sample				
	Carbonate	milligrams per litre	Quarterly	Representative sample				
	Chloride	milligrams per litre	Quarterly	Representative sample				
	Electrical conductivity	microsiemens per centimetre	Quarterly	In situ				
	Magnesium	milligrams per litre	Quarterly	Representative sample				
	pH	pH	Quarterly	In situ				
	Potassium	milligrams per litre	Quarterly	Representative sample				
	Sodium	milligrams per litre	Quarterly	Representative sample				
	Standing Water Level	-	Quarterly	In situ				
	Sulfate	milligrams per litre	Quarterly	Representative sample				
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.				Note	Noted	Note	
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, 42, 13,18 or 27 commences and in any case not more than 12 hours after each discharge commences. Note: 27 added as of 18 June 2019 Note: 12 was removed 19 January 2017				Note	Noted	Note	
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 Environment approved "Stage 2 Water Management Plan" required under Schedule 4, condition 18 of the				Water Management Plan, Issue 4, March 2013	Groundwater monitoring is conducted in accordance with the Water Management Plan	C	

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations																																			
	Project Approval (08_0144) for the Stage 2 project. The results of this monitoring are required to be reported in the Annual Review.		and is reported in Annual Reviews.																																					
M2.7	For the purposes of the table(s) above Special Frequency 3 means the collection of samples as soon as practicable after each discharge commences from point NR1 and in any case not more than 4 hours after each discharge.	Note	Noted	Note																																				
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: <ul style="list-style-type: none"> 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 testing prior to the testing taking place. 	ALS Current Best Method documentation, dated 7 June 2019	The ALS Current Best Method Documentation describes the particulates sampling procedure as per the Australian Standard 3580.10:2003 as required under Sampling Method AM-19.	C																																				
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. Note: The Protection of the Environment Operations (Clean Air) Regulation 2021 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".	ALS Current Best Method documentation, dated 7 June 2019	Air Quality Monitoring is being conducted using approved methods.	C																																				
M4 Weather Monitoring																																								
M4.1	<p>Requirement to monitor weather</p> <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 border="1"> <thead> <tr> <th>Parameter</th> <th>Units of Measure</th> <th>Frequency</th> <th>Averaging Period</th> <th>Sampling Method</th> </tr> </thead> <tbody> <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> </tbody> </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	Sentinex Weather Station Calibration Reports	<p>The weather station was observed to monitor required parameters via unit of method and averaging period in real-time.</p> <p>According to the Sentinex Weather Station Calibration reports, the weather stations are calibrated to <i>AS3580.14-2011: Methods for sampling and analysis of ambient air, Part 14: Meteorological monitoring for ambient air quality monitoring applications.</i></p>	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																																				
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Sigma theta @ 10 metres	°	Continuous	15 minute	AM-2 & AM-4																																				

Item	Assessment Requirement					Reference/ Evidence	Comments	Compliance	Recommendations
	Solar radiation	W/m2	Continuous	15 minute	AM-4				
	Additional requirements - siting - measurement				AM-1 & AM-4 AM-2 & AM-4				
M5 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.					Complaint register 2019, 2020, 2021 and 2022	Noted to comply	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.					Complaint register 2019, 2020, 2021 and 2022	Noted to comply	C	
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.					Complaint register 2019, 2020, 2021 and 2022	Noted to comply	C	
M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.					Note	Noted	Note	
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.					Via Website: https://whitehavencoal.com.au/our-business/our-assets/narrabri-mine/	Complaints number is available on company website, 1800 942 836. The complaints line is managed by a third party who takes details and forwards complaints to the Environment Superintendent.	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.					Via Website: https://whitehavencoal.com.au/our-business/our-assets/narrabri-mine/ https://whitehavencoal.com.au/our-business/our-assets/narrabri-mine/	Complaints number is available on company website, 1800 942 836.	C	
M6.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.					Note	Noted	Note	
M7 Noise monitoring									
M7.1	For each monitoring point specified below, the Licensee must monitor the noise or vibration 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. POINTS: N5, N6, and N8					SLR Noise Monitoring Reports 2019, 2020, 2021, 2022	Monitoring was conducted on a quarterly basis for Points N5, N6, N8 and N9 during the audit period.	C	
	Parameter	Units of measure	Frequency	Sampling method					

Item	Assessment Requirement				Reference/ Evidence	Comments	Compliance	Recommendations												
	Ambient noise	LAeq (15 minute) LAmax LA1 LA10 LA90 LAmin	Quarterly monitoring as details in the most recently approved "Noise Management Plan" for the premises.	As detailed in the most recently approved "Noise Management Plan" for the premises.																
M7.2	POINT: N10 <table border="1"> <thead> <tr> <th>Parameter</th> <th>Units of measure</th> <th>Frequency</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Ambient noise</td> <td>LAeq (15 minute) LAmax 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> </tbody> </table>				Parameter	Units of measure	Frequency	Sampling method	Ambient noise	LAeq (15 minute) LAmax 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.	Note	Noted	Note					
Parameter	Units of measure	Frequency	Sampling method																	
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M7.3	For the purposes of conditions M7.1 and M7.2 the monitoring locations are described as: <table border="1"> <thead> <tr> <th>EPA ID no.</th> <th>Description of location</th> </tr> </thead> <tbody> <tr> <td>N5</td> <td>Within 30 metres of the residence on the property "Oakleigh"</td> </tr> <tr> <td>N6</td> <td>Within 30 metres of the residence on the property "Newhaven"</td> </tr> <tr> <td>N8</td> <td>Within 30 metres of the residence on the property "Haylin View"</td> </tr> <tr> <td>N10</td> <td>Portable Monitor</td> </tr> <tr> <td>N9</td> <td>Within 30 metres of the residence on the property "High Range"</td> </tr> </tbody> </table> <p>Note: Monitoring at N8 to commence when surface activities approach the eastern end of the southern longwall panels.</p> <p>Note: N10 is a portable 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.</p>				EPA ID no.	Description of location	N5	Within 30 metres of the residence on the property "Oakleigh"	N6	Within 30 metres of the residence on the property "Newhaven"	N8	Within 30 metres of the residence on the property "Haylin View"	N10	Portable Monitor	N9	Within 30 metres of the residence on the property "High Range"	Note	Noted	Note	
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M7.4	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 Determining Compliance, outlined above, and: <ol style="list-style-type: none"> at each one of the monitoring locations N5, N6, N8 and N9; occur Quarterly in a reporting period; occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of: <ol style="list-style-type: none"> 1.5 hours during the day; 30 minutes during the evening; and 1 hour during the night. occur for three consecutive operating days. 				EPL Monitoring Reports 2019 to 2022 SLR Noise Monitoring Reports 2019 to 2022	Quarterly monitoring reports were available for review dated between March 2020 and September 2022. The scope of these assessments were noted to align with the requirement outlined in Condition M7.1	C													
6 Reporting Conditions																				
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: <ol style="list-style-type: none"> a Statement of Compliance, a Monitoring and Complaints Summary, a Statement of Compliance - Licence Conditions, a Statement of Compliance - Load based Fee, 				Annual Returns for 2019-2020, 2020-2021 and 2021-2022.	Noted to be compliant	C													

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations
	<p>5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,</p> <p>6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and</p> <p>7. a Statement of Compliance - Environmental Management Systems and Practices.</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 the EPA.</p>				
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	Annual Returns for 2019-2020, 2020-2021 and 2021-2022.	Noted to be compliant	C	
R1.3	<p>Where this licence is transferred from the licensee to a new licensee:</p> <p>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</p> <p>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.</p>	Note	Not triggered	NT	
R1.4	<p>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:</p> <p>a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or</p> <p>b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.</p>	Note	Not triggered	NT	
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or 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').	2019-2020 Annual Return 2020-2021 Annual Return 2021-2022 Annual Return eConnect EPA Annual Return submission confirmation email, dated 7 April 2022.	The reporting period under the EPL is 20 February to 19 February each year, given this, the Annual Return for the 2021-22 reporting period was required to be submitted to EPA on 21 April 2022. NOCPL submitted the Annual Return on 7 April 2022.	C	
R1.6	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.	Annual Returns for 2015-2016, 2016-2017, 2017-2018 and 2018-2019.	Noted to be compliant	C	
R1.7	<p>Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.</p> <p>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.</p> <p>Note: An application to transfer a licence must be made in the approved form for this purpose.</p>	Annual Returns for 2019-2020, 2020-2021 and 2021-2022. 2021-2022 eConnect EPA Annual Return Form	Noted to be signed by Company Directors	C	
R2 Notification of environmental harm					
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.		Notification has been made via email to the EPA.	C	
R2.2	<p>The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.</p> <p>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.</p>	NCO, written email to EPA dated 21 July 2020.	EPA written notification indicates that notifications are provided within the required timeframes.	C	

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations
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.	EPA, Notice to provide information and/or records 1589797, dated 3 February 2020 EPA, Notice to provide information and/or records 1598692 EPA, Clean-up Notice 1593529, dated 9 April 2020 EPA, Variation to Clean-up Notice 1593529, dated 14 July 2020	The Auditor understands that on 15 January 2020, the EPA requested NCO to submit a written report in relation to an underground fire at the premises, which occurred on or around 30 December 2019. It is understood that NCO had identified a hot spot in the reject emplacement and that in the process of taking remediation action, the plant used to remove the hotspot released dust into the air. The Auditor understands that the written report was submitted to EPA on 30 January 2020.	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.	NCO, written email to EPA, dated 30 January 2020	Email evidence observed indicating that the report was submitted to EPA within the specified timeframe.	C	
R3.3	The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; 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; 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; e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.	Various reports as noted in this report.	Reports have been submitted as required by this condition.	C	
R3.4	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.	Various reports as noted in this report.	NCO has complied with all requests for further information.	C	
R4 Other reporting conditions					
R4.1	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: a) an assessment of compliance with noise limits detailed in the limit conditions of this licence; and 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.	SLR Monitoring Report, dated 12 October 2022 NCO email to EPA dated 12 October 2022	Report was submitted to the EPA on the 12 October 2022 following receipt on the same day.	C	
R4.2	Auditor Note: this section added as of 7 September 2022 The licensee must submit to the EPA Armidale Office within 30 days of obtaining the quarterly groundwater sampling results (required under condition M2.3), a report that provides:	Email sent from NCO to EPA Armidale with quarterly groundwater sampling results attached, dated 5 February 2022.	Quarterly groundwater sampling results were submitted to the EPA on the 5th February 2021 following receipt on 8th January 2021	C	

Item	Assessment Requirement	Reference/ Evidence	Comments	Compliance	Recommendations
	1. The quarterly ground water sampling results; and 2. Delineation of potential pollution sources and 3. A graph of the sampling results, inclusive of historical results, that allows visualisation of the trends over time being shown by sample results.				
7 General Conditions					
G1	Copy of licence kept at the premises or plant				
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Observed	Hard copy kept in Environmental Superintendent office	C	
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Note	Noted	Note	
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	Note	Noted	Note	
8 Pollution Studies and Reduction Programs Auditor Note: this section added as of 7 September 2022					
U1	Ground Water Characterisation and Leak Detection				
U1.1	For EPL monitoring points 28, 29, 30, 31, 32, 33 and 34, The licensee must submit as part of their annual return, a groundwater monitoring report that includes and is not limited to: 1. An annual review and summary of quarterly findings from the ongoing groundwater sampling occurring on the premises and 2. A delineation of potential groundwater pollution sources. This report must be submitted as part of the annual return.	Annual Return 2022	Groundwater monitoring report observed to be attached to annual return.	C	
9 Special Conditions					
E1	Quality Assurance and Verification Report				
	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.	Not	Not triggered	NT	
E2	Noise Impacts				
	Noise impacts where wind speed exceeds 3 metres per second at 10 metres above the ground must be addressed by: 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.	Complaints Summary 2019 to 2022 Procedure for the Recording of Community Complaints, dated 30 April 2020.	Since the previous IEA, it was noted that a procedure has been developed which requires the wind speed to be documented when a community complaint is made or recorded. Upon review of the community complaints summary, it was noted that wind speed has been recorded in relation to noise impacts.	C	

TABLE C1 – MINING LEASE

Compliance Assessment – Mining Lease 1609

Document details	
Document title	Table C1 – Mining Lease
Document subtitle	Compliance Assessment – Mining Lease 1609
Project No.	0532817
Date	23 January 2023
Version	Final
Author	Heather Mckay, Tom Abbott
Client Name	Whitehaven Coal Limited

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
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>	Note	Not triggered during this audit period, last amendment to the Mining Lease took effect on 1 July 2014.	NT	
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.		There were no recorded discharges of mine affected water from the site during the audit period. The Auditor notes that a number of non-compliances have been raised against Exploration Lease, however, this is outside of the Audit scope.	C	
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.	Mining Operations Plan Amendment B dated 29 November 2021 Letter from Resource Regulator dated 16 May 2022	The current MOP cover the period 1 December 2020 to 31 December 2023 and is approved by the Resource Regulator.	C	
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"> • the <i>Environmental Planning and Assessment Act 1979</i> • the <i>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>	Mining Operations Plan Amendment B dated 29 November 2021 Letter from Resource Regulator dated 16 May 2022	The approved MOP adequately addresses the requirements of this condition.	C	
3c	The titleholder may apply to the Director-General to amend an approved MOP at any time.	Mining Operations Plan Amendment B dated 29 November 2021 Letter from Resource Regulator dated 16 May 2022	Noted, the MOP was last amended on 29 November 2021 and was approved by the Department of Planning, Industry & Environment on 16 May 2022.	C	
3d	<p>It is not a breach of this condition if:</p> <p>(i) the operations constituting the breach were necessary to comply with a lawful order or direction given under the <i>Mining Act 1992</i>, the <i>Environmental Planning and Assessment Act 1979</i>, <i>Protection of the Environment Operations Act 1997</i> or the <i>Occupational Health and Safety Act 2000</i>; and</p> <p>(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.</p>	Interview – Environmental Superintendent	No breaches reported during audit period.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
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.	Mining Operations Plan Amendment B dated 29 November 2021 Letter from Resource Regulator dated 16 May 2022	The MOP is approved by the Department until 22 July 2022 and replaced by the Rehabilitation Management Plan.	C	
Environment 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.	Annual Reviews 2019, 2020 and 2021	Annual Reviews have been prepared and submitted as required by the Project Approval during the audit period.	C	
5	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;	Annual Reviews 2019, 2020 and 2021	The Annual Reviews 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.	Annual Reviews 2019, 2020 and 2021	Not triggered	NT	
Rehabilitation					
7	Disturbed land must be rehabilitated to a sustainable/agreed end land use to the satisfaction of the Director-General.	Annual Reviews 2019, 2020 and 2021	Refer to CoA, Condition 5, progressive rehabilitation was undertaken during the audit period and examples sighted by the auditor. Rehabilitation performance against goals is reported in the Annual Reviews. It is noted that with the commencement of the Mining Amendment (Standard Conditions of Mining Leases – Rehabilitation) Regulation 2021, this lease will be amended to include new standard conditions related to rehabilitation. NCO has submitted the Rehabilitation Management Plan and forward plan to the Resources Regulator. The RMP is due to be resubmitted to the Resources Regulator by 13 January 2023 following an update to align the rehabilitation objectives statement with the Resources Regulator Guidelines.	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 miniwalls, associated first workings (gateroads, installation roads and associated main headings, etc.), and pillar extractions. and are otherwise defined by the <i>Applications for Subsidence Management Approvals guidelines (EDG17)</i> (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 Mine Health & Safety Act 2004, or the document <i>New Subsidence Management Plan Approval Process - Transitional Provisions (EDP09)</i> . (d) Subsidence Management Plans are to be prepared in accordance with the <i>Guideline for Applications for Subsidence Management Approvals</i> .	Subsidence Management Plan	The SMP was approved by the DG on 13 April 2012	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	(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 <i>New Approval Process for Management of Coal Mining Subsidence - Policy</i> .				
Working Requirement					
9	<p>The lease holder must:</p> <p>(a) ensure that at least 212 competent people are efficiently employed on the ease 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 \$3,710,00 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>	CCC Meeting Minutes, June 2022. Interview – Environmental Superintendent	CCC report for June 2022 confirms that employment levels are 283 Whitehaven staff and 204 contractors	C	
Control of Operations					
10	<p>(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:-</p> <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>	Note	Noted	Note	
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>(c) A summary of all geological findings acquired through mining or development evaluation activities;</p> <p>(d) Particulars of exploration proposed to be conducted in the next twelve months period;</p> <p>(e) All plans, maps, sections and other data necessary to satisfactorily interpret the report.</p>	Exploratory reports 2020, 2021, 2022 Acknowledgement of lodgement for 2022 report received on 16/5/2022	Annual exploratory reports reviewed for the audit period adequately meet the requirements of this condition.	C	
Licence to Use Reports					
12	<p>(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.</p> <p>(b) The non-exclusive licence will operate as a consent for the purposes of section 365 of the Mining Act 1992.</p>	Note	Noted	Note	
Confidentiality					
13	<p>(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:</p> <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>	Note	Noted	Note	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Terms of the non-exclusive licence					
14	The terms of the non-exclusive copyright licence granted under condition 12 are: (a) the Minister may sub-licence others to publish, print, adapt and reproduce but not on-licence reports. (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 electronic database. (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. (d) there is no royalty payable by the Minister for the licence. (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.	Note	Noted	Note	
Blasting					
15a	Ground Vibration 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 occupied premises as the case may be, unless determined otherwise by the Department of Environment and Climate Change.	Interview – Environment Superintendent	No blasting took place during the audit period.	NT	
15b	Blast Overpressure 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.	Interview – Environment Superintendent	No blasting took place during the 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 acceptable to the Director-General.		Safety not subject of IEA	Note	
Exploratory Drilling					
17 (1)	At least twenty eight days prior to commencement of drilling operations the lease holder must notify the relevant Department of Climate Change and Environment regional hydrogeologist of the intention to drill exploratory drill holes together with information on the location of the proposed holes.	Interview – Environment Superintendent	NCO advised that drilling is only undertaken for the purposes of advancing of the longwall progress and is not a planned exploration program.	NT	
17 (2)	If the lease holder drills exploratory drill holes he must satisfy the Director-General that:- a) all cored holes are accurately surveyed and permanently marked in accordance with Departmental guidelines so that their location can be easily established; b) all holes cored or otherwise are sealed to prevent the collapse of the surrounding surface; c) all drill holes are permanently sealed with cement plugs to prevent surface discharge of groundwaters; d) if any drill hole meets natural or noxious gases it is plugged or sealed to prevent their escape; e) if any drill hole meets an artesian or sub-artesian flow it is effectively sealed to prevent contamination of aquifers. f) 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. g) once any drill hole ceases to be used the land and its immediate vicinity is left in a clean, tidy and stable condition.	NC850 cement report NC847 GIS rehab monitoring records Drill hole tracker spreadsheet	Records reviewed confirm that drill holes are decommissioned and sealed, rehabilitated and rehabilitation is monitored as required.	C	
Prevention of Soil Erosion and Pollution					
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,	Refer to CoA Condition 4.6.			

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	waterbody or groundwaters. The lease holder must observe and perform any instructions given by the Director-General in this regard.	Annual Reviews 2019, 2020, 2021			
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.	Interview – Environment Superintendent	No power lines are located in the operational area.	NT	
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	No fences removed in the mining lease location. NCOPL are the landholders in which the mining lease applies. All land in active mining area	NT	
Roads and Tracks					
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 stipulate. (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.	Interview – Environmental Superintendent	Not triggered. Greylands Road is under mine ownership. There is no mine related infrastructure on Scratch Road and it is noted to largely be covered under the exploration lease.	NT	
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 Climate Change and Environment.	Interview – Environmental Superintendent	Tracks and drill pads are planned in accordance with disturbance limit. Gravel reused when access tracks are removed and rehabilitated along with other rehabilitation areas.	C	
Trees and Timber					
23	(a) The lease holder must not fell trees, strip bark or cut limber 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 conditions to the consent, without the approval of a warden. (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. (c) The lease holder must obtain all necessary approvals or licences before using timber from any Crown land within the lease area.	Interview – Environmental Superintendent	NCOPL is the landholder of the Mining Lease area. State forest is mostly on Exploration Lease area. No timber removed from Crown land at Scratch Road. No crown land in the active operational area.	C	
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 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 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.	Interview – Environmental Superintendent Email June 2021 briefing package for MOD7 Letter 9 June to MEG briefing on the MOD MEG advice to DPE, 13 August 2021	No such requests have been made. Consultation with MEG with MOD7 to change mining method – presented for change in mining method – no concerns raised. LW107 and 110 were already approved in the extraction plan. MEG provided advice to DPE in August 2021, stating “MEG considers the MOD to be appropriate use of resources”.	NT	
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.	Interview – Environmental Superintendent	No such requests have been made.	NT	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
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.	Interview – Environmental Superintendent	No such requests have been made.	NT	
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.	Interview – Environmental Superintendent	No such requests have been made.	NT	
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 Warden for inquiry and report under Section 334 of the Mining Act, 1992.	Interview – Environmental Superintendent	No such requests have been made.	NT	
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.	Interview – Environmental Superintendent	No such requests have been made.	NT	
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 act or thing which the lease holder may be licensed or compelled to do.	Interview – Environmental Superintendent Security Deposit dated 13/12/21 Bank guarantee determination dated 20/04/21	Security deposit - \$25.5M 13/12/21 Bank guarantee Determination 20/4/21 The Rehabilitation Cost Estimate (RCE) was updated for MOP amendment B to \$26.446M and the bank guarantee submitted to DPE. The RCE will be amended due to amendment to the forward plan.	C	
Security					
27a	A security in the sum of \$100,000 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.	2016 IEA	Verified in previous IEA	C	
27b	The lease holder must provide the security required by sub-clause (a) in one of the following forms: (i) cash, (ii) a security certificate in a form approved by the Minister and issued by an authorised deposit-taking institution.	2016 IEA	Verified in previous IEA	C	
Trigonometrical Stations and Survey Marks					
28	A person must not remove, damage, destroy, displace, obliterate or deface any marks in connection with any trigonometrical station, permanent mark or survey mark unless authorized to do so by the Surveyor-General.	Interview – Environmental Superintendent Email 25/10/21 application to disturb survey mark Survey mark removal granted 29 October 2021	NCO submitted application to disturb a survey mark for 201/202 extraction plan.	C	

APPENDIX B DEPARTMENTAL CORRESPONDENCE

Department of Planning and Environment



Shane Rily
Environmental Superintendent
Narrabri Coal Operations
Whitehaven Coal Limited
Kamilaroi Country

By email only: NCO-approval@whitehavencoal.com.au

19/10/2022

Dear Mr Rily

Narrabri Coal - Stage 2 (MP08_0144)
2022 Independent Environmental Audit – change of auditor request

Reference is made to your post approval matter, MP08_0144-PA-37, request for the Planning Secretary's approval of a change of support auditor for the 2022 Independent Environmental Audit (IEA) for the Narrabri Coal Operations (NCO), submitted as required by Schedule 6, Condition 7 of MP08_0144 as modified (the consent) to the Department of Planning and Environment (the department) on 17 October 2022.

The department has reviewed the nomination and information you have provided and is satisfied that Tom Abbott is suitably qualified and experienced for the role of support auditor. In accordance with Schedule 6, Condition 7 of the consent and the department's Independent Audit Post Approval Requirements (2020), the Planning Secretary has agreed to the following audit team amendment:

- Tom Abbott (replacement support auditor).

Please ensure this correspondence is appended to the Independent Audit Report.

Should you wish to discuss the matter further, please contact Joel Curran, Senior Compliance Officer on 02 4904 2702 or compliance@planning.nsw.gov.au

Yours sincerely

A handwritten signature in black ink that reads "H Watters".

Heidi Watters
Team Leader Northern
Compliance

As nominee of the Planning Secretary

Shane Rily
Environmental Superintendent
Narrabri Coal Operations
Whitehaven Coal Operations
Kamilaroi Country

By email only: NCO-approval@whitehavencoal.com.au

27/09/2022

Dear Mr Rily

**Narrabri Coal - Stage 2 (MP08_0144)
Independent Environmental Audit – submission extension request**

Reference is made to your post approval matter, MP08_0144-PA-36, request for an extension of time to submit the 2022 Independent Environmental Audit (IEA) of Narrabri Coal Operations (NCO), as required under Schedule 6, Condition 8 of MP08_0144 as modified (the approval).

The Department notes that the two-week Christmas shutdown period will impact the submission of the IEA report and NCO's response to the auditor's recommendations (RAR).

Accordingly, the Planning Secretary has granted an extension of time until 31 January 2023 to submit the 2022 IEA and RAR.

If you wish to discuss the matter further, please contact Joel Curran, Acting Team Leader on 02 4904 2702 or compliance@planning.nsw.gov.au

Yours sincerely



Joel Curran
Acting Team Leader
Compliance

As nominee of the Planning Secretary

Shane Rily
Environmental Superintendent
Narrabri Coal Operations
Whitehaven Coal Limited
Kamilaroi Country

By email only: NCO-approval@whitehavencoal.com.au

29/08/2022

Dear Mr Rily

**Narrabri Coal Operations (MP08_0144)
Auditor endorsement request - 2022 Independent Environmental Audit**

Reference is made to your post approval matter, MP08_0144-PA-33, request for the Secretary's endorsement of suitably qualified, experienced, and independent persons to prepare the 2022 Independent Environmental Audit (IEA) for Narrabri Coal Operations (NCO), submitted as required by Schedule 6, Condition 7 of MP08_0144 as modified (the consent) to the Department of Planning and Environment on 19 August 2022.

The Department of Planning and Environment (the department) has reviewed the nominations and information you have provided and is satisfied that these experts are suitably qualified, experienced, and independent. In accordance with Schedule 6, Condition 7 of the consent and the department's *Independent Audit Post Approval Requirements* (2020), the Planning Secretary has agreed to the following audit team:

- Ms Heather McKay – Lead Auditor
- Mr Mark Gethings – Support Auditor
- Mr Gareth Swarbrick – Subsidence Specialist
- Mr Chris Gimber – Water Specialist
- Magaesh Naidu – Noise Specialist
- Mr Oliver Moore – Technical Oversight and Review

Please ensure this correspondence is appended to the IEA Report.

The IEA must be prepared, undertaken, and finalised in accordance with the department's *Independent Audit Post Approval Requirements* (2020) and the conditions of consent. Failure to meet these requirements will require revision and resubmission. Further, in accordance with Schedule 6, Condition 7 of the consent the Planning Secretary requires that in undertaking the IEA, the auditors:

- Consult with the following agencies prior to the site inspection, with all matters raised to be clearly tabulated and addressed in the IEA report:

Department of Planning and Environment

- NSW Department of Planning and Environment
- NSW Department of Regional NSW, Mining, Exploration and Geoscience
- NSW Department of Planning, Biodiversity Conservation Division
- NSW Department of Planning, Water Division
- NSW Environmental Protection Authority
- NSW Resources Regulator
- Narrabri Council
- Narrabri Coal Operations Community Consultative Committee
- Only use the compliance status descriptors “compliant”, “non-compliant” or “not triggered”. The terms “partial compliance”, “partial non-compliance”, “not verified” or other similar terms are not to be used.
- Recommends actions to address each non-compliance identified and any additional opportunities for improvement.

Should you wish to discuss the matter further, please contact Joel Curran, Senior Compliance Officer on 02 4904 2702 or compliance@planning.nsw.gov.au

Yours sincerely

A handwritten signature in black ink that reads "H Watters".

Heidi Watters
Team Leader Northern
Compliance

As nominee of the Planning Secretary

Department of Planning and Environment

Our ref: OUT22/20314

Heather McKay
Level 9, 260 Queen St
Brisbane QLD 4000

Email: heather.mckay@erm.com

17 November 2022

Subject: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022

Dear Heather

I refer to your request seeking advice from the Department of Planning and Environment – Water (the department) on an upcoming audit for the above matter. It is understood this consultation is in accordance with conditions of approval for the project.

The department understands that the scope of the audit as outlined under the development consent and the reference guideline, “*Independent Audit Post Approval Requirements (2020)*” extends to at least the following:

- Identification of compliance requirements and documentation of any non-compliances.
- Assessment of the adequacy and implementation of management plans and sub plans.
- Assessment of compliance against relevant regulatory requirements and legislation.
- Assessment of compliance between actual and predicted impacts in the environmental assessment.
- Reporting requirements for management plans.
- Identification of strengths of the project in environmental management and opportunities for improvement.

The department requests that the audit address compliance with the following specific elements of the consent conditions and related legislative requirements in a manner consistent with the above audit scope:

- The requirement to prepare and implement management plans that relate to water sources and their dependent ecosystems and users, and associated impact management and mitigation. These plans may include:
 - Water Management Plans and related sub-plans eg. Site Water Balance, Erosion and Sediment Control Plan, Stormwater Management Plan, Surface and Groundwater Management Plan.
 - Extraction Plans and related sub-plans eg. Water Management Plan, Subsidence Management Plan.
- The requirement to prepare and implement trigger action response plans for water source impacts which set clearly defined limits and actions. This is to be reported on within annual and exceedance based reporting.
- Water supply availability is clearly defined for the project.

Department of Planning and Environment

- Water take at the site via storage, diversion, interception or extraction is clearly documented and is authorised by a relevant Water Access Licence or exemption under the Water Management (General) Regulation 2018.
- Water metering at the site is in accordance with the NSW Non-Urban Metering Framework where relevant.
- Water Access Licence/s used to account for water take by the project nominates the work where the water is being taken from.
- Annual reporting clearly documents; 1) water take, use and water source impacts, 2) compares results with previous year's, and 3) identifies exceedances and how these are managed/mitigated.

Should you have any further queries in relation to this submission please do not hesitate to contact DPE Water Assessments at water.assessments@dpie.nsw.gov.au

Yours sincerely,



Tim Baker
Senior Projects Officer, Assessments, Knowledge Division
Department of Planning and Environment: Water



AREQ0034158

Ms Heather McKay
ERM
PO Box 1400
Spring Hill QLD 4004

By email: Heather.McKay@erm.com

Dear Ms McKay

Subject: Narrabri Colliery – Independent Environmental Audit

Thank you for your email dated 9 November 2022 requesting consultation on the independent audit to be undertaken of the Narrabri Colliery which is covered by Mining Lease 1609 (ML1609).

The independent audit is required to assess compliance against the relevant environmental management conditions of ML1609 up to 1 July 2022, including the mining operations plan.

From 2 July 2022, the independent environmental audit should provide an assessment of compliance with the requirements of Schedule 8A Standard conditions of mining leases, Part 2 Standard conditions, as set out in the Mining Regulation 2016.

The audit should note observations where rehabilitation procedures, practices and outcomes represent best industry practice.

It would be appreciated if a copy of the final audit report could be sent to the Regulator at nswresourcesregulator@service-now.com upon completion of the audit.

Yours sincerely

Jenny Ehmsen
Principal Compliance Auditor
16 November 2022

Tetty Mackinnon

From: Lindsay Fulloon <Lindsay.Fulloon@epa.nsw.gov.au>
Sent: Wednesday, 30 November 2022 9:48 AM
To: Heather McKay
Subject: FW: RE: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022 [ref:_00D7F6iTix_5007F1LFZ7A:ref]
Attachments: image005.jpg; image006.jpg

EXTERNAL MESSAGE

Hello Heather

Please in future ensure that all correspondence with the EPA goes to info@epa.nsw.gov.au (they can be marked to the attention of a particular staff member) to ensure that matters are picked up if a staff member is on leave or not available for some other reason.

We have a few suggestions re: thinks that would be worth looking into at Narrabri Coal Mine as a result of recent observations and current climatic trends. These include:

- Waste management – key here is proper separation of hazardous or restricted solid waste from general solid waste to ensure it does not end up at a general solid waste landfill;
- Water inventory – recent extended wet weather events has put significant pressure on clean and dirty water infrastructure at mining sites throughout the region. It would be great if the audit could examine the sites performance with respect to its water management plan and any storage/treatment/management/discharge requirements; and
- Chemical storage and handling – during recent visits to the site, chemicals have not always been stored appropriately – consider bunding, exposure to rainfall etc.

Hope this helps

Kind regards

Lindsay Fulloon

Manager Regulatory Operations
Regulatory Operations Regional West
NSW Environment Protection Authority
D: 02 6773 7016 M: 0419 418 577



www.epa.nsw.gov.au @NSW_EPA

The EPA acknowledges the traditional custodians of the land and waters where we work. As part of the world's oldest surviving culture, we pay our respect to Aboriginal elders past, present and emerging.

Report pollution and environmental incidents 131 555 or +61 2 9995 5555

----- Forwarded Message -----

From: Heather McKay [heather.mckay@erm.com]

Sent: 28/11/2022 16:51

To: rebecca.scrivener@epa.nsw.gov.au; info@epa.nsw.gov.au

Cc: lcini@whitehavencoal.com.au; jgooley@whitehavencoal.com.au; oliver.moore@erm.com; brentbaker@whitehavencoal.com.au; tom.abbott@erm.com; srily@whitehavencoal.com.au

Subject: RE: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022

Dear Rebecca,

I would like to provide a reminder of the below request. I would appreciate if you could provide any items for input into the IEA by Monday 5 December.

Kind regards,

Heather

Heather McKay

Principal ESG Consultant

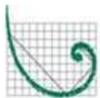
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PO Box 1400?Spring Hill ? QLD 4004

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E Heather.McKay@erm.com?W www.erm.com



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From: Heather McKay

Sent: Wednesday, November 9, 2022 6:30 PM

To: 'Rebecca.Scrivener@epa.nsw.gov.au' <Rebecca.Scrivener@epa.nsw.gov.au>; 'info@epa.nsw.gov.au' <info@epa.nsw.gov.au>

Cc: 'Shane Rily' <SRily@whitehavencoal.com.au>; Brent Baker <BrentBaker@whitehavencoal.com.au>; Lynden Cini (<LCini@whitehavencoal.com.au>) <LCini@whitehavencoal.com.au>; Jemma Gooley <JGooley@whitehavencoal.com.au>; Oliver Moore <Oliver.Moore@erm.com>; Tom Abbott <Tom.Abbott@erm.com>

Subject: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022

Dear Rebecca,

I am currently completing the Independent Environmental Audit (IEA) on the Conditions of Approval issued to Whitehaven Coal Narrabri Mine, PA 08_0144.

One of the requirements of the audit is that it is to be undertaken in consultation with relevant agencies. To that end, this email invites you to raise any questions or concerns regarding this project from an environmental management perspective.

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 6-8 December 2022, therefore it would be appreciated if there are any concerns, areas of focus etc., they are raised by 25 November 2022.

I can be contacted at the details outlined below to discuss further.

Kind regards,

Heather McKay

Principal ESG Consultant

ERM

Level 9 | 260 Queen St | Brisbane QLD 4000

PO Box 1400?Spring Hill ? QLD 4004

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ref:_00D7F6iTix._5007F1LFZ7A:ref

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PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

Tetty Mackinnon

From: Donna Ausling <donnaa@narrabri.nsw.gov.au>
Sent: Wednesday, 16 November 2022 5:33 PM
To: Heather McKay
Cc: Michelle Henry; Landon Brady
Subject: RE: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022 > response 16/11/2022

EXTERNAL MESSAGE

Good evening Heather,

Thanks for your email. It would be appreciated if the following items could be considered/focused on:

- Waste management, particularly waste tyre management given ongoing community interest.
- Biosecurity (weeds) management given the nature of the current season and ongoing flooding impacts.

Thank you for the opportunity to provide feedback.

Kind regards

Donna Ausling

Director Planning and Sustainability

Phone: 02 6799 6866

Email: donnaa@narrabri.nsw.gov.au

NARRABRI SHIRE
DISCOVER THE POTENTIAL



**HAVE YOUR SAY ON OUR
FLOOD MITIGATION PLAN.**
Let's keep our community safe.



From: Heather McKay <Heather.McKay@erm.com>
Sent: Wednesday, 9 November 2022 7:30 PM
To: Donna Ausling <donnaa@narrabri.nsw.gov.au>; Council <Council@narrabri.nsw.gov.au>
Cc: Shane Rily <SRily@whitehavencoal.com.au>; Brent Baker <BrentBaker@whitehavencoal.com.au>; Lynden Cini <LCini@whitehavencoal.com.au>; Jemma Gooley <JGooley@whitehavencoal.com.au>; Oliver Moore <Oliver.Moore@erm.com>; Tom Abbott <Tom.Abbott@erm.com>
Subject: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022

Dear Donna,

I am currently completing the Independent Environmental Audit (IEA) on the Conditions of Approval issued to Whitehaven Coal Narrabri Mine, PA 08_0144.

One of the requirements of the audit is that it is to be undertaken in consultation with relevant agencies. To that end, this email invites you to raise any questions or concerns regarding this project from an environmental management perspective.

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 6-8 December 2022, therefore it would be appreciated if there are any concerns, areas of focus etc., they are raised by 25 November 2022.

I can be contacted at the details outlined below to discuss further.

Kind regards,

Heather McKay
Principal ESG Consultant

ERM

Level 9 | 260 Queen St | Brisbane QLD 4000
PO Box 1400 | Spring Hill | QLD 4004
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E Heather.McKay@erm.com | W www.erm.com



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Tetty Mackinnon

From: Russell Stewart <fourstewarts@bigpond.com>
Sent: Tuesday, 15 November 2022 8:19 AM
To: Heather McKay
Cc: 'Shane Rily'; 'Brent Baker'; Lynden Cini; 'Jemma Gooley'; Oliver Moore; Tom Abbott
Subject: RE: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022

EXTERNAL MESSAGE

G'day Heather.

Many thanks.

There are no outstanding actions from the Narrabri CCC.

Regards,

Russell

Russell Stewart

Independent Chair

Narrabri Coal Community Consultative Committee.

Phone 0457922878 any time.

From: Heather McKay [mailto:Heather.McKay@erm.com]
Sent: Wednesday, 9 November 2022 7:30 PM
To: fourstewarts@bigpond.com
Cc: Shane Rily; Brent Baker; Lynden Cini; Jemma Gooley; Oliver Moore; Tom Abbott
Subject: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022

Dear Russell,

I am currently completing the Independent Environmental Audit (IEA) on the Conditions of Approval issued to Whitehaven Coal Narrabri Mine, PA 08_0144.

One of the requirements of the audit is that it is to be undertaken in consultation with relevant agencies. To that end, this email invites you to raise any questions or concerns regarding this project from an environmental management perspective.

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 6-8 December 2022, therefore it would be appreciated if there are any concerns, areas of focus etc., they are raised by 25 November 2022.

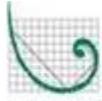
I can be contacted at the details outlined below to discuss further.

Heather McKay

Principal ESG Consultant

ERM

Level 9 | 260 Queen St | Brisbane QLD 4000
PO Box 1400 | Spring Hill | QLD 4004
T +61 (0)7 3007 8486 M +61 (0)420 532 113
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Tetty Mackinnon

From: Joel Curran <Joel.Curran@planning.nsw.gov.au>
Sent: Thursday, 10 November 2022 8:49 AM
To: Heather McKay
Cc: Shane Rily; Brent Baker; Lynden Cini; Jemma Gooley; Oliver Moore; Tom Abbott
Subject: RE: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022

EXTERNAL MESSAGE

Hi Heather

Thank you for getting in touch regarding the upcoming Narrabri Coal Mine IEA.

The department is requesting a focus on the following:

- Greenhouse gas emissions
 - a summary and assessment of greenhouse gas emissions during the audit period and comparison to EA predictions
 - a summary of all measures currently undertaken at the mine to minimise greenhouse gas emissions, and recommendations for additional measures that may be undertaken at the mine to minimise greenhouse gas emissions
 - implementation of the greenhouse gas minimisation plan, and recommendations for improvement to the plan
- biodiversity offsets
 - implementation of the biodiversity offset strategy
 - status of long-term security arrangements for the offset areas – date(s) offset areas long-term security arrangements were secured (finalised), method of security and any outstanding long-term security arrangements

Regards

Joel Curran
Senior Compliance Officer

Development Assessment | Department of Planning and Environment
T 02 4904 2702 | M 0412 323 331 | E joel.curran@planning.nsw.gov.au
PO Box 1226 | Newcastle NSW 2300
Please direct all email correspondence to compliance@planning.nsw.gov.au
www.dpie.nsw.gov.au



The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

If you are submitting a compliance document or request as required under the conditions of consent or approval, please note that the Department is no longer accepting lodgement via compliance@planning.nsw.gov.au.

The Department has upgraded the Major Projects Website to improve the timeliness and transparency of its post approval and compliance functions. As part of this upgrade, proponents are now requested to submit all post approval and compliance documents online, via the Major Projects Website. To do this, please refer to the instructions available [here](#).

From: Heather McKay <Heather.McKay@erm.com>
Sent: Wednesday, 9 November 2022 7:30 PM
To: Joel Curran <Joel.Curran@planning.nsw.gov.au>; DPE PSVC Compliance Mailbox <compliance@planning.nsw.gov.au>
Cc: Shane Rily <SRily@whitehavencoal.com.au>; Brent Baker <BrentBaker@whitehavencoal.com.au>; Lynden Cini <LCini@whitehavencoal.com.au>; Jemma Gooley <JGooley@whitehavencoal.com.au>; Oliver Moore <Oliver.Moore@erm.com>; Tom Abbott <Tom.Abbott@erm.com>
Subject: Whitehaven Coal Narrabri Mine Independent Environmental Audit 2022

Dear Joel,

I am currently completing the Independent Environmental Audit (IEA) on the Conditions of Approval issued to Whitehaven Coal Narrabri Mine, PA 08_0144.

One of the requirements of the audit is that it is to be undertaken in consultation with relevant agencies. To that end, this email invites you to raise any questions or concerns regarding this project from an environmental management perspective.

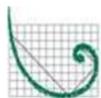
The attached Terms of Reference outlines the audit process, and also introduces the approved team of suitably qualified, experienced and independent experts who will be undertaking the audit. The site inspection will be completed over the period 6-8 December 2022, therefore it would be appreciated if there are any concerns, areas of focus etc., they are raised by 25 November 2022.

I can be contacted at the details outlined below to discuss further.

Kind regards,

Heather McKay
Principal ESG Consultant

ERM
Level 9 | 260 Queen St | Brisbane QLD 4000
PO Box 1400 | Spring Hill | QLD 4004
T +61 (0)7 3007 8486 **M** +61 (0)420 532 113
E Heather.McKay@erm.com | **W** www.erm.com



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ERM's Sydney Office

Level 15
309 Kent Street
Sydney NSW 2000

T: +61 2 8584 8888

F: +61 2 9299 7502

www.erm.com