

BARNETT & MAY

Metropolitan Coal Mine

2024 Independent Environmental Audit

Prepared for
Peabody Energy Pty Ltd.

Client representative
Stephen Love

Date
1 May 2025

Rev 2



Contents

1

1.	Introduction	1
1.1	Limitations of this Report	1
1.2	The Metropolitan Coal Mine.....	2
2.	Definitions	3
3.	Auditor Certification	5
3.1	Audit Details	6
4.	Audit process	7
4.1	Audit Guidelines	7
4.2	Overview	10
4.3	Preliminary activities	10
4.3.1	Approval of audit teams	10
4.3.2	Consultation with Agencies	10
4.4	Information Review and Compliance Register	11
4.5	Site audit	11
4.5.1	Opening Meeting	11
4.5.2	Site Inspections	11
4.5.3	Site Interviews	11
4.5.4	Document review	12
4.5.5	Closing Meeting	12
4.6	Reporting	13
5.	Stakeholder Consultation.....	15
6.	Statutory Compliance and Recommendations	20
6.1	Summary of Compliance Status	20
6.2	Non-Compliances and other recommendations	21
7.	Independent Audit Post Approval Requirements.....	32
7.1	Summary of Complaints	32
7.1.1	Complaints Management and Reporting	33
7.2	Summary of Environmental Incidents	34
7.2.1	Incident Management and Reporting	36
7.3	Summary of Notices	37
7.4	Project Environmental Management System	38
7.5	Implementation of the Operational Environmental Management Plan and Sub-plans	39
7.5.1	Surface Facility Water Management Plan	40
7.5.2	Noise Management Plan	40
7.6	Status of Previous IEA Findings	41
7.7	Specialist Auditor Reports	45
7.8	Operational Environmental Impacts	45
7.8.1	Extent of Project Operations	48
7.9	Other Matters	48

List of tables

Table 1 - Post Approval Audit Guidelines 7

Table 2 - Compliance Assessment Matrix 13

Table 3 - Risk Assessment Matrix 14

Table 4 - Summary of Stakeholder Inputs 15

Table 5 - Summary of Statutory Compliance..... 20

Table 6 - Statutory Non-Compliances 21

Table 7 - Summary of Complaints 32

Table 8 - Summary of Incidents..... 34

Table 9 - Management Plan Compliance Summary 39

Table 10 - Status of 2018 Audit Findings 41

Table 11 - Predicted vs Actual Impacts 45

Appendices

- Appendix A — Audit Table
- Appendix B – Audit Photographs
- Appendix C – Auditor Approval Letter
- Appendix D – Stakeholder Consultation
- Appendix E – Auditor Qualifications
- Appendix F – Specialists Reports

Prepared by — K. Holmes		Date 1 May 2025
-------------------------	---	-----------------

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
A	Draft for client Review	K. Holmes	R Peterson	K. Holmes	23/5/2024
0	Final	K. Holmes	K Holmes	K. Holmes	11/6/2024
1	Minor editorial revision	K. Holmes	K Holmes	K. Holmes	12/6/2024
2	Update to include specialist reports	K. Holmes	K. Holmes	K. Holmes	1/5/2025

© 2025 Barnett & May

This document is and shall remain the property of Barnett & May. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form is prohibited.

1. Introduction

The Metropolitan Coal Mine (also known as the Helensburgh Coal Mine), is located off Parkes St, Helensburgh, New South Wales (NSW) and is operated by Peabody Energy.

The purpose of the audit, that was undertaken in accordance with the **Barnett and May's** proposal (dated 19 October 2020), was to determine if the compliance obligations contained in the Project Approval (08_0149) Schedule 5, Conditions 8 and 9, which state:

C8 - "By the end of December 2011, and every 3 years thereafter, unless the Director-General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development.

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

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

C9 – Within 6 Weeks of completion of the audit, or as otherwise agreed by the *Director-General*, the Applicant must submit a copy of the audit report to the *Director-General*, together with its response to any recommendations contained in the Audit Report.

The site inspection was undertaken by Ken Holmes (Accredited Lead Auditor) of Barnett & May on 11 March 2024. The audit covered the period from 1 January 2021 to 28 February 2024 (the Audit Period).

Subsequent to the finalisation of Revision 1 of the report, DPHI requested that three specialist reports, covering Aquatic Ecology, Surface and Groundwater Hydrology and Subsidence be included. This report has been amended to include the findings of those specialist report..

1.1 Limitations of this Report

In preparing this Independent Environmental Audit Report, Barnett and May has assessed the activities appropriate and necessary to evaluate the compliance status against the conditions contained in the Auditee's Project Approval. Barnett and May has addressed the general technical matters which might reasonably be considered to be relevant to such an assessment.

The findings of this Independent Environmental Audit are based on observations of the site, interviews with personnel nominated by the Auditee and review of the documentation provided by the Auditee. Barnett and May has relied on the accuracy and completeness of the documentation and other information provided by the Auditee.

Barnett and May can only advise based on the information provided to them and therefore cannot dismiss the possibility that compliance or environmental performance issues, other than those presented in the report existed at the time of this Audit.

The audit findings presented in this report are professional opinions based solely upon Barnett and May's visual observations of the site, and upon Barnett and May's interpretation of the documentation reviewed, interviews and conversations with personnel nominated by the Auditee, as referenced in this report. These conclusions are intended exclusively for the purposes stated herein, at the site listed, and for the project indicated. Opinions presented in this report apply to the site's conditions and features as they existed at the time of Barnett and May's site visit in 2 March

2021, and those reasonably foreseeable. They necessarily cannot apply to conditions and features which Barnett and May is unaware of and has not had the opportunity to evaluate. This report does not, and does not purport to, give legal advice on the actual or potential environmental liabilities of any individual or organisation.

1.2 The Metropolitan Coal Mine.

Peabody Energy operates the Metropolitan Coal Mine, located on Parkes St Helensburgh, New South Wales (NSW). The Metropolitan Coal Project Approval (08_0149) was granted on 22 June 2009 under Section 75J of the NSW EP&A Act) by the NSW Minister for Planning and Infrastructure and has been modified three times:

- Mod 1 (8 September 2010) – to construct a replacement underground drift, including construction of a new drift portal at the mine's Major Surface Facilities Area
- Mod 2 (2 July 2011) – relating to the amount of product coal to be trucked off-site and the number of truck departures for product coal and coal reject
- Mod 3 (3 October 2013) – to consolidate the annual environmental reporting requirements under the Project Approval and the Mining Lease and Consolidated Coal Lease conditions.

Metropolitan Coal Mine is considered the oldest continually operating coal mine in Australia, having been in operation from 1888. The mine uses underground longwall mining techniques to extract coal, which is then transferred by conveyor for further processing at the surface facilities. Surface activities include coal washing, sorting and shipping to Port Kembla Coal Terminal for domestic and international shipping. The main products are hard coking and semi-hard coking product coal. The coal wash reject was historically sent to Glenlee but during the audit period a significant amount has been beneficially reused as fill at developments in the Illawarra region or sold as product coal through PKCT.


In the longwall mining process, coal seam is mined at a minimum depth of 400m from the ground surface with each section being 153m wide by design. The project area is wholly located in the Woronora Plateau (Woronora Reservoir Catchment) adjacent to the Royal National Park, which is the second oldest national park in the world and the oldest in Australia. Mining is undertaken beneath the Waratah Rivulet and upper reaches of Woronora Reservoir as per relevant approval conditions. Subsidence is predominantly managed through mine layout planning prior to extraction. Metropolitan has also developed a rock bar remediation technique to rehabilitate sections of stream on Waratah Rivulet and Eastern Tributary where required.

2. Definitions

Acronyms	Description
ACHMP	Aboriginal Cultural Heritage Management Plan
AER	Annual Environmental Review
AHIP	Aboriginal Heritage Impact Permit
AEMR	Annual Environmental Management Review
AR	Annual Review
AQGMP	Air Quality and Greenhouse Gas Management Plan
BMP	Biodiversity Management Plan
BOS	Biodiversity Off-set Strategy
CC	Construction Certificate
CCC	Community Consultative Committee
CHPP	Coal Handling Process Plant
DPI	(former) Department of Primary Industries
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DECC	Department of Environment and Climate Change (now DPHI)
DPE	Department of Planning and Environment (Now known as DPHI)
DPHI	Department of Planning, Housing and Infrastructure (formerly the Department of Planning and Environment / Department of Planning, Infrastructure and Environment)
ECS	Environment and Community Superintendent
EMS	Environmental Management Strategy
EPA	NSW Environment Protection Authority
EP&A Act	NSW Environmental Planning and Assessment Act
EPBC	Environmental Protection and Biodiversity Conservation Act
EPL	Environmental Protection License
GMP	Groundwater Management Plan
HCPL	Helensburgh Coal Pty Limited
IEA	Independent Environmental Audit
LW20-22	Longwalls 20-22

Acronyms	Description
LW23-27	Longwalls 23-27
LW	Longwall
MCPL	Metropolitan Coal Pty Limited
MOP	Mining Operations Plan
NOW	NSW Office of Water
NMP	Noise Management Plan
OC	Occupation Certificate
OEH	NSW Office of Environment and Heritage
OEMP	Operational Environmental Management Plan
PA	Project Approval
PIN	Penalty Infringement Notice
PIRMP	Pollution Incident Response Management Plan
PKCT	Port Kembla Coal Terminal
RAP	Registered Aboriginal Group
REF	Review of Environmental Factors
RMP	Rehabilitation Management Plan
SWAF	Surface Water Assessment Forms
SWB	Site Water Balance
SWMP	Surface Water Management Plan
SWVR	Surface Water Validation Report
TEOM	Tapered Element Oscillating Microbalance (Samplers)
TMP	Traffic Management Plan
WCC	Wollongong City Council
WMP	Water Management Plan

3. Auditor Certification

Independent Audit Certification Form	
Development Name	Metropolitan Coal Mine, Helensburgh
Application Number	Metropolitan Coal Project Approval 08_0149
Description of Development	Coal Mine
Development Address	Parkes St, Helensburgh NSW 2508
Proponent	Metropolitan Collieries Pty Ltd
Operator Address	Metropolitan Coal (Peabody Energy Australia Pty Ltd) Parkes St, Helensburgh NSW 2508
Title of Audit	Metropolitan Coal Mine 2024 Independent Environmental Audit
<p><i>I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report and to the best of my knowledge:</i></p> <ul style="list-style-type: none"> <i>The audit has been undertaken in accordance with relevant approval condition(s) and in general accordance with the auditing standard AS/NZS ISO 19011:2011 and in general conformance with the DPE's Independent Audit Post Approval Requirements (June 2018).</i> <i>The findings of the audit are reported truthfully, accurately and completely;</i> <i>I have exercised due diligence and professional judgement in conducting the audit;</i> <i>I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;</i> <i>I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;</i> <i>I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);</i> <i>Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and</i> <i>I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</i> <p><i>Note.</i></p> <p><i>a) The Independent Audit is an 'environmental audit' for the purposes of section 122B (2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p><i>b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Signature	
Name of Lead/Principal Auditor	Ken Holmes
Address	102/75 – 77 Foamcrest Avenue, Newport, NSW
Email Address	ken@baeckea.com.au
Auditor Certification (if relevant)	Exemplar Global 14065
Date	1 May 2025

3.1 Audit Details

Audit Title:	Metropolitan Coal Mine 2024 Independent Environmental Audit
Site:	Metropolitan Coal Mine, Helensburgh New South Wales
Client Contact:	Stephen Love
Position:	Environment and Community Superintendent
Client:	Peabody Energy Pty Ltd
Client Address:	100 Melbourne St, South Brisbane QLD 4101
Client Phone Number	02 9412 6600
Client Email:	slove@peabodyenergy.com.au
Audit Team:	Ken Holmes (Certified Lead Auditor) Stephen Ditton (Mine Subsidence) Shaun Cassidy (Hydrogeologist) Lachlan Hammersley (Surface Water Hydrologist)
Auditor's Telephone:	0438 046 261
Auditor's Email:	ken@baeckea.com.au
Date of Site Visit	11 March 2024
Site Visit Completion Date	11 March 2024
Audit Scope:	<p>The audit was undertaken as per the brief outlined in the Barnett and May proposal (dated 16 November 2023). As such, the audit provides an assessment of the compliance of the project with the conditions of the following approvals:</p> <ul style="list-style-type: none"> Metropolitan Coal Project Approval 08_0149 (Mod 3, dated 2 Oct 2013) Environmental Protection Licence (EPL) No. 767 Mining Lease Standard Conditions covering the following mining leases: <ul style="list-style-type: none"> CCL 703 (1973) ML1702 (1992) CL379 (1973) MPL320 (1973) ML1610 (1992) Groundwater Licence 10BL603595 Extraction Plan Approval Long Wall 308-310. Note that DPE did not issue any conditions with this Approval. <p>The scope of this Independent Environmental Audit complies with the requirements of the New South Wales Department of Planning, Industry and Environment (DPIE) Independent Audit Post Approval Guidelines May 2020.</p>

4. Audit process

4.1 Audit Guidelines

This audit report has also been prepared in accordance with the 'Independent Audit Guideline, May 2020 (Audit Guidelines) (DP&E, 2020). [Table 1](#) lists key requirements from the Audit Guidelines, the relevant Section of the Guidelines which references the requirement and indicates where each is addressed in this report.

Table 1 - Post Approval Audit Guidelines

Section	Independent Audit Report Requirements	Addressed
4.1	Version Control	
	1) the application number of the project;	Section 3
	2) each version or revision number of the report;	Page iii
	3) the date on which the report was prepared and issued to the Department; and	Page iii
	4) the title and name of the person who certified the Independent Audit Report.	Section 3.1
4.2	Contents	
4.2.1	Introduction – a brief overview of the audit including:	
	1) background of the project;	Section 1.2
	2) the audit team (including qualifications and experience);	Section 3.1
	3) the objectives of the audit;	Section 1
	4) the audit scope; and	Section 3.1
	5) the temporal period covered by the audit.	Section 1
4.2.2	Audit Methodology	
	1) documentation from the Planning Secretary agreeing to the auditor and any technical specialist(s);	Appendix C
	2) how the audit scope was developed;	Section 5
	3) a summary of the audit process adopted to determine the compliance status and assess if documents are adequate;	Section 4
	4) site personnel interviewed including their name and position title (and including if access was not granted or possible with any required personnel and why);	Section 4.5.3
	5) details of site inspections undertaken (including any areas where access was not granted or possible and why);	Section 4.5.2
	6) a summary of the consultation undertaken; and	Section 5
	7) meanings of compliance status descriptors used, as set out in this document.	Section 4.6
4.2.3	Audit Findings	
	1) a list of the approvals and documents audited;	Appendix A
	2) a summary of the assessment of compliance i.e. comparison between the total number of compliance requirements and any non-compliances identified during the reporting period. Graphics can be used to summarise project performance in relation to compliance requirements;	Section 6.1
	3) a summary of any notices, orders, penalty notices or prosecutions issued in relation to the consent during the audit period;	Section 7.3

Section	Independent Audit Report Requirements	Addressed
	<ul style="list-style-type: none"> 4) exception reporting of all non-compliances identified during the audit period. Details must include the relevant consent condition, the condition reference number, a unique non-compliance identification number, details of the non-compliance and the auditor's recommended actions that are proposed to be taken or have been taken to address the non-compliance; 5) a brief discussion or table of the status of actions arising from previous audits and the progress or outcomes of each action. Details must include the source of the action, reference (condition number), action proposed, proposed completion date, the status (date completed, if relevant) and the action complete. 6) a brief discussion of whether the Environmental Management Plans, Sub-plans and compliance documents are adequate, implemented and whether there are any opportunities for improvement; 7) a discussion of other matters considered relevant by the auditor or the Department taking into account relevant regulatory requirements and legislation and knowledge of the development's past performance; 8) documentation of any feedback received as a result of consultation undertaken with the Department, and other agencies or stakeholders including the community and Community Consultative Committee for the audit and the outcomes of this consultation; 9) a summary of complaints, and the adequacy of the response to, and management of complaints; 10) details of any incidents (including any enforcement action by any agency) and the adequacy of the response to, and management of such incidents; 11) an assessment of the compliance between actual and predicted impacts documented in environmental impact assessment, including an assessment of the physical extent of the development in comparison with the approved boundary and any potential off-site impacts of the development required under the Environmental Planning and Assessment Act 1979; 12) evidence collected through site inspections undertaken during the audit; 13) evidence to support compliance assessment provided by the personnel interviewed during the audit; 14) a brief discussion of any continual environmental management improvement opportunities identified as part of the audit; and 15) key strengths of the development's environmental management and performance identified by the auditor. 	<p>Section 6.2</p> <p>Section 7.6</p> <p>Section 7.5</p> <p>Section 7.9</p> <p>Section 5</p> <p>Section 7.2</p> <p>Section 7.1</p> <p>Section 7.8</p> <p>Appendix A</p> <p>Appendix A</p> <p>Section 6.2</p> <p>Section 7.4</p>
4.2.4	Recommendations and opportunities for Improvement	Section 6.2

Section	Independent Audit Report Requirements	Addressed
4.2.5	Appendices 1) a completed Independent Audit Table with all relevant conditions of consent, identifying each requirement, compliance status assessed, documenting verified evidence and providing recommendations for any non-compliance that is identified;	Appendix A
	2) a copy of documentation from the Planning Secretary agreeing to the auditor and any technical specialist(s);	Appendix C
	3) documentation detailing consultation with the Department, and other agencies or stakeholders including the community and Community Consultative Committee;	Appendix D
	4) completed and signed Independent Audit Declaration Form(s);	Section 3
	5) any reports prepared by the agreed technical specialist(s), as required; and	Appendix F
	6) site inspection photographs.	Appendix B

Note 1: Compliance against the requirements of the Environment Protection Licence (EPL) has been undertaken in this Audit as the scope of the Independent Environmental Audit in the Conditions of Approval relevant to this development specifically includes the EPL.

4.2 Overview

The audit process and methodology are summarised in this section, and comprised the following key undertakings:

- Preliminary planning activities;
- Review of information and preparation of a compliance register (audit protocol / checklist);
- Site inspection and interviews:
- Opening meeting;
- Site inspection;
- Review of relevant records;
- Review of additional information provided after the site inspection; and
- Preparation of this audit report.

4.3 Preliminary activities

Off-site planning for the site audit comprised:

- Initial discussions with client representative, to organise the site inspection and access to audit documentation;
- Prepare the audit compliance checklist;
- Completion of a project specific Risk Assessment;
- Review of online information;
- Submission of a preliminary document / record request; and
- Consultation with relevant agencies.

4.3.1 Approval of audit teams

Peabody Energy sought the Secretary's endorsement for the audit team to undertake this Independent Environmental Audit. The Secretary approved the following team on 27 November 2023, the subsidence expert on 19 March 2024, the aquatic biologist on 30 January 2025 and the groundwater expert on 18 March 2025 and (Appendix C):

- Ken Holmes, Barnett & May (lead auditor).
- Zoe Lagerroth (aquatic Biology specialist).
- Jonathon Tait (groundwater hydrology specialist).
- Lachlan Hammersley (surface water specialist).
- Steven Ditton (mine subsidence expert)

4.3.2 Consultation with Agencies

The Auditor consulted with the regulatory stakeholders as detailed in Section 5 below.

Emails were initially sent (via Email) to each of the above agencies advising them of the audit and the scope of the audit and inviting them to provide comments/requirements or specific environmental issues they required the audit to target. Where required (where no response was provided by the nominated stakeholder organisation, a follow up email was sent to repeat the invitation to provide input into the audit. Details of the responses from each group / organisation is provided in Section 5.

4.4 Information Review and Compliance Register

Prior to the site inspection the Auditor prepared a detailed audit checklist (spreadsheet) that was used to assess and track compliance. This spreadsheet formed the basis of the compliance register presented in Appendix A of this report.

4.5 Site audit

The site inspection component of the audit was undertaken on 2 March 2021.

4.5.1 Opening Meeting

Following site inductions, the opening meeting was held on-site. It was attended by the following personnel:

- Stephen Love (Environmental and Community Superintendent)
- Kane Organ (Environmental Officer)
- Ken Holmes (Lead Auditor) – Barnett and May.

Introductions were made, and the purpose and scope of the audit was outlined. An explanation of the audit process was communicated. That is, a site inspection, site interviews and detailed review of records in order to identify compliance with the approval conditions relevant to the current operations at the site.

4.5.2 Site Inspections

An initial tour of the site was undertaken by the Auditor. Subsequent detailed inspections of specific areas of the operation were subsequently undertaken. The site inspection included observation of:

- Site access and security;
- Landslip rehabilitation works;
- Camp Creek, downstream of the mine, surface works;
- Coal washing plant;
- Rail loop, loading and unloading facilities;
- ROM and product stockpiles and conveyer system;
- Waste storage areas;
- Fuel and dangerous goods storage areas;
- Equipment maintenance area;
- Rehabilitation areas;
- Dust control infrastructure; and
- Surface water management infrastructure.

The Auditor was provided access to all areas of the site.

Site inspections were undertaken by the technical specialists on 21 March 2025.

4.5.3 Site Interviews

Audit interviews comprised of a series of meetings with:

- Stephen Love (Environmental and Community Superintendent)
- Kane Organ (Environmental Officer)

4.5.4 Document review

Compliance related documents that were not available prior to, and during site discussions of, the audit, were requested to be provided following the audit. The Auditee's personnel assisted with the provision of documentation following the audit, through secure file transfer mechanisms. The key documents reviewed during this audit are listed in the Compliance Registers against specific conditions.

4.5.5 Closing Meeting

A closing meeting was held on-site. It was attended by the following personnel:

- Stephen Love (Environmental and Community Superintendent)
- Kane Organ (Environmental Officer)
- Ken Holmes (Lead Auditor) – Barnett and May.

Preliminary audit findings were presented and tasks and timeline for completion of the audit agreed.

4.6 Reporting

The compliance register was completed using notes and observations recorded during the site inspection / interviews and review of appropriate documentation. The completed compliance register is presented in **Appendix B**. A summary of the non-compliances identified during this audit are provided in Table 5. The audit criteria used to determine compliance for this audit is defined in Table 2.

Table 2 - Compliance Assessment Matrix

Assessment	Criteria
Compliance	<p>Compliance</p> <p>The site complies with the requirements of applicable pre-operational Consent Conditions.</p> <p>A judgment made by an auditor that the activities undertaken, and the results achieved fulfil the specified requirements of the audit criteria. While further improvements may still be possible, the minimum requirements are being met.</p>
Non-Compliance	<p>Non-Compliance</p> <p>Clear evidence has been collected to demonstrate the requirement has not been complied with and is within the scope of the audit.</p> <p>Site displays little or no evidence of compliance with the requirements of the regulatory documentation.</p> <p>Note: Where the auditor has not been able to collect enough verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit. In the absence of enough verification, the auditor may in some instances be able to verify by other means (visual inspection, personal communication, etc.) that a requirement has been met. In such a situation, the requirement should still be assessed as not verified. As the condition cannot be verified it is treated as a non-compliance.</p>
Not Triggered	<p>Not Applicable / Not Triggered</p> <p>The respective condition / requirement was not activated within the scope of the audit.</p>
Noted	<p>A statement or fact, where no assessment of compliance is required.</p>

Risk levels for each non-compliance identified have been assessed in accordance with Table 2.

Table 3 - Risk Assessment Matrix

Risk Level	Description
High	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence.
Medium	Non-compliance with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • potential for moderate environmental consequences, but is unlikely to occur; or • potential for low environmental consequences but is likely to occur.
Administrative non-compliance	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions).

5. Stakeholder Consultation

Table 4 provides a summary of the Stakeholder Consultation undertaken by the Auditor.

Table 4 - Summary of Stakeholder Inputs

Department	Contact	Stakeholder Comments	Auditor Response
NSW Department of Planning, Housing and Infrastructure	Katrina O'Reilly	NSW Planning would like the below to be focused on: <ul style="list-style-type: none"> Surface water and Groundwater impacts – compliance/monitoring/ reporting against trigger levels (and actions implemented/developed as a result of TARPS) and water licensing 	Compliance with the surface and groundwater performance indicators has been reviewed. Please refer to the detailed findings in Section 6.1 and Appendix A1.
		<ul style="list-style-type: none"> Biodiversity/aquatic – impacts of subsidence on biodiversity values/swamps/creeks/aquatic 	Compliance with the biodiversity performance indicators has been reviewed. Please refer to the detailed findings in Section 6.1 and Appendix A1.
		<ul style="list-style-type: none"> Heritage – impacts of subsidence on Aboriginal heritage values 	No impacts on Aboriginal Heritage values occurred during this audit period.
		<ul style="list-style-type: none"> Compliance with footprint as per EA and consent appendices 	No works (other than the cleanup actions taken in Camp Creek) occurred outside of the approved project footprint during this audit period.
		<ul style="list-style-type: none"> Compliance with management plan commitments 	A review of all management plans was undertaken. The operations are being undertaken in general accordance with the commitments contained in the management plans. It is noted, however that implementation of the requirements of the Surface Water Management Plan (for example maintenance of sediment basins and surface water drains) was not consistent.
		<ul style="list-style-type: none"> Rehabilitation progress 	No significant rehabilitation was undertaken during this audit period, other than the cleanup works associated with Camp Creek. It is noted that no significant rehabilitation works will be undertaken while the mine continues to operate.
		<ul style="list-style-type: none"> Compliance with Subsidence Performance Measures – Natural and Heritage Features and Built Features 	Compliance with the subsidence performance indicators has been reviewed. Please refer to the detailed findings in Appendix A1.

Department	Contact	Stakeholder Comments	Auditor Response
NSW Department of Planning, Housing and Infrastructure	Katrina O'Reilly	<ul style="list-style-type: none"> Adaptive management measures 	Adaptive management is not specifically covered in the Project Approval and is therefore not referenced in any of the management plans. There is not, therefore, a formal approach taken to adaptive management. The mine operations are well established and there is evidence that management do look for continual improvement. However, when reviewing the mine's management plans, there have been no significant revisions (other than the Longwall Extraction Plans) undertaken over the past two audit periods. A formal review of all plans, taking into account lessons learned is warranted.
		<ul style="list-style-type: none"> Complaints register and management thereof 	Five complaints were recorded over the Audit Period. Three were noise related, and one dust related (refer to Section 7.1). The documented complaints management processes have been implemented.
		<ul style="list-style-type: none"> Greenhouse Gas emissions reporting and assessment 	Greenhouse gas emissions are reported through the NGERs scheme as Metropolitan emits more than 100,000 tonnes of CO2-e a year. During the audit period Metropolitan did not identify any opportunities to significantly reduce emissions but continues to explores options to electrify equipment – the site shuttle bus is now electric and an electric Drift Runner vehicle for transporting personnel underground is being trialled onsite. Metropolitan is also in the planning phase of installation of a flare unit to be constructed in 2026, which will burn methane from the gas drainage plant once the % methane is suitable (Metropolitan is currently a high CO2, low methane mine, with higher methane levels expected as the mine progresses westward).
		<p>NSW Planning also requests that agencies consulted include:</p> <ul style="list-style-type: none"> EPA Resource Regulator WaterNSW NRAR Biodiversity Conservation Division (BCD) Wollondilly, Campbelltown and Wollongong Councils Sydney Catchment Authority TfNSW NSW Heritage Dams safety CCC 	Agency Consultation: The Auditor consulted with each agency. The outcomes from the requested consultation are provided in this Table.

Department	Contact	Stakeholder Comments	Auditor Response
Wollongong City Council	Ron Zwicker Special Projects and Planning Support Manager	<p>Thank you for the opportunity to provide issues / matters for consideration, as part of your independent assessment of the Metropolitan Colliery.</p> <p>In this respect, Council would like the following issues / matters to be assessed as part of the independent review of the colliery:</p> <ul style="list-style-type: none"> • Commentary as to whether the level of subsidence is in line with the predicted subsidence levels contained in the original Environmental Assessment Report for the colliery. 	<p>Review of the subsidence monitoring has concluded that the overall subsidence effects of the project do not exceed predictions by more than 15%.</p>
		<ul style="list-style-type: none"> • Advice on the health of Waratah Rivulet as a result of subsidence related impacts from the longwall mining. 	<p>The results of aquatic ecology monitoring is considered to be consistent with the potential subsidence impacts and environmental consequences described in the Project EA, Preferred Project Report, the Metropolitan Coal Water Management Plans and Biodiversity Management Plans</p>
		<ul style="list-style-type: none"> • Commentary on the level of success of grouting measures used for the remediation of creek bedrock within Waratah Rivulet. 	<p>A preliminary review of post remediation pool drainage behaviour by Hydro Engineering and Consulting of pools on Waratah Rivulet between 2016 and 2020 concluded that all pools previously impacted appeared to be behaving in a similar manner to pre-impact or comparable control pools, with the exception of Pool A. Metropolitan plans to remobilise for additional works at Pool A in 2024.</p>
		<ul style="list-style-type: none"> • Commentary on the health of the creek below the colliery pit top, where coal fines were previously deposited into the creek line, due to heavy rainfall event(s). 	<p>Bio-Analysis undertook four rounds of aquatic ecology monitoring between September 2022 and May 2023. The results indicate there is no evidence of an impact on the macroinvertebrate communities with Camp Creek and the Hacking River downstream of the mine.</p>
Wollongong City Council	Ron Zwicker Special Projects and Planning Support Manager	<p>Advice on the level of success of the remediation of the creek below the pit top, in removing the coal fines.</p>	<p>Metropolitan engaged WSP to undertake a series of inspections to inspect and remove any residual fines from Camp Creek and Hacking River after rainfall events, with a final inspection scheduled for May 2024. WSP will then review the results of previous inspection and, in conjunction with the aquatic ecologist, recommend if further monitoring is required or can cease. The size and frequency of accumulations has steadily decreased during the monitoring period.</p>
NSW EPA	Andrew Couldridge	<p>The EPA did not respond to the consultation request.</p>	<p>Noted</p>

Department	Contact	Stakeholder Comments	Auditor Response
NSW Resources Regulator	Greg Kininmonth	<p>Thank you for your email dated 11 March 2024 requesting consultation on the independent environmental audit to be undertaken of the Metropolitan Colliery which is covered by the following mining leases.</p> <ul style="list-style-type: none"> • CCL703 (1973) • ML1702 (1992) • CL379 (1973) • MPL320 (1973) • ML1610 (1992) <p>The independent environmental audit is required to assess compliance against the relevant environmental management conditions of the mining leases up to 1 July 2022, including implementation of the mining operations plan for the site.</p> <p>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. It is noted that the 5 mining leases that comprise Metropolitan Colliery have been approved by the Regulator to be treated as a single lease for the purposes of Part 2 of Schedule 8A.</p> <p>The audit should note observations where rehabilitation procedures, practices and outcomes represent best industry practice.</p>	This audit has reviewed compliance against all mining leases (specific conditions) up until 1 July 2022 and the Standard Conditions of Mining Leases from 1 July 2022. Please refer to Appendix A3.
Transport for NSW	Henk Buys Technical Committee Representative	No unplanned interventions were required for TfNSW infrastructure during the audit period, and there were no delays to the mining program as a result of infrastructure impacts. This was a function of the detailed planning and consultation during development of the BFMPs and pro-active risk management during mining, and also the increasing distance of the longwalls from TfNSW infrastructure. Where pavement damage did occur, it was able to be repaired as part of a normal maintenance program.	Noted
Community Consultative Committee	Lisa Andrews (Independent Chair)	I wish to advise that I have not received any comments or concerns back from CCC members for inclusion in the IEA.	Noted

Department	Contact	Stakeholder Comments	Auditor Response
NSW Heritage	Colleen Klingberg	<p>Thank you for your referral seeking comment from Heritage NSW on the scope for the Independent Environmental Audit for the above State Significant Development. Thank you for the continued opportunity to comment on the project.</p> <p>In respect to the scope of audit for Aboriginal cultural heritage, Heritage NSW notes the requirements for the multiple rounds of monitoring of Aboriginal sites for subsidence and environmental impacts, as per the Metropolitan Coal Heritage Management Plan.</p>	<p>Post mining heritage monitoring surveys are conducted at the completion of each longwall block, as per the HMP. I have attached as an example the Monitoring Report produced after completion of LW306.</p> <p>To date, two heritage sites have been affected by subsidence impacts as a result of cracking of sandstone that coincides with Aboriginal art, which represents less than 2% of sites in the mining area.</p>
Dam Safety NSW	Heather Middleton Manager Mining Impacts	No response was received from Dam Safety NSW	Noted
WaterNSW	Jessie Evans Mining Manager, Catchment Protection	No response was received from WaterNSW	Noted
Wollondilly Council	council@ wollondilly.nsw.gov.au	No response was received from Council	Noted
Campbelltown Council	council@ campbelltown.nsw.gov.au	No response was received from Council	Noted

6. Statutory Compliance and Recommendations

Compliance with the Conditions of Consent and the Environment Protection Licence has been reviewed by assessing compliance against the various documentation related to project approval, as listed in section 2.2 of this report. The Compliance Register presented in Appendix A provides a detailed review of the compliance status of the site, including recommendations to address non-conformances.

6.1 Summary of Compliance Status

A summary of compliance with pre-operations statutory requirements is provided in Table 5 - Summary of Statutory Compliance. The number of conditions include sub-clauses within each approval document.

Table 5 - Summary of Statutory Compliance

Approval/ Licence	No. of Conditions	Compliant	Non- Compliant	Not Triggered	Noted
Project Approval 08_0149 (Mod 3, dated 2 Oct 2013)	162	108	10	37	7
Environmental Protection Licence (EPL) No. 767	80	52	2	3	23
Mining Lease Standard Conditions	87	34	4	21	28
CCL307 (1973)	37	17	1	14	5
ML1702 (1992)	11	6	0	2	3
ML1610 (1992)	9	5	0	2	2
Water Licence 10WA118774 and WAL36475	9	8	0	1	0
Extraction Plan Approval Long Wall 308 - 310.	n.a.				

6.2 Non-Compliances and other recommendations

Non-compliances identified during the site inspection, interviews and document reviews are recorded in detail in the Compliance Registers in **Appendix A** and are summarised in Table 6. Recommendations have been made to address all identified non-compliances. Further recommendations for improvement relating to aquatic ecology monitoring is presented in Table 7.1 of the specialist report provided in Appendix F.

Table 6 - Statutory Non-Compliances

No.	Condition	Observation	Recommendation	Risk Level
Project Approval 08_0149				
S2 C11a	The Applicant shall ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition; and	<p>The Metropolitan Coal Mine operates an SAP based maintenance system that monitors and manages scheduled and unscheduled maintenance.</p> <p>On several occasions in 2022 including 18 January 2022, 17 August 2022, and 8 September 2022, the EPA observed that the Turkey's Nest Dam contained coal material which had collected in the dam.</p> <p>On 7 July 2022, the EPA issued a penalty notice to Metropolitan Collieries Ptd Ltd for contravention of Condition O2.1 of the Environment Protection Licence. The PIN related to the maintenance of freeboard in the Turkey's nest retention basin</p>	<p>Continue with the implementation of iron staining source investigation, remediation, and monitoring in accordance with the Approved Metropolitan Coal Stream Remediation Plan.</p> <p>In addition, it is recommended that Metropolitan establish a wet weather threshold criterion to trigger additional inspections.</p>	Medium
S3 C1 a)	<p>The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 1:</p> <ul style="list-style-type: none"> Eastern Tributary between the full supply level of the Woronora Reservoir and the main gate of Longwall 26. Negligible environmental consequences over at least 70% of the stream length (that is no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron 	<p>The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated negligible impacts on flow behavior in the Eastern Tributary over the audit period, except for iron staining along the reach of the Eastern Tributary.</p> <p>Iron staining is present at a number of stream features between the main gate of Longwall 26 and the full supply level of the Woronora Reservoir.</p> <p>Metropolitan has committed to monitoring the nature and extent of iron staining on the Eastern Tributary during the mining of Longwalls 305-307 Metropolitan Coal to implement contingency measures (stream remediation measures) in accordance with the Project Approval.</p>	<p>Continue with the implementation of iron staining source investigation, remediation, and monitoring in accordance with the Approved Metropolitan Coal Stream Remediation Plan.</p>	Low

No.	Condition	Observation	Recommendation	Risk Level
	staining and minimal gas release.			
S4 S1	By the end of 2014, the Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 2 at any residence on privately-owned land, or on more than 25% of any privately-owned land.	<p>Section 7.1 in each year's Annual Review provides details of each year's noise monitoring results.</p> <p>Monitoring at 16 Oxley Place in Quarters 1, 2, 3 and 4 measured a noise level of 55 dBA, 57 dBA, 55 dBA and 51 dBA respectively, which were non-complaint (Quarter 2), conditionally14 non-compliant (Quarters 1 and 3) and conditionally compliant (Quarter 4) with the Night-time LA1 Noise Impact Assessment Criterion (50 dBA). Exceedances of noise criteria have trended down over the audit period.</p> <p>No exceedances were identified during 2022 or 2023.</p>	Continue the identification of nuisance noise sources and implementation of noise mitigation strategies.	Low

No.	Condition	Observation	Recommendation	Risk Level
S4 C14	The Proponent shall ensure that all surface water discharges from the site comply with the discharge limits (both volume and quality) set for the project in any EPL.	<p>Section 12 of the Annual Reviews summarise the incidents that were recorded during the audit period. During the audit period nine incidents were recorded and were reported in the Annual Reviews.</p> <p>EPL 767 permits the discharge of water from Licensed Discharge Point No. 8 (LDP 8). During the audit period, the EPA was informed of 2 discharges from LDP 8.</p> <p>Seven of the incidents were water discharges from non-licensed discharge points at the site. The EPA was notified of all these discharges and DPE was notified of 4 of these water discharges. Metropolitan's assessment of the unreported discharges is that they did not meet the threshold as causing or having the potential to cause material environmental harm and, on that basis, Metropolitan formed the view that they did not trigger the notification requirements. Metropolitan indicated to the auditor that the EPA was nonetheless informed of these discharges as part of its broader ongoing engagement with the EPA about water management at the site. In the case of three of the incidents, that were not reported to DPHI, the EPA issued Prevention Notices or Penalty Infringement Notices.</p> <p>The causes of the water incidents included:</p> <ul style="list-style-type: none"> • Periods of extreme heavy rainfall overwhelmed the surface water collection system. • Insufficient freeboard being maintained in the sediment dams. • Insufficient maintenance of drains (inspection and clearing of blockages) • The Surface Water Management Plan was not revised during this audit period. 	<p>Review all water discharges, determine the root causes of the discharges. Based on the lessons learned, review the management of surface water and revise the Surface Facilities Water Management Plan.</p> <p>Consider including specific design capacity criteria in the surface facilities water management plan and monitoring pond capacities. This would allow easier identification of any limitations in water management infrastructure to improve the future management of water related incidents.</p>	Medium
S4 C15	The Proponent shall prepare and implement a Water Management Plan for the surface facilities area and two ventilation shaft sites to the satisfaction of the Director-General. This plan must be prepared in consultation with NOW and OEH by a suitably qualified expert whose appointment has been endorsed by the Director-General and submitted to the Director-General for approval by the	<p>The SFWMP was not revised during the audit period. Compliance of the plan's administrative aspects of this condition was verified during the 2017 IEA.</p> <p>Failure to maintain freeboard in the sediment does not conform with the Water Performance Criterion (Containment of Contaminants) that commits Metropolitan to maintaining all sediment containment facilities.</p>	<p>Review and revise the Surface Facilities Water Management Plan to reflect the current water management system and improvements implemented.</p>	Medium

No.	Condition	Observation	Recommendation	Risk Level
	end of June 2010. In addition to the standard requirements for management plans (see condition 2 of schedule 7).			
S7 C2	<p>The Applicant shall ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:</p> <p>(b) a description of:</p> <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 development or any management measures 	<p>With the exception of the Surface Facilities Water Management Plan, the plans cover statutory requirements, performance measures and indicators, and a section on the implementation of management measurements.</p> <p>The current version of the Surface Facilities Water Management Plan does not address the changes in the water-related monitoring and reporting conditions in the Environment Protection Licence.</p> <p>It is noted that none of the current management plans reference the current identities of the relevant NSW Statutory Authorities (e.g. DPHI).</p>	<p>Update the Surface Facilities Water Management Plan to reflect the monitoring and reporting requirements of the EPL.</p> <p>Revise all management plans to reflect the changes in identify of the relevant statutory authorities.</p>	Administrative Non-Compliance
S7 C4b	<p>(Review and if warranted revise Plans) Within 3 months of:</p> <p>(b) the submission of an incident report under Condition 7 below;</p>	<p>All plans except the Water Management plan did not trigger this condition. Note that the Surface Water Management Plan currently refers to three licensed discharge points Point 6, 7 and 8). The current EPL licences two points (Points 7 and 8).</p>	<p>Review and revise the Surface Water Management Plan to ensure that the current water management system is accurately described and that relevant modifications to the Environment Protection Licence have been addressed. Review and if required all management plans (e.g. the Air Quality Management Plan) that may be impacted by previous variations to the EPL.</p>	Administrative Non-Compliance

No.	Condition	Observation	Recommendation	Risk Level
S7 C4c	(Review and if warranted revise Plans) Within 3 months of: (c) the submission of an audit report under Condition 9 below; or	The 2020 Independent Environmental Audit recommended the review of the Noise Management Plan. No documentation was available to verify that the recommended review was undertaken.	Review and if required revise the Noise Management Plan.	Administrative Non-Compliance
S7 C6	The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident	<p>Section 12 of the Annual Reviews summarise the incidents that were recorded during the audit period. A formal incident register is not maintained. Nine incidents were recorded for the Audit Period and were reported in the Annual Reviews. While all of these incidents were reported to the EPA, only four were reported to DPE / DPHI. Metropolitan assessment of the unreported incidents is that they did not meet the threshold as causing or having the potential to cause material environmental harm. In the case of three of the incidents, that were not reported to DPHI, the EPA issued Prevention Notices or Penalty Infringement Notices.</p> <p>The EP&A Act does not define what constitutes an incident and Proponents usually rely on the definition of reportable incidents provided in the POEO Act, that includes incidents that involve <i>“actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial”</i>.</p> <p>It is the Auditor’s view therefore, that the water discharges that were reported to the EPA as a potentially reportable incident should also have been reported to DPHI under Schedule 7 Condition 6 of the Approval. In any case, the incidents that resulted in the EPA issuing Prevention Notices / Penalty Infringement Notices warrant reporting to DPHI, as soon as the Proponent becomes aware that the EPA considers that incident non-trivial.</p>	Review the incident management and reporting procedures as documented in EMS and PIRMP to ensure that all potentially reportable incidents are reported to the relevant Authorities.	Administrative Non-Compliance
S7 C11	From the end of 2009, the Proponent shall make the following information publicly available on its website, a copy of all current statutory approvals;	A copy of the relevant approvals and licenses were available on the website; however, the Environment Protection Licence (2019 version) was not the current (25 January 2024) version.	Ensure that all documents loaded onto the website are the current versions.	Administrative Non-Compliance
S3 C1	<p>The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 1:</p> <ul style="list-style-type: none"> Catchment yield to the Woronora Reservoir Negligible reduction to the quality or quantity of water resources reaching the Woronora Reservoir. <p>No connective cracking between</p>	<p>The 2021 and 2022 Annual Reviews reported that surface water flow was at Level 1 throughout each review period (i.e. negligible impact on water quality).</p> <p>Aluminum levels were at Level 3 during April 2021 and dissolved manganese were at Level 3 throughout the 2022 reporting period (i.e. exceeded the impact indicators). These exceedances were investigated by Associate Professor Barry Noller who concluded that the water quality data obtained is considered a negligible impact on the waters of Woronora Reservoir.</p> <p>Dissolved manganese was at Level 3 from March to July 2023 and September to December 2023.</p> <p>A review of the monitoring data was undertaken by Associate Professor Barry Noller</p>	Recommendation for Improvement – implement all recommendations made by the Independent Expert Advisory Panel for Mining in their 2023 report to be included in the LW311 to 318 Water Management Plans and Stream Remediation Plans.	Recommendation for Improvement

No.	Condition	Observation	Recommendation	Risk Level
	the surface and the mine.	<p>who determined that while the subsidence impact performance indicator was exceeded, that the relevant performance measures were not exceeded, that is there was no significant reduction in water quality in the Woronora Reservoir over the audit period.</p> <p>DPE sought the advice of the Independent Expert Advisory Panel for Mining on Water Quality Performance Measures for Metropolitan Coal Mine in April 2023. The Panel concluded: "The quality of the Woronora Reservoir has been poor during 2022-2023 (and during other periods historically) and has led to significant complications for water treatment and water supply. Although there are natural influences on water quality that might explain the observed variations in water quality, the Panel cannot rule out the possibility that the Metropolitan Mine has had a non-negligible adverse impact."</p> <p>The Panel further concluded: "The assessments of the quality of water reaching the Woronora Reservoir presented by Peabody in response to level 3 triggers are not based on sufficient data and analysis and therefore do not provide sufficient justification and reasonable conclusions. The assessments do not adequately consider the potential significance of the impaired water quality for the WaterNSW Raw Water Supply Agreement and Water Quality Incident Management trigger levels".</p> <p>The Panel subsequently made a series of recommendations to address the water quality monitoring issues.</p> <p>Based on the current Trigger Response Indicators, no significant impact has been identified, and therefore the Auditor has concluded that this performance measure has been met. However, the recommendations of the Panel should be implemented to improve the assessment of performance against the water quality indicators.</p>		
S3 C1	<p>The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 1:</p> <ul style="list-style-type: none"> Catchment yield to the Woronora Reservoir Negligible reduction to the quality or quantity of water resources reaching the Woronora Reservoir. No connective cracking between the surface and the mine. 	<p>The 2021 and 2022 Annual Reviews stated that 9EGW2A and PM02 were not exceeded. The 2023 Annual Review indicated that the performance indicators were not exceeded for groundwater levels at the five deep piezometer bores (PHGW2A, F6GGW4A, 9GGW2B, 9EGW2A and PM02) Level 3 Levels were triggered due to local groundwater depressions at the shallow piezometer bores T3 to T5 in 2021, 2022 and 2023 (post LW305-308). However, hydraulic gradients were still maintained towards the Woronora Reservoir.</p> <p>An assessment of the performance measures was undertaken in their six-monthly report for the period 1 January to 30 June 2023 by SLR Consultants. SLR found that in 2020 "exceedances of the Level 3 trigger for the T3 performance indicator were a result of water levels within Woronora Reservoir increasing in response to rainfall events..... since this (time) the performance indicator has remained at Level 3. The increase in the Woronora Reservoir level in early 2022 has confirmed that the groundwater level at bore T3-R now also reflects the Woronora Reservoir level. Although an exceedance has occurred for the gradient between bore T3-R and the reservoir, there has not been a</p>	<p>Recommendation for Improvement – PM02 logger should be investigated to understand why pressure increased after a new logger was installed after Jul 2023.</p> <p>Shallow sensors P60m, P108m and P155m at 9EGW2A/9EGW2-4 depressurizing from LW307 to LW309. The sudden increase in pressure from Sept 2023 onwards should be watched as deeper sensors showed this response prior to significant</p>	Recommendation for Improvement

No.	Condition	Observation	Recommendation	Risk Level
		reversal of gradient to the Woronora Reservoir that would induce leakage from the reservoir (the performance measure) because the intervening bore T2 still shows a hydraulic gradient towards the reservoir”.	decreases in pressure. The hydrographs for 9EGW2A and 9EGW2-4 show as one hydrograph and should be separated for reporting purposes.	
S7 C6	The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident	While the spill incidents were generally managed appropriately, business as usual practice across the mining industry and Australian Industry more broadly is to maintain a formal Incident Register. This can be as simple as a spreadsheet that allows the recording of all relevant information concerning each incident, including: <ul style="list-style-type: none"> • Time of the incident; • Incident description; • Personnel involved; • Initial investigations and preliminary actions taken; • Reporting (internal and external) and timing of reporting, • Further investigations undertaken (including root cause analysis); and • Preventative and Corrective Actions. 	Prepare and maintain a formal incident register.	Recommendation for Improvement
ENVIRONMENTAL PROTECTION LICENCE 767				

No.	Condition	Observation	Recommendation	Risk Level
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	<p>Section 12 of the Annual Reviews summarise the incidents that were recorded during the audit period. A formal incident register is not maintained.</p> <p>During the audit period nine incidents were recorded and were reported in the Annual Reviews.</p> <p>EPL 767 permits the discharge of water from Licensed Discharge Point No. 8 (LDP 8). During the audit period, the EPA was informed of 2 discharges from LDP 8.</p> <p>Seven of the incidents were water discharges from non-licensed discharge points at the site. The EPA was notified of all these discharges and DPE was notified of 4 of these water discharges. Metropolitan's assessment of the unreported discharges is that they did not meet the threshold as causing or having the potential to cause material environmental harm and, on that basis, Metropolitan formed the view that they did not trigger the notification requirements. Metropolitan indicated to the auditor that the EPA was nonetheless informed of these discharges as part of its broader ongoing engagement with the EPA about water management at the site. In the case of three of the incidents, that were not reported to DPHI, the EPA issued Prevention Notices or Penalty Infringement Notices.</p>	Review all water discharges, determine the root causes of the incidents. Based on the lessons learned, review and revise the surface water management plan.	Medium
O2.1	<p>All plant and equipment installed at the premises or used in connection with the licensed activity:</p> <p>a) must be maintained in a proper and efficient condition; and</p>	<p>The Metropolitan Coal Mine operates an SAP based maintenance system that monitors and manages scheduled and unscheduled maintenance.</p> <p>On several occasions in 2022 including 18 January 2022, 17 August 2022, and 8 September 2022, the EPA observed that the Turkey's Nest Dam contained coal material which had collected in the dam.</p> <p>On 7 July 2022, the EPA issued a penalty notice to Metropolitan Collieries Ptd Ltd for contravention of Condition O2.1 of the Environment Protection Licence. The PIN related to the maintenance of freeboard in the Turkey's nest retention basin</p>	Ensure that the routine inspection of all surface water management infrastructure, including sediment ponds is undertaken and that all required cleaning and maintenance is undertaken.	Medium

No.	Condition	Observation	Recommendation	Risk Level
STANDARD MINING LEASE CONDITIONS				
D1 C4	(1) The holder of a mining lease must take all reasonable measures to prevent, or if that is not reasonably practicable, to minimise, harm to the environment caused by activities under the mining lease.	<p>Section 12 of the Annual Reviews summarise the incidents that were recorded during the audit period. During the audit period nine incidents were recorded and were reported in the Annual Reviews.</p> <p>EPL 767 permits the discharge of water from Licensed Discharge Point No. 8 (LDP 8). During the audit period, the EPA was informed of 2 discharges from LDP 8.</p> <p>Seven of the incidents were water discharges from non-licensed discharge points at the site. The EPA was notified of all these discharges and DPE was notified of 4 of these water discharges. Metropolitan's assessment of the unreported discharges is that they did not meet the threshold as causing or having the potential to cause material environmental harm and, on that basis, Metropolitan formed the view that they did not trigger the notification requirements. Metropolitan indicated to the auditor that the EPA was nonetheless informed of these discharges as part of its broader ongoing engagement with the EPA about water management at the site. In the case of three of the incidents, that were not reported to DPHI, the EPA issued Prevention Notices or Penalty Infringement Notices.</p> <p>The causes of the water incidents included:</p> <ul style="list-style-type: none"> • Periods of extreme heavy rainfall overwhelmed the surface water collection system. • Insufficient freeboard being maintained in the sediment dams. • Insufficient maintenance of drains (inspection and clearing of blockages). 	Review all water discharges, determine the root causes of the discharges. Based on the lessons learned, review and revise the surface water management plan.	Medium
D4- 17	<p>The holder of a mining lease must create and maintain records of all actions taken that demonstrate compliance with each of the conditions set out in this Part.</p> <p>Note— The Act, sections 163D and 163E provide for the form in which records must be kept and the period for which they must be retained.</p>	Other than screen shots and the documents that are available on the Metropolitan Website, records demonstrating compliance with the standard conditions (for example correspondence, including email responses from the Resource Regulator) were not able to be provided to the Auditor.	Establish and maintain compliance records as required by Condition D4 - 17	Administrative Non-Compliance

No.	Condition	Observation	Recommendation	Risk Level
D3 C18	(1) The holder of a mining lease must provide the Minister with a written report detailing any non-compliance with- a. a condition of the mining lease,	The Auditor was unable to verify whether the non-compliances against the reporting requirements in the Standard Mining Lease Conditions were reported to the Resources Regulator.	Establish and maintain compliance records as required by Condition D4 - 17	Administrative Non-Compliance
D4 C19a	The holder of a mining lease must nominate a natural person to be the contact person with whom the Secretary can communicate in relation to the mining lease for the purposes of the Act.	The Screen shot from the Portal (submissions received) confirmed the NCP submission was received on 15 December 2023. The submission was outside of the 28-day period required by the Condition.	Ensure that submissions to the RR meet the timelines required by the Mining Lease Standard Conditions.	Administrative Non-Compliance

No.	Condition	Observation	Recommendation	Risk Level
Consolidated Coal Lease 703				
25	The lease holder shall provide and maintain to the satisfaction of the Minister efficient means to prevent contamination, pollution, erosion or sedimentation of any river, stream, creek, tributary, lake, dam, reservoir, watercourse or catchment area or any undue interference to fish or their environment and shall observe any instruction given or which may be given by the Minister with a view to preventing or minimising the contamination, pollution, erosion or sedimentation of any river, stream, creek, tributary, lake, dam, reservoir, watercourse or catchment area or any undue interference to fish or their environment.	<p>Section 12 of the Annual Reviews summarise the incidents that were recorded during the audit period. During the audit period nine incidents were recorded and were reported in the Annual Reviews.</p> <p>EPL 767 permits the discharge of water from Licensed Discharge Point No. 8 (LDP 8). During the audit period, the EPA was informed of 2 discharges from LDP 8.</p> <p>Seven of the incidents were water discharges from non-licensed discharge points at the site. The EPA was notified of all these discharges and DPE was notified of 4 of these water discharges. Metropolitan's assessment of the unreported discharges is that they did not meet the threshold as causing or having the potential to cause material environmental harm and, on that basis, Metropolitan formed the view that they did not trigger the notification requirements. Metropolitan indicated to the auditor that the EPA was nonetheless informed of these discharges as part of its broader ongoing engagement with the EPA about water management at the site. In the case of three of the incidents, that were not reported to DPHI, the EPA issued Prevention Notices or Penalty Infringement Notices.</p> <p>The causes of the water incidents included:</p> <ul style="list-style-type: none"> • Periods of extreme heavy rainfall overwhelmed the surface water collection system. • Insufficient freeboard being maintained in the sediment dams. • Insufficient maintenance of drains (inspection and clearing of blockages) • The Surface Water Management Plan was not revised during this audit period. 	Review all water discharges, determine the root causes of the discharges. Based on the lessons learned, review and revise the surface water management plan.	Medium

7. Independent Audit Post Approval Requirements

This audit focused on the compliance requirements established by the Conditions of Approval. While the scope of the audit, as specified in the Conditions of Consent do not refer specifically to the DPIE Independent Audit Post Approval Requirements (DPIE, May 2020), for completeness the Audit has, where possible, assessed the environmental performance of the project. This section of the report covers the specific requirements contained in the DPIE Guidelines.

7.1 Summary of Complaints

A complaints register is located on the company website. Five complaints were recorded over the Audit Period. Three were noise related, and one dust related. Table 7 provides a summary of complaints received by the mine management over the Audit Period.

Table 7 - Summary of Complaints

Date	Category	Details and Metropolitan Coal's Response
23/11/2021	Noise	<p>Site was contacted regarding recent increase in noise from product stockpile during night.</p> <p>Metropolitan discussed potential new noise sources with onsite personnel and identified potential change in noise levels caused by new equipment on stockpile. Complainant contacted to discuss nature of noise and explain recent increase in production from mine which may be causing additional noise on stockpile. Site has parked up machine suspected of creating excessive noise and will conduct noise measurements to assess before undertaking noise mitigation works if required.</p> <p>Follow up call confirmed that new machine seems to be source of noise. Metropolitan undertook to take steps to mitigate noise from machine when operating on stockpile at night.</p>
19/2/2022	Noise	<p>Site was contacted regarding noise from generator in operation near top office area.</p> <p>Metropolitan explained that generator was in use to conduct critical safety works on mine electrical substation and would be in operation for one night only. Metropolitan will investigate alternative power supplies for future works of a similar nature.</p>
23/3/2023	Noise	<p>Site was contacted regarding noise from loading trains between 12:45am and 3:30am.</p> <p>Metropolitan explained that the later than normal train loading was due to train scheduling delays causing short-term changes to train loading time slot.</p> <p>Follow up call to complainant was undertaken to explain late train arrival and scheduling delays.</p>
14/9/2023	Dust	<p>Dust on property.</p> <p>Metropolitan met with caller to outline dust mitigation measures implemented onsite and previous monitoring results which demonstrated that majority of dust at neighbouring properties is typically not from mine (coal dust makes up a relatively small fraction of overall dust levels). An offer to conduct microscopic analysis of monthly dust samples was made.</p>
16/2/2024	Noise	<p>Metallic clanging noise from stockpile area.</p> <p>Metropolitan contacted caller to confirm a recently identified chute on the coal product stockpile was the source of noise as coal bounced off walls. The chute was lined to deaden the noise.</p> <p>Follow up call with complainant confirmed that noise seemed to have abated, but Metropolitan would continue to monitor.</p>

7.1.1 Complaints Management and Reporting

Section 6 of the Environmental Management Strategy outlines the requirements of the complaints management system and references the requirements of Condition M4.2 of the Environment Protection Licence.

A complaints register is available on the Website, however that register is (appropriately) a high-level summary of the complaints received.

Metropolitan have reviewed each complaint, determined the causes of the complaints and where required taken appropriate actions.

7.2 Summary of Environmental Incidents

Metropolitan Coal does not maintain an incident register. Incident management procedures are described in Section 7 of the Environmental Management Strategy (EMS). An incident is defined (in the EMS) as a set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in the Project Approval. Incidents are reported in accordance with Condition 6, Schedule 7 of the Project Approval, and are reported annually in section 13 of the Annual Review.

The Auditor was provided with a list of incidents and reviewed the incident specific records provided by Metropolitan. Those incidents are summarised in Table 8.

Table 8 - Summary of Incidents

Date	Category	Details and Metropolitan Coal's Response	DPHI Report
21 March 2021	Water	<p>A spoon drain collects water from the southern side of the coal stockpile and is directed into Turkeys Nest Dam. Water captured in Turkeys Nest Dam is typically pumped to the Water Treatment Plant (WTP) for treatment and discharged to Camp Creek under EPL 767, with a licensed spillway at Turkeys Nest Dam serving as a spillway to Camp Creek.</p> <p>During prolonged heavy rainfall, mine personnel observed dirty water overflowing the spoon drain and identified that the drain and pipework had become blocked causing the water to overflow into a nearby clean water drain and then into Camp Creek. Immediate efforts were made to unblock the drain, but it was concluded that the blockage was significant and would likely require heavy equipment to rectify.</p> <p>On 22 March 2021, Metropolitan Coal engaged a vacuum truck, 30 tonne excavator and high-pressure water jet unit to unblock the drain. Once unblocked, the discharge of dirty water to the clean water drain ceased and sediment loads in Camp Creek rapidly dissipated under heavy flow conditions.</p> <p>Examination of the debris which had collected in the grated drain contributing to the blockage identified a significant quantity of coal cobbles, a coal product with a diameter of approximately 50 mm which is stockpiled at the eastern end of the stockpile drains. The cobble material removed from the drain contained an accumulation of finer coal material which served to seal the void spaces between the cobbles, rendering the drain blocked. Based on the observed high rainfall and nature of the drain debris, Metropolitan concluded that the heavy rainfall mobilised a significant quantity of cobbles which, due to contours on the stockpile pad, predominantly reported to the northern grated drain rather than the southern spoon drain. As cobbles continuously flowed into Turkeys Nest Dam, the accumulating material in Turkeys Nest Dam has obstructed the flow at the outlet of the pipe. This caused larger debris entering the drain (i.e. cobbles) to fall out of suspension and accumulate within the drain itself. As capacity in the drain constricted, progressively smaller particles of coal began to accumulate until the drain was wholly blocked.</p> <p>Three actions were taken to mitigate future incidents of this nature:</p> <ul style="list-style-type: none"> • Upgrade of the eastern end of the stockpile and modified the spoon drain to redirect storm related cobble stockpile flow to the spoon drain with a discharge located above the small pond of Turkeys Nest Dam. This action reduced the large particles entering the main pond of Turkeys Nest Dam and potential for an accumulation of cobbles to obstruct the northern pipe. • Removal of storm deposited cobbles and silt from the Turkeys Nest Dam outlet. • Installation of small concrete baffles in the rail corridor which lead to the grated drain to reduce surface water flow velocity and potential scour of ballast from the rail line. 	Yes

Date	Category	Details and Metropolitan Coal's Response	DPHI Report
13 January 2022	Water	<p>Dirty water overflowed a grated drain within stockpile area, which caused water to overflow into a nearby clean water drain leading to Camp Creek.</p> <p>EPA issued Penalty Notice (3173531030) to MCPL on 7 June 2022 on the basis that the main sediment dam (Turkey's nest) had been allowed to fill with coal sediment. As a result, dirty water could not freely enter the dam from a pipe that collects runoff from the coal stockpile. The dirty water backed up in the pipe and overflowed into a channel that flows into Camp Gully Creek. This failure of maintenance resulted in a discharge of untreated water from an unauthorised discharge point.</p> <p>Remedial Actions: Excavator and vacuum truck used to clear out drain. Ongoing desilting of sediment dams on site to increase storage capacity.</p>	Yes
7 April 2022	Water	<p>Dirty water overflowed a grated drain within stockpile area, which caused water to overflow into a nearby clean water drain leading to Camp Creek.</p> <p>Potentially caused by extreme rainfall exceeding capacity of sediment dams resulting in discharge from site. The EPA was notified by phone and advised Metropolitan that a formal report was not required as the extreme rainfall event was impacting all operations in the region.</p> <p>Remedial Action proposed: Excavator and vacuum truck used to clear out drain. Ongoing desilting of sediment dams on site to increase storage capacity.</p>	No
4 July 2022	Water	<p>Blockage at the north-eastern stockpile drain, caused water to overflow into a nearby clean water drain leading to Camp Creek. The discharge was caused by extreme rainfall exceeding capacity of sediment dams resulting in discharge from site. The EPA were notified, however took no action as the event was deemed to be caused by an extremely heavy rainfall event.</p> <p>Remedial Actions: Water sample taken. Excavator and vacuum truck used to clear out drain. Ongoing desilting of sediment dams on site to increase storage capacity.</p>	Yes
8 September 2022	Water	<p>Partial blockage of Turkeys Nest pump resulting in an overflow from Turkeys Nest to Camp Creek through the licenced discharge point 8 (LDP8). The discharge occurred during a period of heavy rainfall.</p> <p>Remedial Actions: Spillway sandbagged. The pump was immediately backflushed to restore nominal flow and an inspection of Camp Creek was carried out. Extensive clean-up of Camp Creek undertaken.</p>	No
8 October 2022	Water	<p>Over 8-9 October 2022 the site received 63 mm of rainfall, following 101.8 mm of rainfall received between 4-7 October. The rainfall over his period exceeded the site's stormwater capacity resulting in discharge to Camp Creek from LDP8.</p> <p>The incident was caused by heavy rainfall and sediment in dams resulting in discharge from LDP8 exceeding criteria.</p> <p>The EPA was notified and issued a Prevention Notice directing Metropolitan to stop the discharge (through the licenced discharge point).</p> <p>Remedial Actions: Water samples taken. Inspection of Camp Creek revealed no new deposits of coal material. Ongoing clean-up of Camp Creek undertaken. In addition, contingency pumping was commenced, and the performance of the water treatment plant and pumps onsite was monitored for the duration of the discharge to ensure volumes through the discharge point were minimised. Ongoing desilting of the Turkeys Nest Dam to remove sediment and increase stormwater retention capacity continued.</p>	No

Date	Category	Details and Metropolitan Coal's Response	DPHI Report
17 November 2022	Water	<p>Whilst clean-up works were being undertaken in a clean water drain, grey-brown turbid water was observed entering Camp Creek. The EPA was notified.</p> <p>The EPA served a Penalty Infringement Notice on Metropolitan in relation to this incident. Metropolitan reported that the incident was caused by skid steer maintenance works being undertaken in clean water drain.</p> <p>Remedial Actions: Works ceased. Turbid water monitored until dissipation. Clean water drain signposted, and gate installed. Standard Operating Procedure implemented for working in or near clean water drains.</p>	No
9 December 2022	Water	<p>A clean water diversion drain flows east towards the eastern corner of the product stockpile before routing underground to the south and flowing into a sloped barrel drain which reports to Camp Creek. A groundwater seep also emanates from the ground adjacent to the clean water drain and flows into Camp Creek. On 9 December an opaque white seepage was observed and reported to the EPA. DPHI /DPE was not notified.</p> <p>The EPA issued a Cleanup Notice in relation to this incident.</p> <p>Remedial Actions: Water samples taken. Dredging operations ceased and works undertaken around product coal stockpile to retain water seepage from dredged material. Water from dredging operations pumped to Turkeys Nest in place of surface flow to minimise seepage to groundwater.</p>	No
6 August 2023	Water	<p>On 6 August 2023, after a period of intense rainfall, a landslide occurred on an embankment adjacent to an access road near the Water Treatment Plant on the site. This resulted in a section of the embankment dislodging and moving down into Camp Creek resulting in the deposition of water and historically emplaced fill material in the creek.</p> <p>Following this incident, Metropolitan Coal activated its Pollution Incident Response Management Plan and promptly commenced activities to stabilise the slump. A program of works including removal of material by hand and machinery commenced on 7 August 2023, with the EPA confirming completion of the cleanup process on 19 December 2023. Works to stabilise and remediate the slope are ongoing with expected completion in June 2024.</p> <p>The EPA issued a cleanup notice in relation to this incident.</p>	Yes

7.2.1 Incident Management and Reporting

Section 7 of the Environmental Management Strategy outlines the requirements of the incident management system and references the requirements of Schedule 7 Condition 6 of the Planning Approval. Sections 3 and 4 of the PIRMP provides further detail on incident reporting. It is noted that the EMS does not reference the incident reporting information in the PIRMP.

Nine incidents were recorded for the Audit Period and were reported in the Annual Reviews. While all of these incidents were reported to the EPA, only four were reported to DPE / DPHI. Metropolitan assessment of the unreported incidents is that they did not meet the threshold as causing or having the potential to cause material environmental harm. In the case of three of the incidents, that were not reported to DPHI, the EPA issued Prevention Notices or Penalty Infringement Notices.

It is the Auditor's and Surface Water Specialist's view that any incident that is reported to the EPA as a potentially reportable incident should also be reported to DPHI under Schedule 7 Condition 6 of the Approval. A non-compliance has been recorded against that condition, refer to Section 6.2 above.

Recommendations for improvement:

While the spill incident was managed appropriately, business as usual practice across the mining industry and Australian Industry more broadly is to maintain a formal Incident Register. This can be as simple as a spreadsheet that allows the recording of all relevant information concerning each incident, including:

- Time of the incident;
- Incident description;
- Personnel involved;
- Initial investigations and preliminary actions taken;
- Reporting (internal and external) and timing of reporting,
- Further investigations undertaken (including root cause analysis); and
- Preventative and Corrective Actions.

It is also recommended that a review of management plans be undertaken to capture any changes in standard operating procedures and remedial approaches are captured.

7.3 Summary of Notices

The following notices, orders, penalty notices or prosecutions were issued in relation to the consent during the audit period:

DPHI: No notices issued.

Environment Protection Authority Notices:

- Penalty Infringement Notice Number 3173531030 – issued 7 June 2022. Offence dated 13 January 2022 (the discharge of dirty water into Camp Creek).
- Prevention Notice Number 3503648 dated 9 September 2022. The notice relates to the PIN issued (see above) and inspections by the EPA on 8 January 2022, 17 August 2022, and 8 September 2022, where accumulated sediments within the Turkey Nest dam were considered to be impacting the efficient operation of that sedimentation dam. The notice required the mine to desilt the dam to obtain a minimum storage capacity of 4 megalitres.
- Clean Up Notice Number 3503716, dated 16 September 2022. The clean-up notice relates to the preparation of a cleanup protocol of coal fines from Camp Creek and the Hacking River as a result of discharges to Camp Creek from the licensed discharge point between 3 July and 8 September 2022. The notice also required the commencement of clean-up works by 20 September 2022.
- Clean Up Notice Number 3503769, dated 30 September 2022. The clean-up notice relates to the cleanup of coal fines from Camp Creek and the Hacking River as a result of discharges to Camp Creek from the licensed discharge point between 3 July and 8 September 2022.
- Variation of Prevention Notice Number 3504134 dated 10 November 2022. The notice relates Prevention Notice 35003648 and varies the minimum storage capacity of the Turkey Nest Dam to 10.8 Megalitres
- Clean Up Notice Number 3504133, dated 10 November 2022. The clean-up notice relates to the desilting of the Turkey Nest Dam and settling pond.
- Clean Up Notice Number 3504370, dated 11 December 2022. The clean-up notice relates to the seepage (and discharge to Camp Creek) of a white coloured material on 9 December 2022. The Notice required the prevention of leaking material entering the creek, identification of the source and prevention of the discharge.
- Penalty Infringement Notice Number 3173531891 – issued 9 May 2023. Offence date 17 November 2022 (the seepage (and discharge to Camp Creek) of a white coloured material on 9 December 2022)
- Penalty Infringement Notice Number 3173531882 – issued 9 May 2023. Offence date 17 November 2022 (the seepage (and discharge to Camp Creek) of a white coloured material on 9 December 2022)
- Clean Up Notice Number 3506294, dated 7 August 2023. The clean-up notice relates to the landslip incident of 6 August 2023 requiring the preparation of a clean-up and cleanup of the site and creek in accordance with the plan.
- Notice Requiring Payment of Reasonable Costs and Expenses, Notice Number 1627268, dated 4 October 2023. The notice relates to EPA costs incurred relating to investigation of coal fines from the mine into Camp Creek and the Hacking River.
- Notice Requiring Payment of Reasonable Costs and Expenses, Notice Number 1632945, dated 7 February

2024. The notice relates to EPA costs incurred relating to the landslip incident investigation.

7.4 Project Environmental Management System

The Metropolitan Coal Mine operates in accordance with the Environmental Management Strategy. The Environmental Management Strategy that was prepared as a requirement of the Planning Approval describes the environmental management approach implemented at the Mine. The EMS, as documented does not meet the requirements of ISO 14001. However, the level of compliance identified in this audit indicates the system is being generally being implemented in accordance with the Environmental Management Strategy.

7.5 Implementation of the Operational Environmental Management Plan and Sub-plans

The Conditions of Approval required the preparation and implementation of the management plans and program listed in Table 9. During the document review phase of the project the contents of each of the plans were reviewed. Table 9 summarises the findings of that review. In general, the Plans and Programs adequately identified the relevant project risks and proposed appropriate risk management controls. Note that recommendations for improvement of management plans are provided in the subsection following Table 9.

Table 9 - Management Plan Compliance Summary

Management Plan requirements under Schedule 3, 4, 6, and 7.	Environmental Management Strategy	Waste Management Plan	Noise Management Plan	Air Quality and Greenhouse Gas Management Plan	Surface Facilities Water Management Plan	Traffic Management Plan	Rehabilitation Management Plan	Coal Extraction Plan	Extraction Plan - Water Management Plan	Land Management Plan	Biodiversity Management Plan	Heritage Management Plan	Built Features Management Plan	Public Safety Management Plan	Subsidence Management Plan	Coal Recovery Plan
Schedule 7 Condition 10																
Latest version uploaded to website	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Schedule 7 Condition 2																
Detailed baseline data	-	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Statutory requirements	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Performance measures / criteria / action trigger levels	-	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Management measures / controls	-	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Monitoring and reporting	-	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Contingency planning	-	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Environmental performance improvement	-	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Incident management	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Complaints management	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Non-compliance management	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Reporting exceedance of impact assessment or performance criteria.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Periodic review and revision	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	-
Schedule 7 Condition 4																
Review and revision following Annual Review	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Review and revision following Incidents	NT	NT	✗	NT	✗	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Review and revision following IEAs	NT	NT	✗	NT	✗	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Review and revision following modification to the Approval	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

Notes to Table 9 - Management Plan Compliance Summary:

√ = Complies

✗ = Does not comply (for details refer to compliance table in Appendix 1)

— = Not applicable

NT = not triggered during this Audit Period

7.5.1 Surface Facility Water Management Plan

Following the:

- surface water incidents and resultant action taken by the EPA
- variation of the Environment Protection Licence

a review of the Surface Facility Water Management Plan should have been undertaken and the plan revised if necessary.

Recommendation: Review relevant management plans (and revise if necessary) to cover to reflect lessons learned as a result of any reportable incident and/or variations to relevant licences and approvals.

7.5.2 Noise Management Plan

Metropolitan has continued to experience noise exceedances throughout the audit period. The Auditor notes that the exceedances have trended down with the progressive implementation of noise abatement treatments to plant. While the Auditor accepts that Metropolitan continue to monitor noise emissions and identify mitigation opportunities, the Noise Management Plan has not been revised to reflect the significant noise compliance challenges faced by the operation and the processes required to drive towards full compliance. The current version of the management plan was last revised in 2014.

Recommendation: Review the Noise Management Plan with the objective of assessing whether further (process) opportunities are available and revise the plan to reflect the current noise management program being implemented.

7.6 Status of Previous IEA Findings

Table 10 lists the status of implementation of the audit recommendations associated with the Approval, relevant licenses and permits identified during the 2021 Audit.

Table 10 - Status of 2018 Audit Findings

Condition	Detail		2021 Audit Assessment / Recommendation	2024 Audit Assessment	Status
Project Approval 08_0149					
Sch 3 Cond 1	Asset	Performance Measure	The 2018, 2019 or 2020 Annual Reviews (and referenced specialists report) indicated negligible impacts on flow behavior in the Eastern Tributary over the audit period, except for iron staining along the reach of the Eastern Tributary. Recommendation: Continue implementation of iron staining source investigation, remediation and monitoring.	Monitoring and implementation of remediation measures continued throughout the audit period.	Closed
	Eastern Tributary between the full supply level of the Woronora Reservoir and the main gate of Longwall 26.	Negligible environmental consequences over at least 70% of the stream length (that is no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining and minimal gas release.			
Sch 4 Cond 1	By the end of 2014, the Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 2 at any residence on privately-owned land, or on more than 25% of any privately-owned land.		Table 10 in each year’s Annual Review provides a summary of each year’s noise monitoring results. During 2020 exceedances of the Night LAeq(15min) criteria were exceeded at 16 Oxley Place. During 2018 exceedances were recorded for all four noise criteria at multiple residences and in 2019 exceedances of the LA1 at multiple properties . Exceedances of noise criteria have trended down over the audit period. Recommendation: Continue the identification of nuisance noise sources and implementation of noise mitigation strategies.	Monitoring continued throughout the audit period. One noise complaint was received during the audit period. The cause of that complaint was identified.	Closed

Condition	Detail	2021 Audit Assessment / Recommendation	2024 Audit Assessment	Status
Sch 4 Cond 15	The Proponent shall prepare and implement a Water Management Plan for the surface facilities area and two ventilation shaft sites to the satisfaction of the Director-General. This plan must be prepared in consultation with NOW and OEH by a suitably qualified expert whose appointment has been endorsed by the Director-General, and submitted to the Director-General for approval by the end of June 2010. In addition to the standard requirements for management plans (see condition 2 of schedule 7).	<p>The SFWMP was not revised during the audit period. Compliance of the plan with the administrative aspects of this condition was verified during the 2017 IEA.</p> <p>Failure to maintain freeboard in the sediment does not conform with the Water Performance Criterion (Containment of Contaminants) that commits Metropolitan to maintaining all sediment containment facilities.</p> <p>Recommendation: Desilt the sediment ponds in the coal stockpile area and ensure that adequate freeboard is always maintained.</p>	<p>Nine water incidents occurred during this audit period. The causes of the water incidents included:</p> <ul style="list-style-type: none"> • Insufficient freeboard being maintained in the sediment dams; • Insufficient maintenance of drains (inspection and clearing of blockages) • Periods of heavy rainfall overwhelmed the surface water collection system. <p>Desilting and drain maintenance works are on-going.</p> <p>The Auditor notes that the Surface Water Management Plan has not been reviewed as a result of on-going surface water incidents.</p>	Open
Sch 7 Cond 2	The Applicant shall ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include: (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	<p>Refer to Section 7.5. All plans include a description of measures to be implemented to ensure compliance. However, the Noise Management Plan needs to be reviewed in light of on-going non-compliances.</p> <p>Recommendation: Review the Noise Management Plan with the objective of assessing whether further (process) opportunities are available and revise the plan to reflect the current noise management program being implemented.</p>	The Noise Management plan was reviewed. Metropolitan did not consider that changes to the plan were warranted.	Closed
Sch 7 Cond 4	Revision of Strategies, Plans and Programs within 3 months of: (b) the submission of an incident report under Schedule 7 Condition 7.	<p>All plans except the noise management plan did not trigger this condition.</p> <p>Recommendation: Ensure that following an incident (including significant compliance breach) or in response to on-going non-compliances that the relevant management plans are reviewed and if required revised.</p>	Metropolitan Coal reported that they undertake regular reviews and will continue to review the site management plans, including after submission of an incident report.	Closed

Condition	Detail	2021 Audit Assessment / Recommendation	2024 Audit Assessment	Status
Environment Protection Licence				
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	<p>Leak of a water-soluble lubricant occurred in May 2018. While some of the lubricant leaked from the site into the Camp Creek, a review of the inspections and water testing undertaken at the time did not identify any impacts on waters of the creek.</p> <p>No water discharges resulted in exceedance of water quality parameters during the audit period.</p> <p>Recommendation: Metropolitan has investigated the incident and implemented appropriate mitigation measures - No further action required.</p>	Metropolitan has investigated the incident and implemented appropriate mitigation measures - No further action required.	Closed
M4.2	<p>The (Complaints Register) record must include details of the following:</p> <p>a) the date and time of the complaint;</p> <p>b) the method by which the complaint was made;</p> <p>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;</p> <p>d) the nature of the complaint;</p> <p>e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and</p> <p>f) if no action was taken by the licensee, the reasons why no action was taken.</p>	<p>The complaints register that is uploaded to the web is not designed to meet the requirements of this section. A detailed complaint register that meets all of the requirements of this condition is not maintained.</p> <p>Recommendation: Establish a detailed complaint record that meets all of the requirements of EPL Condition M4.2. Note that this record should not be made available to the public as it will identify individual complainants.</p>	Metropolitan Coal has updated the Complaints Register to include a complainant details column, which will be hidden when the Complaints Register is published on the Metropolitan website.	Closed
M4.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	<p>The complaints register that is uploaded to the web is not designed to meet the requirements of this section. A detailed complaint register that meets all of the requirements of this condition is not maintained.</p> <p>Recommendation: Establish as detailed complaints record that meets all of the requirements of EPL Condition M4.2. Note that this record should not be made available to the public as it will identify individual complainants.</p>	Metropolitan Coal has updated the Complaints Register to include a complainant details column, which will be hidden when the Complaints Register is published on the Metropolitan website.	Closed

Condition	Detail	2021 Audit Assessment / Recommendation	2024 Audit Assessment	Status
Consolidated Mining Lease 703				
50	<p>Where the lease holder desires to commence prospecting operations in the subject area the lease holder shall notify the Director General in writing and shall comply with such additional conditions as the Minister may impose including any condition requiring the lodgment of an additional bond or other form of security for rehabilitation of the area affected by such operations.</p> <p>Where the lease holder notifies the Director General pursuant to sub paragraph (a) of this condition the lease holder shall furnish with that notification details of the type of prospecting methods that would be adopted and the extent and location of the area that would be affected by them.</p>	<p>The Resources Regulator, in their email of 9 March 2018 reminded Metropolitan Coal of the requirement for prior notification of exploration programs.</p> <p>Recommendation: Ensure that exploration notifications are provided to the Resources Regulator prior to commencement of those works.</p>	<p>Metropolitan Coal notified the Resources Regulator prior to commencement of exploration works in 2020 in correspondence dated 26 March 2020.</p> <p>Metropolitan Coal will continue to notify the Resources Regulator prior to the commencement of any new exploration works.</p>	Closed

7.7 Specialist Auditor Reports

Specialist auditor reports are provided in Appendix F.

7.8 Operational Environmental Impacts

An assessment of actual impacts against those predicted in the EIS is provided in Table 11.

Table 11 - Predicted vs Actual Impacts

Category	Predicted Impact	Actual Impacts to Date
Land use	The Project would not adversely affect the Woronora Reservoir water supply.	There is no evidence of any material impact on the Woronora Reservoir water supply.
Subsidence - Waratah Rivulet and tributaries	Some fracturing and dilation of the underlying strata of the Waratah Rivulet.	Some fracturing of strata underlying Waratah Rivulet has been recorded. Remedial works are being undertaken to address these impacts.
	Cracking and dilation of bedrock may result in the localised diversion of a portion of the surface flow into subterranean flows or leakage through rock bars	Some diversions of surface flows have been observed. Remedial works are being undertaken to address these impacts.
	Small changes bed gradients could occur.	No significant changes in bed gradient have been observed.
	Increased potential for scouring of the stream banks.	No significant scouring of stream banks has been observed.
Subsidence - Woronora Reservoir	Some fracturing and dilation of the bedrock within the inundation area and stored water area	No material changes have been observed.
	Fracturing and dilation may result in the localised diversion of a portion of the surface flow into subterranean flows or leakage through rock bars.	Some diversions of surface flows have been observed, however no material impacts on the water supply to the reservoir have been observed. The surface water specialist noted that their experience is that in the event that diversions occurs, this is considered "take" and requires a WAL. Peabody indicate based on consultation with regulator this is not required
Subsidence – Upland Swamps	Minor cracking within the swamps would generally not be expected to propagate through swamp soil profiles	No material changes to upland swamps have been observed.
Subsidence – Cliffs, Overhangs and Slopes	The size and extent of surface cracking on slopes is expected to be minor. Mine subsidence would be unlikely to result in any significant slope failure	No material subsidence impacts on cliffs, overhangs or slopes have been observed.
Subsidence - Built Structures	Mine design in the vicinity of the Garrawarra Centre would be constrained such that any impacts to the buildings resulting from systematic subsidence movements would be negligible.	No significant subsidence impacts have been observed on the Garrawarra Centre.
	Subsidence assessment undertaken indicates that management of potential subsidence effects on this structure would be readily achievable.	No material impacts on the railway from subsidence have been observed.
Perched Groundwater	Any changes in swamp moisture as a result of cracking are expected to be immeasurable when compared to the scale of seasonal rainfall.	No material changes to up land swamps have been observed.

Category	Predicted Impact	Actual Impacts to Date
Shallow Groundwater	No impacts on registered bores in the wider Project area and surrounds would be expected.	No material impacts on local bores have been identified.
Surface Water	No significant impacts on surface water inflows to Woronora Reservoir were predicted.	No material impacts on the water supply to the reservoir from the mining operations have been observed.
	Surface water quality is not expected to be impacted by subsidence or gas releases.	No significant impacts on surface water quality have been detected. Note that surface staining (iron / manganese) has been observed.
Aquatic Ecology	The Project is unlikely to have a significant impact on the composition or distribution of aquatic macrophytes. The Project is unlikely to have any significant long-term impacts on assemblages of macroinvertebrates. It is unlikely that the Project would further significantly impact on fish fauna.	<p>Macroinvertebrates/macrophyte:</p> <p>Significant differences in macroinvertebrate /macrophyte communities in the Audit Period attributed to miningrelated impacts (LW 20-27) include:</p> <ul style="list-style-type: none"> – C2 on tributary C: evidence of a mining related change to the assemblage of aquatic macrophytes in autumn 2021. – ET2 on the Eastern Tributary: altered numbers of Atyidae in autumn 2021 to autumn 2022 (and historically between spring 2015 and autumn 2018); but not during spring 2022 or autumn 2023. – ET4 on the Eastern Tributary: significant change to assemblage of macroinvertebrates detected in spring 2019 and subsequent surveys; altered patterns of diversity of macroinvertebrate taxa since autumn 2018; altered macrophyte assemblage since autumn 2018. – WT3 on the Waratah Rivulet: altered diversity of macroinvertebrate taxa in spring 2016, autumn 2018 to autumn 2023. <p>Fish: Fish have not been monitored so the EIS prediction relating to fish cannot be tested. However, as identified in Table 6.1, fish monitoring is not warranted.</p>
	It is unlikely that stream water level changes as a result of mine subsidence would disturb riparian vegetation to the extent that its role would be adversely impacted.	No significant impacts on riparian vegetation have been detected.
Terrestrial Flora	Subsidence impacts on riparian vegetation are expected to be relatively minor, with effects to vegetation condition predominantly being temporary and limited in extent.	No significant impacts on riparian vegetation have been detected.
	It is unlikely that the Southern Sydney Sheltered Forest on Transitional Sandstone Soils in the Sydney Basin Bioregion EEC would be adversely affected by subsidence.	No significant impacts on endangered ecological communities have been detected.
Terrestrial Fauna	Impacts on vertebrate fauna due to surface cracking are likely to be relatively minor and very unlikely to result in an impact that would threaten the viability of any vertebrate species population.	No significant impacts on the terrestrial fauna have been detected.
	It is unlikely that any vertebrate population would be put at risk by the potential subsidence-related impacts.	No significant subsidence impacts on terrestrial fauna have been detected.

Category	Predicted Impact	Actual Impacts to Date
Terrestrial Fauna	It is very unlikely that cracking or subsidence in tributary streams would impact the local Platypus population.	No significant subsidence impacts on terrestrial fauna have been detected.
	The Project would be unlikely to have a significant effect on threatened fauna.	No significant subsidence impacts on endangered terrestrial fauna have been detected.
Aboriginal Heritage	The majority of identified Aboriginal heritage sites would experience no significant change, particularly when compared to natural deteriorating processes unrelated to mining.	No unapproved impacts on Aboriginal heritage sites have been identified.
Non-Aboriginal Heritage	There would be negligible impact on heritage values (historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance) of the sites in the vicinity of the Project Underground Mining Area (or their settings) as a result of the Project.	No unapproved impacts on non-Aboriginal heritage sites have been identified.
Noise	No privately owned residences would experience an increase in operational noise as a result of the Project.	On-going noise impacts on residents have occurred throughout the project. Over the audit period those impacts (exceedances) have trended downwards.
	Significant operational noise reductions would be achieved as the Project progresses, with the number of private residences in the Noise Affection Zone falling from 29 to 14.	On-going noise impacts on residents have occurred throughout the project. Over the audit period those impacts (exceedances) have trended downwards.
Noise	Negligible noise increase (i.e. < 1 dBA) due to the increased Project train movements at the nearest residential receivers to the rail line.	Significant increases in noise impacts from rail operations have not been identified.
	Road transport noise should not increase as a result of the project.	Significant increases in noise impacts from trucking operations have not been identified. Over the latter part of this audit period, truck movements have decreased.
Air Quality	Annual average dust deposition due to the Project plus background was not predicted to be above the applicable 4 g/m ² /month DECC amenity criterion at any receiver.	Air quality impacts are in-line with predictions.
	Predicted annual average PM ₁₀ (Project plus background) concentrations modelled for Years 3 and 15 were not predicted to be above the 30 µg/m.	Air quality impacts are in-line with predictions.
	Predicted odour levels for when Ventilation Shaft No. 3 only would be operating and when both ventilation shafts would be operating were not predicted to be above the DECC odour assessment criterion at any receiver.	Air quality impacts are in-line with predictions.
Transport	The additional traffic expected to be generated by the Project during the on-street peak hours would be sufficiently low that potential impacts on the operation of the surrounding intersections are considered to be negligible.	Significant increases in traffic impacts from trucking operations have not been identified. Over the latter part of this audit period, truck movements have decreased.
	The number of trains would increase from 1.5 trains per day to three trains per day on average over the year.	Peak train movements are in line with predictions. During the latter half of this audit period, the frequency of train movements has decreased.

Category	Predicted Impact	Actual Impacts to Date
Visual	The Project would not involve any additional surface development within the majority of the Completed or Current Underground Mining Areas, hence the discussion below focuses on the Major Surface Facilities Area and surrounds and the Project Underground Mining Area and surrounds.	No additional surface facilities have been developed within the majority of the lease areas.

7.8.1 Extent of Project Operations

The original Environmental Assessment and modifications defined the proposed project boundaries. A review of current aerial imagery (Google Maps) and the Auditor's observations during the site inspection found that the mining operations are confined to the approved site boundaries.

7.9 Other Matters

No other matters have been identified during this Independent Environmental Audit.

Audit Compliance Tables

Appendix A1 Planning Approval

Planning Approval Compliance Table

Appendix A1

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
SCHEDULE 2 ADMINISTRATIVE CONDITIONS								
Sch 1 Cond 1	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the Project.	Documents as noted in this audit report.		Reasonable and feasible measures observed during the audit site inspection on 19/3/24	All reasonable measures were observed during the audit site inspection with documented evidence provided to demonstrate their implementation.	Noted	
Sch 2 Cond 2	TERMS OF CONSENT	The Applicant shall carry out the development generally in accordance with the: (a) EA; (b) PPR; (c) EA (Mod 1; and (d) conditions of this consent.	Documents as noted in this audit report.			Compliance with the approval (as modified) is assessed below.	Noted	
Sch 2 Cond 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 consent shall prevail to the extent of any inconsistency.					Noted	
Sch 2 Cond 4		The Proponent shall comply with any reasonable requirements of the Director-General arising from the Department's assessment of: <ul style="list-style-type: none"> any strategies, plans, programs, reviews, audits, or correspondence that are submitted in accordance with this approval; and the implementation of any actions or measures contained in these documents. 		Environment & Community Superintendent – DPHI did not issue any directions following their review of any strategies, plans, programs, reviews, audits, or related correspondence.			Not Triggered	
Sch 2 Cond 5	Mining Operations	The Proponent may undertake mining operations in the mining area for up to 23 years from the date of this approval.					Noted	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 2 Cond 6	Coal Extraction	<p>The Proponent shall not:</p> <p>a) extract more than 3.2 million tonnes of ROM coal from the mining area in a calendar year, or</p> <p>b) transport more than 2.8 million tonnes of product coal from the site in a calendar year.</p>	<p>Metropolitan Coal Mine 2022 Annual Review (Table 4).</p> <p>Metropolitan Coal -Coal and Coal Reject Trucking 1 January 2023 – 31 December 2023.</p>	<p>Environment & Community Superintendent – Coal production summaries are provided in each Annual Review (Table 4). We are not required to break down by month but do update the truck and rail register (on website) every 6 months.</p>		<p>The Annual Reviews and data provided by the Environment and Community Superintendent reported the following production qualities:</p> <ul style="list-style-type: none"> 2021: ROM Coal Extraction 1,130,139 tonnes. 2021: Coal Transport from site (by Rail) 1905,510 tonnes. 2022: ROM Coal Extraction 2,047,404 tonnes 2022: Coal Transport from site (by Rail) 1,699,843 tonnes. 2023: ROM Coal Extraction 12,527,376 tonnes. 2023: Coal Transport from site (by Rail) 2,043,937. 	Compliance	
Sch 2 Cond 7	Coal Rejects	<p>The Proponent shall not export any coal reject from the site after 2021 without the written approval of the Director-General.</p>	<p>Letter from DPIE (J Evans) to Metropolitan Coal (J Degotardi) titled “Metropolitan Coal Project (MP 08_0149) Request to Extend Coal Washery Reject Transportation to 2023.</p>	<p>Environment & Community Superintendent – Coal washery rejects are blended with some product coal to the client’s specification before railing to Port Kembla Coal Terminal. The blended product is exported. We considered including this Coal washery rejects in the product coal totals for annual reporting since this is technically more accurate, but decided it was better for consistency with historical reporting to continue reporting it separately. Table 4 of each year’s AR details the destination of all Coal washery rejects transported from site, but from memory I don’t believe any Coal washery rejects was beneficially reused in local LGAs during the audit period.</p>		<p>No coal washery rejects, except for the material that has been blended with coal for export, have been transported from the site. The washery rejects are blended back with the coal in order to meet the specific client’s technical specifications and is sold as product, not removed from site as a waste.</p>	Compliance	
Sch 2 Cond 8		<p>The Proponent shall not emplace coal reject on the surface of the site without the written approval of the Director-General.</p> <p><i>Note: This condition applies to the Camp Gully Emplacement Area, as well/ as to the rest of the surface of the site. It does not apply to the proposed additional coal reject stockpile shown in Appendix 4.</i></p>		<p>Environment and Community Superintendent - No coal washery rejects were emplaced on the surface during the audit period.</p>	<p>No evidence of coal washery reject surface disposal was sighted during the IEA site inspection.</p>	<p>No coal washery rejects were emplaced on the surface during the audit period.</p>	Compliance	
Sch 2 Cond 9	STRUCTURAL ADEQUACY	<p>The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structure, are constructed in accordance with:</p> <p>a) the relevant requirements of the BCA; and</p> <p>b) any additional requirements of the MSB in areas where subsidence effects are likely to occur.</p>		<p>Environment and Community Superintendent – No new structures were built during the audit period.</p>	<p>No new structures were sighted during the site inspection</p>	<p>No new structures were built during the audit period.</p>	Not Triggered	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		<i>Notes; Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.</i>						
Sch 2 Cond 10	Demolition	The Applicant shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.		Environment and Community Superintendent – No structures were demolished during the audit period.		No structures were demolished during the audit period.	Not Triggered	
Sch 2 Cond 11	Operation of Plant and Equipment	The Applicant shall ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition; and	EPA Penalty Notice number 3173531030 dated 7 July 2022. EPA Prevention Notice 3503648 dated 9 September Peabody Work Order Details Reports (Work Order Number 1049621) Peabody Work Order Details Reports (Work Order Number 115304533)	Environment and Community Superintendent – Peabody uses SAP to track maintenance works across the Peabody platform both on the surface and underground.	During the site inspection all areas inspected were appropriately organised and maintained. No evidence of improper equipment operations or maintenance were observed.	The Metropolitan Coal Mine operates an SAP based maintenance system that monitors and manages scheduled and unscheduled maintenance. On several occasions in 2022 including 18 January 2022, 17 August 2022, and 8 September 2022, the EPA observed that the Turkey's Nest Dam contained coal material which had collected in the dam. On 7 July 2022, the EPA issued a penalty notice to Metropolitan Collieries Ptd Ltd for contravention of Condition O2.1 of the Environment Protection Licence. The PIN related to the maintenance of freeboard in the Turkey's nest retention basin.	Non-Compliance	Ensure that the routine inspection of all surface water management infrastructure, including sediment ponds is undertaken and that all required cleaning and maintenance is undertaken.
		(b) operated in a proper and efficient manner.	Peabody Work Order Details Reports (Work Order Number 1049621) Peabody Work Order Details Reports (Work Order Number 115304533)	Environment and Community Superintendent – Peabody uses SAP to track maintenance works across the Peabody platform both on the surface and underground.	During the site inspection all areas inspected were appropriately organised and maintained. No evidence of improper equipment operations or maintenance were observed.	The Metropolitan Coal Mine operates an SAP based maintenance system that monitors and manages scheduled and unscheduled maintenance.	Compliance	
Sch 2 Cond 12	STAGED SUBMISSION OF STRATEGIES, PLANS OR PROGRAMS	With the approval of the Director-General, the Proponent may submit any strategies, plans or programs required by this approval on a progressive basis.					Noted	

PLANNING APPROVAL 08_0149							
Cond.	Short Title	Condition		Documents Reviewed	Assessment	Compliance Finding	Recommendation
Sch 3 Cond 1	Performance Measures	The Proponent shall ensure that the project does not cause any exceedance of the performance measures in Table 1 (below).					
	Table 1 Performance Measures	Asset	Measure	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Surface Water Review Metropolitan Coal Surface Water Review 1 January to 31 December 2023, prepared by ATC Williams. Water Quality Performance Measures for Metropolitan Coal Mine, prepared by the Independent Expert Advisory Panel for Mining, dated October 2023. Metropolitan Coal LW305 -307 Water Management Plan (Mar 2020). Metropolitan Coal LW308 -310 Water Management Plan (Dec 2022). Metropolitan Coal LW311 -316 Water Management Plan (Nov 2024). Six Monthly Groundwater Report 01 January to 30 June 2023, prepared by SLR Consultants. Environment and Community Superintendent – informed the specialist consultants on 21.03.25 of the performances of the Extraction Plans for LW305 – 307 & LW308 – 310.	Photographs 1 and 2 show Waratah Rivulet and an area of typical iron staining. Remediated sites on Waratah Rivulet (Ponds A, F) and Eastern Tributary (Pond ETO) were inspected on 21.03.25 during a period of low flow (after recent flooding). Minor Iron staining/mat floc, occasional disturbed sandstone boulders and grout repaired cracks were observed. Creek flows/ponding appeared to be ‘normal’. The 2021 and 2022 Annual Reviews reported that surface water flow was at Level 1 throughout each review period (i.e. ‘negligible’ impact on water quality). Dissolved Aluminum levels were at Level 3 during April 2021 and dissolved manganese were at Level 3 throughout the 2022 reporting period (i.e. exceeded the impact indicators). These exceedances were investigated by Associate Professor Barry Noller who concluded that the water quality data obtained is considered a ‘negligible’ impact on the waters of Woronora Reservoir. Dissolved manganese was at Level 3 from March to July 2023 and September to December 2023. A review of the monitoring data was undertaken by Associate Professor Barry Noller (Queensland University) who determined that while the subsidence impact performance indicator was exceeded, that the relevant performance measures were not exceeded, that is there was no significant reduction in water quality in the Woronora Reservoir over the audit period. Water quality data from WaterNSW Woronora Reservoir monitoring site DW01 indicate that Total Iron & Aluminum Concentrations exceeded 20-year ARI baseline levels over 75% of the time in 2022 & 2023 (see further discussion below) DPE sought the advice of the Independent Expert Advisory Panel for Mining on Water Quality Performance Measures for Metropolitan Coal Mine in April 2023. The Panel concluded: “The quality of the Woronora Reservoir has been poor during 2022-2023 (and during other periods historically) and has led to significant complications for water treatment and water supply. Although there are natural influences on water quality that might explain the observed variations in water quality, the Panel cannot rule out the possibility that the Metropolitan Mine has had a non-negligible adverse impact.” The Panel further concluded: “The assessments of the quality of water reaching the Woronora Reservoir presented by Peabody in response to level Level 3 triggers are not based on sufficient data and analysis and therefore do not provide sufficient justification and reasonable conclusions. The assessments do not adequately consider the potential significance of the impaired water quality for the WaterNSW Raw Water Supply Agreement and Water Quality Incident Management trigger levels”. The Panel subsequently made a series of recommendations to address the water quality monitoring issues. Based on the current Trigger Response Indicators, no significant impact has been identified, and therefore the Auditors has have concluded that this performance measure has been met. However, the recommendations of the Panel should be implemented to improve the assessment of performance against the water quality indicators in subsequent Water Management Plans for LW311-318. It is also noted that future longwalls will be moving further away from both streams and remediation of impacted sections are on-going. It is therefore anticipated that Water Quantity and Quality are likely to improve over the next 3 - 5 years.	Complies	Recommendation for Improvement – implement all recommendations made by the Independent Expert Advisory Panel for Mining in their 2023 report to be included in the LW311 to 318 Water Management Plans and Stream Remediation Plans.
		Catchment yield to the Woronora Reservoir	Negligible reduction to the quality or quantity of water resources reaching the Woronora Reservoir. Negligible reduction in the water quality of Woronora Reservoir				
		Woronora Reservoir	Negligible leakage from the Woronora Reservoir. No connective cracking between the surface and the mine.				

PLANNING APPROVAL 08_0149									
Cond.	Short Title	Condition		Documents Reviewed	Assessment			Compliance Finding	Recommendation
									<p>pressure from Sept 2023 onwards should be watched as deeper sensors showed this response prior to significant decreases in pressure.</p> <p>The hydrographs for 9EGW2A and 9EGW2-4 show as one hydrograph and should be separated for reporting purposes.</p>
Sch 3 Cond 1	Table 1 Performance Measures	Waratah Rivulet between the full supply level of the Woronora Reservoir and the main gate of Longwall 23 (upstream of Pool P).	Negligible environmental consequences (that is, no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining, and minimal gas releases).	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Six Monthly Groundwater Report 01 January to 30 June 2023, prepared by SLR Consultants. Surface Water Review Metropolitan Coal Surface Water Review 1 January to 31 December 2023, prepared by ATC Williams.	The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated negligible impacts on flow behavior in the Waratah Rivulet over the audit period.			Complies	
		Eastern Tributary between the full supply level of the Woronora Reservoir and the main gate of Longwall 26.	Negligible environmental consequences over at least 70% of the stream length (that is no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining and minimal gas release.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Surface Water Review Metropolitan Coal Surface Water Review 1 January to 31 December 2023, prepared by ATC Williams.	Environment and Community Superintendent – the performance measure was exceeded on Eastern Tributary. Stream remediation works are ongoing and included PUR Grout Curtains to 10 m depth across Pools ETAH, AL, AM and AO. 1m deep grouting also completed at ETAQ & AR. Post-remediation flows are responding positively.		The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated negligible impacts on flow behavior in the Eastern Tributary over the audit period, except for iron staining along the reach of the Eastern Tributary. Iron staining is present at a number of stream features between the main gate of Longwall 26 and the full supply level of the Woronora Reservoir. Metropolitan has committed to monitoring the nature and extent of iron staining on the Eastern Tributary during the mining of Longwalls 305-307 Metropolitan Coal to implement contingency measures (stream remediation measures) in accordance with the Project Approval.	Non-Compliance	Continue with the implementation of iron staining source investigation, remediation, and monitoring in accordance with the Approved Metropolitan Coal Stream Remediation Plan. In addition, it is recommended that Metropolitan establish a wet weather threshold criterion to trigger additional inspections.
		Threatened species, populations, or ecological communities.	Negligible impact.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Subsidence Impacts on Swamp 20 and Swamp 28, prepared by EcoPlanning, dated 29 April 2029			The 2021, 2022 and 2023 Annual Reviews indicated generally negligible impacts on threatened species or ecological communities over the audit period, with the exception of Swamps 20 and 28 where groundwater levels have been impacted by mine-subsidence. An annual assessment of the impacts has been undertaken by EcoPlanning	Complies	

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition		Documents Reviewed	Assessment			Compliance Finding	Recommendation
							(Ecologists) who have determined that the impact performance measure has not been exceeded as a result of the subsidence impacts on Swamps 20 and 28.		
Sch 3 Cond 1	Table 1 Performance Measures	Swamps 76, 77 and 92.	Set through Condition 4 below	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated negligible impacts Swamps 76, 77 and 92 over the audit period.	Complies	
		Cliffs	Less than 3% of the total length of cliffs (and associated overhangs) within the mining area experience mining induced rock fall.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated negligible impacts cliffs over the audit period.	Complies	
		Aboriginal heritage sites	Less than 10% of aboriginal heritage sites within the mining area are affected by subsidence impacts.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Monitoring of Aboriginal Cultural Heritage Sites Longwall 305-307 Round 2 Metropolitan Colliery Wollongong City Council Local Government Area Prepared for Peabody Energy Australia – Metropolitan Colliery, prepared by Niche Environment and Heritage, dated 22 March 2023.	Environment and Community Superintendent - To date, two heritage sites have been affected by subsidence impacts as a result of cracking of sandstone that coincides with Aboriginal art, which represents less than 2% of sites in the mining area.		The 2021, 2022 and 2023 Annual Reviews and referenced specialists report indicated two indigenous heritage sites have been impacted by subsidence. Those sites represent less than 10% of the sites identified in the subsidence areas.	Complies	
		Items of historical or heritage significance at the Garrawarra Centre.	Negligible damage (that is fine or hairline cracks that do not require repair), unless the owner of the item and the appropriate heritage authority agree otherwise in writing.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated no significant impacts on historical heritage sites or the Garrawarra Centre over the audit period.	Complies	
		Built Features	Safe serviceable and repairable unless the owner agrees otherwise in writing.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated no significant impacts on built features over the audit period.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 3 Cond 2	Catchment Monitoring Program	The Proponent shall prepare and implement a comprehensive Catchment Monitoring Program for the project to the satisfaction of the Director- General. This program must: (a) be prepared by suitably qualified and experienced experts whose appointment has been endorsed by the Director-General;	Metropolitan Coal Catchment Monitoring Program (Longwalls 20-22), Revision CMP-RO1-F, dated February 2018. 2018 Independent Environmental Audit			Approval of the 2014 plan was verified in the 2017 IEA. The plan was revised in 2018. No revisions of the plan occurred during this audit period.	Complies	
		(b) be prepared in consultation with NOW, SCA and OEH;	2018 Independent Environmental Audit			No revisions of the plan occurred during this audit period.	Complies	
		(c) be approved by the Director-General before the Proponent is allowed to carry out any second workings in the mining area; and	2018 Independent Environmental Audit			No revisions of the plan occurred during this audit period.	Complies	
		(d) include: <ul style="list-style-type: none"> detailed baseline data of the existing surface and groundwater resources in the project area; program for the ongoing development and use of appropriate surface and groundwater models for the project; and a program to: <ul style="list-style-type: none"> monitor and assess any impacts of the project on the quantity and quality of surface and ground water resources in the project area, and in particular the catchment yield to the Woronora Reservoir; and validate and calibrate the surface and groundwater models. 	Metropolitan Coal Catchment Monitoring Program (Longwalls 20-22), Revision CMP-RO1-F, dated February 2018.			Section 3 of the Catchment Monitoring Program presents baseline monitoring data. Section 4 of the Catchment Monitoring Program describes the surface and groundwater models. Section 5 of the Catchment Monitoring Program presents surface and groundwater monitoring program.	Complies	
Sch 3 Cond 3	Specific Requirements for Further Modelling & Assessment	If the subsidence effects and subsidence impacts of the project exceed the relevant predictions by more than 15% at any time after mining has progressed beyond the halfway mark of Longwall 21, or if the profile of vertical displacement does not reflect predictions, then the Proponent shall use appropriate numerical modelling to supplement the subsequent predictions of subsidence effects and subsidence impacts for the project to the satisfaction of the Director-General. <i>Note: The aim of the numerical modelling is to give a better insight into the mechanisms that may account for the differences between predicted and actual subsidence effects and impacts.</i>	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022). Metropolitan Coal LW311 -316 Extraction Plan (Nov 2024).			An analysis of the observed versus predicted maximum vertical subsidence, tilt and curvature was undertaken by specialist consultants Mine Subsidence Engineering Consultants and presented in each Extraction Plan report for LW305-307, 308-310 & 311 - 316. The measured subsidence for the project area to-date have not exceeded predictions by more than 15%.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 3 Cond 4	Specific Requirements for Further Modelling & Assessment	The Proponent shall not undermine Swamps 76, 77 and 92 without the written approval of the Director-General. In seeking this approval, the Proponent shall submit the following information with the relevant Extraction Plan (see condition 6 below): a) a comprehensive environmental assessment of the: a. potential subsidence impacts and environmental consequences of the proposed Extraction Plan; b. potential risks of adverse environmental consequences; and c. options for managing these risks;		Environment and Community Superintendent – mining has not reached this area yet.			Not Triggered	
		b) a description of the proposed performance measures and indicators for these swamps; and		Environment and Community Superintendent – mining has not reached this area yet.			Not Triggered	
		c) a description of the measures that would be implemented to manage the potential environmental consequences of the Extraction Plan on these swamps (to be included in the Biodiversity Management Plan - see condition 6(f) below) and comply with the proposed performance measures and indicators.		Environment and Community Superintendent – mining has not reached this area yet.			Not Triggered	
Sch 3 Cond 5	First Workings	The Proponent shall not carry out first workings in the mining area that are not consistent with the approved mine plan without the written approval of the Director-General.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).			Annual Reviews detail the mining works completed. First workings in the mining area, as documented in the Annual Reviews, are consistent with approved extraction plans.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 3 Cond 6	Extraction Plan	The Proponent shall prepare and implement an Extraction Plan for all second workings in the mining area to the satisfaction of the Director-General. This plan must: (a) be prepared by a team of suitably qualified and experienced experts whose appointment has been endorsed by the Director-General;	Metropolitan Coal Extraction Plan 305-307, Revision LW 308-310 EP-R01-B, dated 22 November 2022 Letter from DPE (S O'Donoghue) to Metropolitan (J Degotardi) titled "Metropolitan Coal Project (PA 08-0149) Longwall 308-310 Approval of Experts", dated 1 September 2021. The letter endorses the team of experts responsible for preparing the Extraction Plan.			Correspondence was available to verify that the Extraction Plan authors were approved by DPIE.	Complies	
		b) be approved by the Director-General before the Proponent is allowed to carry out the second workings covered by the Extraction Plan;	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).		Mining commencement dates & Extraction Plan approval dates presented in Annual Reviews	The extraction plans were issued and approved prior to the commencement of second workings.	Complies	
		(c) include a detailed plan for the second workings, which has been prepared to the satisfaction of DRE, and provides for adaptive management (from Longwall 23 onwards);	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).			Section 1.3 and Appendix G of the Extraction Plan details the second workings covered by the plan. The Resource Regulator was consulted during the preparation of the current version of the Extraction Plan. Section 4.2 of the Extraction Plan describes the approach to adaptive management.	Complies	
		(d) include detailed plans of any associated surface construction works;	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).			The current Extraction Plan (LW308-310) states that no additional surface works are planned.	Complies	
		(e) include the following to the satisfaction of DRE: <ul style="list-style-type: none"> a coal resource recovery plan that demonstrates effective recovery of the available resource; revised predictions of the conventional and non-conventional subsidence effects and subsidence impacts of the extraction plan, incorporating any relevant information that has been obtained since this approval; and a Subsidence Monitoring Program to: <ul style="list-style-type: none"> validate the subsidence predictions; and analyse the relationship between the subsidence effects and subsidence impacts of the Extraction Plan and any ensuing environmental consequences; 	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).			Appendix H of the Extraction Plan contains the resource recovery plan. Appendix I (Subsidence Predictions and Impact Assessments Report) of the Extraction Plan details the subsidence impacts of the proposed coal extraction. Section 3.7 of the Extraction Plan describes the subsidence monitoring program.	Complies	
Sch 3 Cond 6	Extraction Plan	(f) include a; <ul style="list-style-type: none"> Water Management Plan, which has been prepared in consultation with 	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020).			Appendix A of the Extraction Plan contains the water management	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		<p>OEH, SCA and NOW, to manage the environmental consequences of the Extraction Plan on watercourses (including the Woronora Reservoir), aquifers and catchment yield;</p> <ul style="list-style-type: none"> Biodiversity Management Plan, which has been prepared in consultation with OEH and DRE (Fisheries), to manage the potential environmental consequences of the Extraction Plan on aquatic and terrestrial flora and fauna, with a specific focus on swamps; Land Management Plan, which has been prepared in consultation with SCA, to manage the potential environmental consequences of the Extraction Plan on cliffs, overhangs, steep slopes and land in general; Heritage Management Plan, which has been prepared in consultation with OEH and the relevant Aboriginal groups, to manage the potential environmental consequences of the Extraction Plan on heritage sites or values; Built Features Management Plan, which has been prepared in consultation with the owner of the relevant feature, to manage the potential environmental consequences of the Extraction Plan on any built features; and 	Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).			<p>plan.</p> <p>Appendix C of the Extraction Plan contains the biodiversity management plan.</p> <p>Appendix B of the Extraction Plan contains the land management plan.</p> <p>Appendix D of the Extraction Plan contains the heritage management plan.</p> <p>Appendix E of the Extraction Plan contains the built features plan.</p>		
		(g) include a Public Safety Management Plan, which has been prepared in consultation with DRE and the DSC (for any mining within the DSC notification area), to ensure public safety in the mining area.	<p>Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020).</p> <p>Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).</p>			Appendix F of the Extraction Plan contains the public safety plan.	Complies	
Sch 3 Cond 7	Extraction Plan	<p>In addition to the standard requirements for management plans (see condition 2 of schedule 7), the Proponent shall ensure that the management plans required under condition 6(f) above include:</p> <p>a) a program to collect sufficient baseline data for future Extraction Plans;</p>	<p>Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020).</p> <p>Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).</p>			Attachment 3 of the Extraction Plan describes the program to collect sufficient baseline data for future Extraction Plans.	Complies	
		b) a revised assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this approval;				Appendices A to I of the Extraction Plan provides an assessment of the potential environmental consequences of the Extraction Plan.	Complies	
Sch 3 Cond 7	Extraction Plan	c) a detailed description of the measures that would be implemented to remediate predicted impacts; and				Section 3 and Appendices A to F of the Extraction Plan provides detailed descriptions of measures that would be implemented to remediate predicted impacts.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		d) a contingency plan that expressly provides for adaptive management.				Section 4.1 and Appendices A to F of the Extraction Plan provides contingency plans for adaptive management.	Complies	
Sch 3 Cond 8	Payment of Reasonable Costs	The Proponent shall pay all reasonable costs incurred by the Department to engage independent experts to review the adequacy of any aspect of the Extraction Plan.	Letter from DPE (L Clark) to Metropolitan Collieries (J Degotardi) titled "Receipt Cost Recoup IEAPM for 3 Projects", dated 12 March 2024.	Environment and Community Superintendent – DPE sought costs for review of the 308-310 EP by the Independent Expert Advisory Panel for Mining.		DPE has sought compensation for expert's costs which were paid by Metropolitan in March 2024.	Complies	
Sch 3 Cond 9	Research Program	The Proponent shall prepare and implement a Research Program for the project to the satisfaction of the Director-General and allocate \$320,000 towards the implementation of the program.	2018 Independent Environmental Audit			Development of the research program was verified in the 2017 EIA.	Complies	
		This program must: (a) be prepared in consultation with NOW, SCA, OEH and DRE;	2018 Independent Environmental Audit			Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
		(b) be submitted to the Director-General for approval by the end of 2010;	2018 Independent Environmental Audit			Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
		c) be targeted at genuine research, as opposed to implementing the matters required by this approval; and	2018 Independent Environmental Audit			Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
		(d) be directed at encouraging research into improving: <ul style="list-style-type: none"> the prediction of valley closure and up-sidence, and the resultant subsidence impacts; the assessment of the environmental consequences of subsidence impacts on natural features; the remediation of subsidence impacts on watercourses; the understanding of subsidence impacts and their environmental consequences on swamps; the conservation of the Eastern Ground Parrot on the Woronora Plateau; or the environmental management of underground mining operations in the Southern Coalfield. 	2018 Independent Environmental Audit			Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
Sch 3 Cond 10	Research Program	The Proponent shall obtain the Director-General's approval for the allocation of any funding under this program.	2018 Independent Environmental Audit			Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
Sch 3 Cond 11	Construction Management – Woronora Special Area	The Proponent shall prepare and implement a Construction Management Plan for all surface construction works (excluding remediation or rehabilitation works) in the	2018 Independent Environmental Audit	Environment and Community Superintendent - construction works associated with the Woronora Special Area		Construction works associated with the Woronora Special Area were substantially completed prior to this	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		Woronora Special Area to the satisfaction of the Director-General. This plan must be prepared in consultation with SCA, include detailed plans of the proposed construction works., and be approved by the Director-General before the Proponent is allowed to carry out the construction works.		were substantially completed prior to this audit period.		audit period. Compliance of the research program with this condition was verified in the 2017 EIA.		
Sch 4 Cond 1	NOISE Noise Impact Assessment Criteria	<p>By the end of 2014, the Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 2 at any residence on privately-owned land, or on more than 25% of any privately-owned land.</p> <p>Table 2: Day LA_{eq(15min)} 50 dB(A) Evening LA_{eq(15min)} 45 dB(A) Night LA_{eq(15min)} 45 dB(A) Night LA_{1(1min)} 50 dB(A)</p>	<p>Metropolitan Coal 2021 Annual Review</p> <p>Metropolitan Coal 2022 Annual Review</p> <p>Metropolitan Coal 2023 Annual Review</p> <p>Complaints Register</p>	Environment and Community Superintendent - An exceedance was identified in 2021. No exceedances identified in 2022 and 2023		<p>Section 7.1 in each year's Annual Review provides details of each year's noise monitoring results.</p> <p>Monitoring at 16 Oxley Place in Quarters 1, 2, 3 and 4 measured a noise level of 55 dBA, 57 dBA, 55 dBA and 51 dBA respectively, which were non-complaint (Quarter 2), conditionally14 non-compliant (Quarters 1 and 3) and conditionally compliant (Quarter 4) with the Night-time LA1 Noise Impact Assessment Criterion (50 dBA). Exceedances of noise criteria have trended down over the audit period.</p> <p>No exceedances were identified during 2022 or 2023.</p> <p>Four noise complaints were received during this audit period.</p>	Non-Compliance	Continue the identification of nuisance noise sources and implementation of noise mitigation strategies.
Sch 4 Cond 2	Noise Acquisition Criteria	<p>If after 2014, the noise generated by the project exceeds the criteria in Table 3 at any residence on privately-owned land, or on more than 25% of any privately-owned land, then the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 5-7 of schedule 5.</p> <p>Table 3: Day LA_{eq(15min)} 55 dB(A) Evening LA_{eq(15min)} 50 dB(A) Night LA_{eq(15min)} 50 dB(A)</p>		Environment and Community Superintendent – no requests for acquisition were received during the audit period.		No requests for acquisition were received during the audit period.	Not Triggered	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 4 Cond 3	Additional Noise Mitigation Criteria	It after 2014, the noise generated by the project exceeds the criteria in Table 4 at any residence on privately-owned land, then the Proponent shall, upon receiving a written request from the landowner, implement reasonable and feasible noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. if within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.		Environment and Community Superintendent – no requests for noise mitigation works were received during the audit period.		No requests for noise mitigation were received during the audit period.	Not Triggered	
		Table 4: Day LA _{eq(15min)} 35 dB(A) Evening LA _{eq(15min)} 48 dB(A) Night LA _{eq(15min)} 48 dB(A)						
Sch 4 Cond 4	Rail Noise	The Proponent shall only use locomotives that are approved to operate on the NSW rail network in accordance with noise limits 16.1 to 16.4 in RailCorp's EPL (No. 12208) and ARTC's EPL (No. 3142) or a Pollution Control Approval issued under the former Pollution Control Act 1970.	2018 Independent Environmental Audit.	Environment and Community Superintendent – no changes have been made to the trains used during the audit period. Aurizon was rail operator throughout audit period		No changes in locomotives used at the mine have occurred over the audit period. Compliance of the locomotives used were verified during the 2017 IEA.	Complies	
Sch 4 Cond 5		The Proponent shall use its best endeavours to minimise night-time movements of rolling stock on the Metropolitan rail spur.		Environment and Community Superintendent – We continue to prioritise daytime train loading wherever possible, though evening/night-time loading is sometimes unavoidable due to slot availability and network delays. If night-time loading is necessary, the finer coal products such as the semi-hard coking coal will be prioritized as they generate less noise than coarser product when loading.		Metropolitan coordinate train movements to minimise night-time noise generation. No rail related noise complaints were received during the audit period.	Complies	
Sch 4 Cond 6		In the event of any rail noise or vibration issues that may arise from the haulage of coal over the life of the Project, the Proponent shall liaise with the CCC and the rail service provider to facilitate resolution of these issues and implement additional noise reduction measures where appropriate.	Complaints Register	Environment and Community Superintendent – no changes have been made to the trains used during the audit period.		No changes have been made to the trains used during the audit period. No rail noise related complaints were received during the audit period.	Not Triggered	
Sch 4 Cond 7	Blasting	The Proponent shall not undertake blasting operations at the surface facilities area without the written approval of the Director-General.		Environment and Community Superintendent – no blasting has occurred at the surface during the audit period.		No blasting has occurred at the surface during the audit period.	Not Triggered	
Sch 4 Cond 8	Noise Management Plan	The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan must be prepared in consultation with OEH by a suitably qualified expert whose appointment has been approved by the Director-General and submitted to the Director-General for approval by the end of June 2010. It must also provide for real-time noise monitoring.	Metropolitan Coal Noise Management Plan, Revision NMP-R01-E, dated June 2014. 2018 Independent Environmental Audit.	Environment and Community Superintendent – the noise management plan has not been revised during the audit period.		The current version of the plan was issued in 2014. Compliance with this condition was verified during the 2017 IEA.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 4 Cond 9	Odour	The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.	Complaints Register		No offensive odours were detected during the audit inspection.	No odour complaints have been received during the audit period.	Complies	
Sch 4 Cond 10	Greenhouse Gas Emissions	The Proponent shall implement all reasonable and feasible measures to minimise: 1. energy use on site; and 2. the scope 1, 2 and 3 greenhouse gas emissions produced on site, to the satisfaction of the Director-General.	Metropolitan Coal Air Quality and Greenhouse Gas Management Plan, Revision AQMP-R01-D, dated Dec 2010.	Environment and Community Superintendent – In 2023 Metropolitan purchased an electric bus to transport personnel between the surface facilities and upper office area. An electric drift runner vehicle is also being trialed to transport personnel underground. The Energy Savings Plan was not revised during audit period.		Energy savings action plan is contained within the approved air quality and greenhouse gas management plan. The plan was written and approved in 2011, no further review has taken place. In 2023 Metropolitan purchased an electric bus to transport personnel between the surface facilities and upper office area. An electric drift runner vehicle is also being trialed to transport personnel underground.	Complies	
Sch 4 Cond 11	Air Quality Impact Assessment Criteria	The Proponent shall ensure that dust generated by the project does not cause additional exceedances of the air quality impact assessment criteria listed in Tables 5, 6, and 7 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review	Environment and Community Superintendent –Air Quality monitoring results were generally below the criteria. Where exceedances were identified, these coincided with regional air quality events (bushfires, hazard reduction burns) and were not attributed to the operations of the mine.		A review of each Annual Review has indicated that no air quality related non-compliances, attributed to the mining operations were detected.	Complies	
Sch 4 Cond 12	Land Acquisition Criteria	if the dust generated by the project exceeds the criteria in Tables 8, 9, and 10 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land, 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 5.		Environment and Community Superintendent – no requests for acquisition were received during the audit period.		No requests for acquisition were received during the audit period.	Not Triggered	
Sch 4 Cond 13		The Proponent shall prepare and implement an Air Quality & Greenhouse Gas Management plan for the project to the satisfaction of the Director- General. This plan must be prepared in consultation with OEH by a suitably qualified expert whose appointment has been approved by the Director- General and submitted to the Director-General for approval by the end of June 2010. It must also provide for real-time air quality monitoring.	Metropolitan Coal Air Quality and Greenhouse Gas Management Plan, Revision AQMP-R01-D, dated Dec 2010. 2018 Independent Environmental Audit.	Environment and Community Superintendent – The AQGGMP was not revised during the audit period.		The AQGGMP was not revised during the audit period. Compliance of the plan with this condition was verified during the 2017 IEA.	Complies	

PLANNING APPROVAL 08_0149							
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Discussions	Assessment	Compliance Finding	Recommendation
Sch 4 Cond 14	Discharges	The Proponent shall ensure that all surface water discharges from the site comply with the discharge limits (both volume and quality) set for the project in any EPL.	<p>Metropolitan Coal 2021 Annual Review / Metropolitan Coal 2022 Annual Review / Metropolitan Coal 2023 Annual Review</p> <p>Letter from Metropolitan Collieries (S Love) to DPIE (S O'Donoghue) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 22 March 2021.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (S O'Donoghue) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 29 March 2021.</p> <p>Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled "Metropolitan Coal Project Approval (08_0149) Incident Report – Surface Water Discharge to Camp Creek March 2021", dated 7 April 2021.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to EPA (G Newman) titled "Request for incident report – opaque groundwater seep near clean water drain discharge – Condition R3 – Licence Number 767", dated 12 January 2022.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 13 January 2022.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 20 January 2022.</p> <p>Email from Metropolitan (S Love) to the EPA (A Couldridge) titled "Stockpile Drain and Turkeys Nest", dated 4 July 2022.</p> <p>Penalty Infringement Notice No. 3173531030) issued by the EPA, dated 7 June 2022.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to DPE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 7 August 2023.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 14 August 2023.</p> <p>Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled "Incident Report – Slope Stability Incident 6 August 2023", dated 24 August 2023.</p>	<p>Environment and Community Superintendent – All discharges through licensed discharge point 7 (WTP) complied with relevant volume and criteria.</p> <p>After more than 100mm of rainfall a discharge through LDP8 (Turkeys Nest Dam) in October 2022 occurred, potentially in contravention of a prevention notice issued by EPA. Currently subject of a prosecution by EPA. A summary of the particular is provided in Table 13 of 2022 AR.</p> <p>Photograph 3 shows the desilting of the Turkey's Nest Sediment Pond observed during this Audit.</p> <p>Photograph 4 shows the remediation works in the area of the landslip.</p> <p>Photograph 5 shows Camp Creek downstream from the site.</p>	<p>Nine water related discharges were recorded during this audit period, with two of these discharges from licensed discharge point No. 8. Summaries of those incidents are provided in Section 7.2. The EPA was notified of all discharges, while DPE / DPIE was notified of four of the incidents.</p> <p>The water discharges resulted in the EPA issuing three Penalty Infringement Notices and five Clean-up notices.</p> <p>The causes of the water discharges included:</p> <ul style="list-style-type: none"> • Periods of heavy rainfall overwhelmed the surface water collection system. • Insufficient freeboard being maintained in the sediment dams; • Insufficient maintenance of drains (inspection and clearing of blockages) <p>The Surface Water Management Plan was not revised during this audit period.</p>	Non-Compliance	<p>Review all water discharges, determine the root causes of the discharges. Based on the lessons learned, review the management of surface water and revise the Surface Facilities Water Management Plan.</p> <p>Consider including specific design capacity criteria in the surface facilities water management plan and monitoring pond capacities. This would allow easier identification of any limitations in water management infrastructure to improve the future management of water related incidents.</p>

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 4 Cond 15	Surface Facilities Water Management Plan	The Proponent shall prepare and implement a Water Management Plan for the surface facilities area and two ventilation shaft sites to the satisfaction of the Director-General. This plan must be prepared in consultation with NOW and OEH by a suitably qualified expert whose appointment has been endorsed by the Director-General and submitted to the Director-General for approval by the end of June 2010. In addition to the standard requirements for management plans (see condition 2 of schedule 7).	Metropolitan Coal Surface Facilities Water Management Plan, Revision SFWMP-R01-F, dated 26 August 2019. 2020 Independent Environmental Audit.	Environment and Community Superintendent – The SFWMP was not revised during the audit period.	The main sediment pond within the Product Stockpile area was silted up and reducing the available free board and capacity to hold water during periods of heavy rainfall to prevent sediment discharges.	The SFWMP was not revised during the audit period. Compliance of the plan's administrative aspects of this condition was verified during the 2017 IEA. Failure to maintain freeboard in the sediment does not conform with the Water Performance Criterion (Containment of Contaminants) that commits Metropolitan to maintaining all sediment containment facilities.	Non-Compliance	Review all water discharges, determine the root causes of the discharges. Based on the lessons learned, review and revise the Surface Facilities Water Management Plan surface water management plan.
		The plan must: include a) a comprehensive water balance for the project; and	Metropolitan Coal Surface Facilities Water Management Plan, Revision SFWMP-R01-F, dated 26 August 2019.			Section 4.1.1 of the SFWMP describes the water balance model developed for the mine.	Complies	
		b) ensure that suitable measures are implemented to minimise water use, control erosion, prevent groundwater contamination, and comply with any surface water discharge limits.	Metropolitan Coal Surface Facilities Water Management Plan, Revision SFWMP-R01-F, dated 26 August 2019.			Section 8 of the SFWMP describes the water management measures to be implemented at the mine.	Complies	
		<i>Note: The water balance in this plan must be suitably integrated with both the Catchment Monitoring Program and the Water Management Plans that form part of the Extraction Plan.</i>	Metropolitan Coal Surface Facilities Water Management Plan, Revision SFWMP-R01-F, dated 26 August 2019.			The water balance is integrated with both the Catchment Monitoring Program and the Water Management Plans. Sections 7.2.2 (Surface Water Flow) and 8.7 (Mine Water Make) are discuss the mine water balance in the WMP.	Complies	
Sch 4 Cond 16	Meteorological Monitoring.	During the life of the project, the Proponent shall ensure that there is a suitable meteorological station in the vicinity of the surface facilities area that complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline.	Metropolitan Coal 2020 Annual Review	Environment and Community Superintendent – the meteorological station is located on Robertson Street, Helensburgh, just to the west of the mine entrance. No changes to Robertson Street Met Station beyond maintenance including replacement of parts as needed was undertaken during the audit period.	Meteorology Station in Helensburgh was sighted during the audit.	Figure 18 in the Annual Reviews identify the location of meteorological monitoring sites 68028 at Helensburgh and 568069 at Reverces.	Complies	
Sch 4 Cond 17	Transport Parkes Street Intersection	By the end of 2010, the Proponent shall: <ul style="list-style-type: none">undertake a road safety audit of the Parkes Street and Colliery Road intersection, in consultation with the RTA and WCC; and	2014 Independent Environmental Audit			Compliance with this condition was verified in the 2014 IEA.	Complies	
		<ul style="list-style-type: none">implement any recommendations of this audit, to the satisfaction of the Director-General.	2014 Independent Environmental Audit			Compliance with this condition was verified in the 2014 IEA.	Complies	
Sch 4 Cond 18	Road Maintenance Contributions	<ul style="list-style-type: none">From the end of 2009, the Proponent shall make a suitable annual contribution to WCC, WSC, and CC for the maintenance of local roads that are used as haulage routes by the project. If there is any dispute over the amount of the contribution, the matter must be referred to the Director-General for resolution.	SAP Payment records for Wollongong City Council, Wollondilly Shire Council and Campbelltown City Council.			SAP records of road contributions were sighted.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 4 Cond 19	Road Transport Restrictions	<p>The Proponent shall not:</p> <p>a) load coal or coal reject onto trucks, or transport it off site by road, outside the hours of 7am and 6pm Monday to Friday;</p> <p>b) transport more than 170,000 tonnes of coal off site by road in a calendar year;</p> <p>c) transport any coal off site to the Port Kembla Coal Terminal by road;</p> <p>d) permit the departure of more than 25 trucks containing product coal for delivery to the Corrimal Coke works on any given day; or</p> <p>e) permit the departure of more than 30 trucks containing product coal for delivery to the Coalcliff Coke works on any given day.</p>	<p>Metropolitan Coal 2021 Annual Review</p> <p>Metropolitan Coal 2022 Annual Review</p> <p>Metropolitan Coal 2023 Annual Review</p> <p>Complaints Register</p> <p>Letter from DPE (G Alan) to Metropolitan Coal (J Degotardi) titled "Metropolitan Coal (MP08_0149) Temporary Trucking of coal to Port Kembla BlueScope Steelworks", dated 13 April 2022".</p>			<p>2021 – Road transport of Product Coal – none</p> <p>2021 – Road Transport of Rejects – 15,973 tonnes</p> <p>2022 – Road transport of Product Coal – 1,327 Tonnes</p> <p>2022 – Road Transport of Rejects – none</p> <p>2023 – Road transport of Product Coal – none</p> <p>2023 – Road Transport of Rejects - none</p> <p>No records or complaints related to out of hours truck movements were recorded for the audit period.</p>	Complies	
Sch 4 Cond 20	Road Transport Restrictions	During emergencies (such as the disruption of rail services) the Proponent may exceed the restrictions in condition 19 above with the written approval of the Director-General.	<p>Letter from DPIE (J Evans) to Metropolitan Coal (J Degotardi) titled "Metropolitan Coal (MP08_0149) Request to Extend Coal Washery Reject Transportation to 2023", dated 29/9/2020".</p> <p>Letter from DPE (G Alan) to Metropolitan Coal (J Degotardi) titled "Metropolitan Coal (MP08_0149) Temporary Trucking of coal to Port Kembla BlueScope Steelworks", dated 13 April 2022".</p>	Environment and Community Superintendent – In November 2021 MCPL sought and received approval to truck a limited quantity of CWR to PKCT. In April 2022 MCPL sought and received approval to truck product coal to BlueScope after the Illawarra Rail line was damaged by heavy rains.		<p>The Auditor sighted correspondence evidence that:</p> <ul style="list-style-type: none"> In November 2021 MCPL sought and received approval to truck a limited quantity of Coal Washery Rejects to PKCT. In April 2022 MCPL sought and received approval to truck product coal to BlueScope after the Illawarra Rail line was damaged by heavy rains 	Complies	
Sch 4 Cond 21	Traffic Monitoring	The Proponent shall monitor the amount of coal and coal reject transported from the site by road and rail each year and report the results of this monitoring on its website every six months.	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			The Metropolitan Coal Website includes coal and reject transport records for the 2023 calendar year. The records for 2021 and 2022 were provided to the auditor.	Complies	
Sch 4 Cond 22	Traffic Management	The Proponent shall prepare and implement a Traffic Management Plan for the project to the satisfaction of the Director-General.	Metropolitan Coal Surface Traffic Management Plan, Revision TMP-RO1-J, dated May 2022.	Environment and Community Superintendent - TMP was revised at request of DPE to reflect approved trucking of CWR material to PKCT.		A traffic management plan has been prepared and implemented.	Complies	
		This plan must be prepared in consultation with the RTA, WCC, local schools and the CCC, and submitted to the Director-General for approval by the end of February 2010.	Letter from DPE (H Reed) to Metropolitan Coal (J Degotardi) titled "Metropolitan Coal Mine (08_0149) Traffic Management Plan", dated 30 January 2019. The letter gave DPE approval to the revised plan.			The latest revision of the Traffic Management Plan was approved in January 2019.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 4 Cond 22	Traffic Management	The primary aim of this plan is to minimise the traffic impacts of the project on the residential areas and schools within Helensburgh.	Metropolitan Coal Traffic Management Plan, Revision TMP-R01-I, dated January 2019.			The TMP meets the requirement of providing a framework for minimising traffic impacts on Helensburgh.	Complies	
Sch 4 Cond 23	Visual	The Proponent shall minimise the visual impacts, and particularly the off-site lighting impacts, of the surface facilities area and two ventilation shaft sites to the satisfaction of the Director-General.	Complaint Register		No adverse visual impacts from surface infrastructure were observed during the audit.	No complaints relating to visual amenity were received during the audit period. The ventilation shafts and other surface facilities were sighted during the audit. No adverse visual impacts were observed.	Complies	
Sch 4 Cond 24	Waste	The Proponent shall: minimise the waste (including coal reject) generated by the project; and	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review	Environment and Community Superintendent - we have identified a beneficial reuse option for our coal rejects, and it is now being exported for processing decreasing our overall waste generation qualified.	Waste segregation is practiced in all areas of the site.	The annual reviews records waste generation and disposal for each year. Wastes are segregated on-site and wherever possible wastes are sent off-site for reuse or recycling. Coal rejects have been largely removed from the waste stream and are blended with coal and exported as a product.	Complies	
		ensure that the waste generated by the project is appropriately stored, handled, and disposed of, to the satisfaction of the Director-General.		Environment and Community Superintendent - JRR Richards is contracted to provide all waste management services including the provision, maintenance and emptying of waste bins.	All waste storage areas were appropriately organised and maintained. Wastes were in general stored in bulk bins (JRR Richards provided 5 m ³ bins).	All waste storage areas were observed to be appropriately organised and maintained.	Complies	
Sch 4 Cond 25		The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Director-General. This plan must be submitted to the Director-General for approval by the end of June 2010.	Metropolitan Coal Waste Management Plan, Revision AQMP-R01-E, dated May 2022.	Environment and Community Superintendent – The Waste Management Plan was revised during the audit period.		The Waste Management Plan was revised in 2022 at the request of DPE to include washery rejects off-site disposal.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 5 Cond 1	Notification of Landowners	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 in schedule 4, 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 Executive Director Mineral Resources, 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.	Metropolitan Coal – 2021 Noise Modelling Results Notification letter OP6.			Noise exceedance notifications were sent to impacted residents in accordance with this Condition.	Complies	
Sch 5 Cond 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.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review	Environment and Community Superintendent – All air quality monitoring results were below the criteria.		A review of each Annual Review has indicated that no air quality related non-compliances were detected.	Not Triggered	
Sch 5 Cond 3	Independent Review	If a landowner considers the project to be exceeding the impact assessment criteria in schedule 4, then he/she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land. If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 2 months of the Director-General's decision; a) consult with the landowner to determine his/her concerns;	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review	Environment and Community Manager – No requests for Independent Reviews were received during the audit period.		No requests for Independent Reviews were received during the audit period.	Not Triggered	
		b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to: i. determine whether the project is complying with the relevant impact identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and ii. assessment criteria in schedule 4; and	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review	Environment and Community Manager – No requests for Independent Reviews were received during the audit period.		No requests for Independent Reviews were received during the audit period.	Not Triggered	
		c) give the Director-General and landowner a copy of the independent review.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review	Environment and Community Manager – No requests for Independent Reviews were received during the audit period.		No requests for Independent Reviews were received during the audit period.	Not Triggered	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 5 Cond 4	Independent Review	<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 Executive Director Mineral Resources.</p> <p>If the independent review determines that the project is not complying with the relevant impact assessment criteria in Schedule 4, then the Proponent shall: implement 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 secure a written agreement with the landowner to allow exceedances of the relevant impact assessment criteria, to the satisfaction of the Executive Director Mineral Resources.</p> <p>However, if the further monitoring referred to under paragraph (a) above determines that the project is complying with the relevant impact assessment criteria, then the Proponent may discontinue the independent review with the approval of the Executive Director Mineral Resources.</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 Executive Director Mineral Resources.</p>	<p>Metropolitan Coal 2021 Annual Review</p> <p>Metropolitan Coal 2022 Annual Review</p> <p>Metropolitan Coal 2023 Annual Review</p>	<p>Environment and Community Manager –</p> <p>No requests for Independent Reviews were received during the audit period.</p>		<p>No requests for Independent Reviews were received during the audit period.</p>	Not Triggered	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 5 Cond 5	Land Acquisition	<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: 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 landowners 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' in condition 3 of schedule 4 or condition 4(a) of this schedule;</p> <p>(b) the reasonable costs associated with: relocating within the Wollongong local government areas, or to any other local government area determined by the Director-General; obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and</p> <p>(c) reasonable compensation for any disturbance caused by the land acquisition process.</p> <p>However, if following this period, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.</p>	<p>Metropolitan Coal 2021 Annual Review</p> <p>Metropolitan Coal 2022 Annual Review</p> <p>Metropolitan Coal 2023 Annual Review</p>	<p>Environment and Community Manager –</p> <p>No requests for property acquisition were received during the audit period.</p>		<p>No requests for acquisition were received during the audit period.</p>	<p>Not Triggered</p>	

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 5 Cond 5	Land Acquisition	<p>Upon receiving such a request, the Director-General shall request the President of the NSW Division of the Australian Property institute (the API) to appoint a qualified independent valuer to:</p> <ul style="list-style-type: none"> 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. <p>Within 14 days of receiving the independent value/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 value/s determination. However, if either party disputes the independent value/s determination, then within 14 days of receiving the independent value/s report, they may refer the matter to the Director-General for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent value/s determination. Following consultation with the independent valuer and both parties, the Director-General shall determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above and the independent value/s report. Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Director-General's determination. If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land shall cease, unless the Director-General determines otherwise.</p>	<p>Metropolitan Coal 2021 Annual Review</p> <p>Metropolitan Coal 2022 Annual Review</p> <p>Metropolitan Coal 2023 Annual Review</p>	<p>Environment and Community Manager – No requests for property acquisition were received during the audit period.</p>		<p>No requests for acquisition were received during the audit period.</p>	<p>Not Triggered</p>	
Sch 5 Cond 6	Land Acquisition	<p>The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.</p>	<p>Metropolitan Coal 2021 Annual Review</p> <p>Metropolitan Coal 2022 Annual Review</p> <p>Metropolitan Coal 2023 Annual Review</p>	<p>Environment and Community Manager – No requests for property acquisition were received during the audit period.</p>		<p>No requests for acquisition were received during the audit period.</p>	<p>Not Triggered</p>	
Sch 5 Cond 7	Land Acquisition	<p>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.</p>	<p>Metropolitan Coal 2021 Annual Review</p> <p>Metropolitan Coal 2022 Annual Review</p> <p>Metropolitan Coal 2023 Annual Review</p>	<p>Environment and Community Manager – No requests for property acquisition were received during the audit period.</p>		<p>No requests for acquisition were received during the audit period.</p>	<p>Not Triggered</p>	

PLANNING APPROVAL 08_0149									
Cond.	Short Title	Condition		Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 6 Cond 1	Rehabilitation Objectives	The Proponent shall achieve the rehabilitation objectives in Table 11 to the satisfaction of the Executive Director Mineral Resources (below):						Noted	
		Surface Facilities Areas	Set through Condition 2 below					Noted	
		Waratah Rivulet, between the downstream edge of Flat Rock Swamp and the full supply level of the Woronora Reservoir. Eastern Tributary, between the main gate of Longwall 26 and the full supply level of the Woronora Reservoir.	Restore surface flow and pool holding capacity as soon as reasonably practicable	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review		An inspection of the catchment was undertaken during the audit. Remediation works (former and current) were observed.	Mining subsidence has impacted the surface water features. Metropolitan is actively undertaking stream remediation works. A review of the annual reviews and interview site inspection confirmed that remediation works continued during the audit period.	Complies	
		Cliffs	Ensure that there is no safety hazard beyond that existing prior to mining.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			No safety hazards associated with cliffs were identified in the specialist reports reviewed. No safety related incidents were reported during the audit period related to cliff instability.	Complies	
		Other Land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: comprised of local native plant species; with a landform consistent with the surrounding environment.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			During the site inspection the Auditor viewed the surface works area (mine head, maintenance, storage and admin areas). Those areas are still in use and therefore restoration of those areas has not yet been triggered.	Not Triggered	
		Built Features	Restore / Repair to pre-mining condition or equivalent.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			No impacts on built features were reported during the audit period.	Not Triggered	
		Community	Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment. Ensure public safety.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review	Environment and Community Superintendent – no public safety issues have occurred.		No public safety incidents were recorded during the audit period.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 6 Cond 2	Rehabilitation Strategy – Surface Facilities Area	By the end of October 2011, the Proponent shall prepare a Rehabilitation Strategy for the surface facilities area to the satisfaction of the Director- General. This strategy must: be prepared by a team suitably qualified and experienced experts whose appointment has been endorsed by the Director-General;	Metropolitan Coal Rehabilitation Management Strategy, Revision RS-R01-A, dated October 2011. 2018 Independent Environmental Audit	Environment and Community Superintendent – the rehabilitation strategy was not revised during the audit period.		This strategy was not revised during the current audit period. Compliance with this administrative condition was verified during the 2017 IEA.	Complies	
		a) be prepared in consultation with relevant stakeholders, including WCC and the CCC;	Metropolitan Coal Rehabilitation Management Strategy, Revision RS-R01-A, dated October 2011. 2018 Independent Environmental Audit	Environment and Community Superintendent – the rehabilitation strategy was not revised during the audit period.		This strategy was not revised during the current audit period. Compliance with this administrative condition was verified during the 2017 IEA.	Complies	
		b) investigate options for the future use of the area upon the completion of mining;	Metropolitan Coal Rehabilitation Management Strategy, Revision RS-R01-A, dated October 2011.			Section 4 of the Remediation Strategy describes the potential future land use options for the surface works area.	Complies	
		c) describe and justify the proposed rehabilitation strategy for the area; and	Metropolitan Coal Rehabilitation Management Strategy, Revision RS-R01-A, dated October 2011.			The approved strategy adequately describes and justifies the remediation strategy.	Complies	
		d) define the rehabilitation objectives for the area, as well as the proposed completion criteria for this rehabilitation.	Metropolitan Coal Rehabilitation Management Strategy, Revision RS-R01-A, dated October 2011.			Section 5 of the Remediation Strategy describes rehabilitation objectives and section 6 describes the completion criteria.	Complies	
Sch 6 Cond 3	Progressive Rehabilitation	To the extent that mining operations permit, the Proponent shall carry out rehabilitation progressively, that is, as soon as reasonably practicable following the disturbance.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review		Surface works and adjacent areas were inspected during the audit. Rehabilitation works associated with the landslip were underway (Photograph 4).	There is limited opportunity for progressive rehabilitation to be undertaken during this stage of the operations. Noting however that rehabilitation works associated with stream impacts in the catchment are progressing.	Complies	
Sch 6 Cond 4	Rehabilitation Management Plan	The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Executive Director Mineral Resources. This plan must be prepared in consultation with the relevant stakeholders and submitted to DRE for approval prior to carrying out any second workings in the mining area.	Metropolitan Coal Rehabilitation Management Plan, Revision RMP-R01-G, dated July 2019. 2020 Independent Environmental Audit	Environment and Community Superintendent – the Rehabilitation Management Plan was not revised during the audit period.		This plan was not revised during the current audit period. Compliance with this administrative condition was verified during the 2021 IEA.	Complies	
Sch 6 Cond 5	Catchment improvement Works	The Proponent shall: a) pay SCA \$100,000 by the end of 2011 to carry out catchment improvement works within the Woronora catchment area; or	2012 Independent Environmental Audit			Metropolitan Coal consulted with SCA and proposed to carry out two projects (rehabilitation of a walking track and a quarry site within the SCA area) plus a weed control program, following agreement with SCA.	Not Triggered	
		b) carry out catchment improvement works within this area that have an equivalent value to the satisfaction of SCA,	2018 Independent Environmental Audit			The agreed rehabilitation projects were completed to the satisfaction of the SCA.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 6 Cond 6	Offsets	<p>If the Proponent exceeds the performance measures in Table 1 of this approval, and either the contingency measures implemented by the Proponent have failed to remediate the impact; or the Director-General determines that it is not reasonable or feasible to remediate the impact, then the Proponent shall provide a suitable offset to compensate for the impact to the satisfaction of the Director-General.</p> <p><i>Note: Any offsets required under this condition must be proportionate with the significance of the impact.</i></p>	<p>Metropolitan Coal 2021 Annual Review</p> <p>Metropolitan Coal 2022 Annual Review</p> <p>Metropolitan Coal 2023 Annual Review</p>	Environment and Community Superintendent – all impacts detected will be remediated. No off-set areas have been required.		No off-set areas have been required.	Not Triggered	
Sch 7 Cond 1	Environmental Management Strategy	<p>The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director General. This strategy must:</p> <p>(a) be submitted to the Director General for approval within 3 months of the date of this approval, unless otherwise agreed by the Secretary;</p>	<p>Metropolitan Coal Environmental Management Strategy, Revision A2, dated May 2013.</p> <p>2018 Independent Environmental Audit</p>	Environment and Community Superintendent – the Environment Management Strategy was not revised during the audit period.		The Environmental Management Strategy was not revised during the current audit period. Compliance with this administrative condition was verified during the 2017 IEA.	Complies	
		(b) provide the strategic framework for the environmental management of the project	Metropolitan Coal Environmental Management Strategy, Revision A2, dated May 2013.			The EMS provides the administrative framework for the subsidiary management plans, and while as a standalone document does not provide a strategic framework, the subsidiary plans fulfil this requirement.	Complies	
		(c) identify the statutory approvals that apply to the project;	Metropolitan Coal Environmental Management Strategy, Revision A2, dated May 2013.			Section 3 of the EMS describes the statutory requirements for the project.	Complies	
		(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;	Metropolitan Coal Environmental Management Strategy, Revision A2, dated May 2013.			Section 5 of the EMS describes the key roles and responsibilities for environmental management.	Complies	
		<p>(e) describe the procedures that would be implemented to:</p> <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the project; • respond to any non-compliance; • respond to emergencies; and 	Metropolitan Coal Environmental Management Strategy, Revision A2, dated May 2013.			<p>Section 6 of the EMS describes the complaints management process.</p> <p>Section 6.3 describes the complaints resolution process.</p> <p>Section 7 describes the incident management process.</p> <p>Section 8 describes non-compliance response requirements.</p> <p>Section 9 provides an overview of the emergency response system.</p>	Complies	
		<p>(f) include:</p> <ul style="list-style-type: none"> • copies of any strategies, plans and programs approved under the conditions of this approval; and • a clear plan depicting all the monitoring required to be carried out under the conditions of this approval. 	Metropolitan Coal Environmental Management Strategy, Revision A2, dated May 2013.			The subsidiary management plans (all provided on the company website) provide the required strategies, plans and monitoring programs.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 2	Management Plan Requirements	The Applicant shall ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include: (a) detailed baseline data;	Metropolitan Coal Environmental Management Strategy Metropolitan Coal Pollution Incident Response Management Plan Metropolitan Coal Waste Management Plan Metropolitan Coal Noise Management Plan Metropolitan Coal Air Quality and Greenhouse Gas Management Plan Metropolitan Coal Surface Facilities Water Management Plan Metropolitan Coal Traffic Management Plan Metropolitan Coal Rehabilitation Management Plan Metropolitan Coal Extraction Plan 305-307 Metropolitan Coal Longwalls 305-307 Water Management Plan Metropolitan Coal Longwalls 305-307 Land Management Plan Metropolitan Coal Longwalls 305-307 Biodiversity Management Plan Metropolitan Coal Longwalls 305-307 Heritage Management Plan Metropolitan Coal Longwalls 305-307 Built Features Management Plan Metropolitan Coal Longwalls 305-307 Public Safety Management Plan Metropolitan Coal Longwalls 305-307 Subsidence Monitoring Program Metropolitan Coal Longwalls 305-307 Coal Recovery Plan			Refer to Section 7.5 above. All plans include a section describing baseline data.	Complies	
		(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 development or any management measures 				With the exception of the Surface Facilities Water Management Plan, the plans cover statutory requirements, performance measures and indicators, and a section on the implementation of management measurements. The current version of the Surface Water Management Plan does not address the changes in the water-related monitoring and reporting conditions in the Environment Protection Licence. It is noted that a revised plan has been submitted to the EPA for comment. It is noted that none of the current management plans reference the current identities of the relevant NSW Statutory Authorities (e.g. DPHI).	Non-Compliance	Update the Surface Facilities Water Management Plan to reflect the monitoring and reporting requirements of the EPL.
		(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;				Refer to Section 7.5 above. All plans include a description of measures to be implemented to ensure compliance.	Complies	
		(d) a program to monitor and report on the: <ul style="list-style-type: none"> impacts and environmental performance of the development; effectiveness of any management measures (see c above); 				Refer to Section 7.5 above. All plans include a monitoring program.	Complies	
		(e) a contingency plan to manage any unpredicted impacts and their consequences;				Refer to Section 7.5 above. All plans describe contingency planning.	Complies	
		(f) a program to investigate and implement ways to improve the environmental performance of the development over time;				Refer to Section 7.5 above. All plans include discussion of performance review and improvement.	Complies	
		(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 				Refer to Section 7.5 above. All plans cover incident management, complaints management and compliance assessment and reporting.	Complies	
		<ul style="list-style-type: none"> (h) a protocol for periodic review of the plan. 				All plans include a section of periodic review triggers. It is noted that the periodic review triggers do not include significant changes to operations or processes.	Complies	During the next review of each management plan revise the section on triggers for periodic review to include significant changes to operations or processes.

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 3	Annual Review	By the end of March each year, or other timing as may be agreed by the Secretary, the Applicant shall review the environmental performance of the development to the satisfaction of the Secretary. This review must: (a) describe the development that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			Annual Reviews have been prepared and published for each year covered by this audit period. Section 4 (Operations Summary) of the Annual Reviews described the operations that have been undertaken over the audit period. Sections 4.3 and 14 describe the operations proposed for the next reporting period.	Complies	
		(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against the: <ul style="list-style-type: none"> the relevant statutory requirements, limits or performance measures/criteria; the monitoring results of previous years; and the relevant predictions in the EIS; 	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			Section 6 of the Annual Reviews present the results of the monitoring undertaken during the reporting period.	Complies	
		(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			Section 13 of the Annual Reviews describe any non-compliances and action taken for the reporting period. Non-compliances are also discussed in each of the issue specific subsections of Sections 6 to 11.	Complies	
		(d) identify any trends in the monitoring data over the life of the development;	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			Trends in monitoring are described in each of the issue specific subsections of Sections 6 to 11.	Complies	
		(e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			A brief assessment of (EIS) predicted vs actual impacts are discussed in each of the issue specific subsections of Sections 6 to 11.	Complies	
		(f) describe what measures will be implemented over the next year to improve the environmental performance of the development.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			Section 14 describes measures to be implemented over the next reporting period.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 4	Revision of Strategies, Plans and Programs	Within 3 months of: (a) the submission of an annual review under Condition 4 above;				Refer to Section 7.5 above. All plans include a section of periodic review triggers.	Not Triggered	
		(b) the submission of an incident report under Condition 7 below;				Refer to Section 7.5 above. All plans except the Surface Facilities Water Management Plan did not trigger this condition. Note that the Surface Water Management Plan currently refers to three licensed discharge points Point 6, 7 and 8). The current EPL licences two points (Points 7 and 8).	Non-Compliance	Review and revise the Surface Facilities Water Management Plan to ensure that the current water management system is accurately described and that relevant modifications to the Environment Protection Licence have been addressed.
		(c) the submission of an audit report under Condition 9 below; or				The 2020 Independent Environmental Audit recommended the review of the Noise Management Plan. No documentation was available to verify that the recommended review was undertaken.	Non-Compliance	Review and if required revise the Noise Management Plan.
		(d) any modification to the conditions of this consent, (unless the conditions require otherwise),				Refer to Section 7.5 above. This review condition was not triggered during the audit period.	Not Triggered	
Sch 5 Cond 5	Community Consultative Committee	The Proponent shall establish a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General. This CCC must be operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version) to the satisfaction of the Director-General.	Website – CCC meeting minutes. Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			The Community Consultative Committee (CCC) meets quarterly. The Metropolitan Coal CCC is run in accordance with the NSW Department of Planning & Environment Community Consultative Committee Guidelines. Meeting minutes are available on Peabody website. The management processes for CCC is detailed in Annual Review.	Complies	

PLANNING APPROVAL 08_0149							
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 6	Incident Reporting	The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident	<p>Metropolitan Coal 2021 Annual Review / Metropolitan Coal 2022 Annual Review / Metropolitan Coal 2023 Annual Review</p> <p>Letter from Metropolitan Collieries (S Love) to DPIE (S O'Donoghue) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 22 March 2021.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (S O'Donoghue) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 29 March 2021.</p> <p>Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled "Metropolitan Coal Project Approval (08_0149) Incident Report – Surface Water Discharge to Camp Creek March 2021", dated 7 April 2021.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to EPA (G Newman) titled "Request for incident report – opaque groundwater seep near clean water drain discharge – Condition R3 – Licence Number 767", dated 12 January 2022.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 13 January 2022.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 20 January 2022.</p> <p>Email from Metropolitan (S Love) to the EPA (A Couldridge) titled "Stockpile Drain and Turkeys Nest", dated 4 July 2022.</p> <p>Penalty Infringement Notice No. 3173531030) issued by the EPA, dated 7 June 2022.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to DPE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 7 August 2023.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 14 August 2023.</p> <p>Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled "Incident Report – Slope Stability Incident 6 August 2023", dated 24 August 2023.</p>		<p>Section 12 of the Annual Reviews summarise the incidents that were recorded during the audit period. A formal incident register is not maintained.</p> <p>Nine incidents were recorded for the Audit Period and were reported in the Annual Reviews. While all of these incidents were reported to the EPA, only four were reported to DPE / DPHI. Metropolitan assessment of the unreported incidents is that they did not meet the threshold as causing or having the potential to cause material environmental harm. In the case of three of the incidents, that were not reported to DPHI, the EPA issued Prevention Notices or Penalty Infringement Notices.</p> <p>The EP&A Act does not define what constitutes an incident and Proponents usually rely on the definition of reportable incidents provided in the POEO Act, that includes incidents that involve <i>"actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial"</i>.</p> <p>It is the Auditor's view therefore, that the water discharges that were reported to the EPA as a potentially reportable incident should also have been reported to DPHI under Schedule 7 Condition 6 of the Approval. In any case, the incidents that resulted in the EPA issuing Prevention Notices / Penalty Infringement Notices warrant reporting to DPHI, as soon as the Proponent becomes aware that the EPA considers that incident non-trivial.</p>	Non-Compliance	Review the incident management and reporting procedures as documented in EMS and PIRMP to ensure that all potentially reportable incidents are reported to the relevant Authorities.

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 7	Regular Reporting	The Applicant shall provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			Annual review reports include environmental performance reporting. These reports are available on the Peabody website.	Complies	
Sch 7 Cond 9	Independent Environmental Audit	Prior to 31 December 2015, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must: (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;	2020 Independent Environmental Audit			Previous IEA was undertaken by Barnett and May in March 2021 for the period 1 January 2018 to 31 December 2020 with report finalised in May 2021. The audit team was endorsed by DPIE prior to commencement of the audit.	Complies	
		(b) include consultation with the relevant agencies;	2020 Independent Environmental Audit			DPIE, EPA, WaterNSW, Resource Regulator, Wollongong City Council and the Community Consultative Committee were consulted.	Complies	
		(c) assess the environmental performance of the development and assess whether it is complying with the requirements in this consent, and any other relevant approvals, relevant EPL/s and/or Mining Lease/s (including any assessment, plan or program required under these approvals);	2020 Independent Environmental Audit			The 2020 IEA meets the requirements of this condition.	Complies	
		(d) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and	2020 Independent Environmental Audit			The 2020 IEA meets the requirements of this condition.	Complies	
		(e) recommend measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under these approvals.	2020 Independent Environmental Audit			The 2020 IEA meets the requirements of this condition.	Complies	
		<i>Note: This audit team must be led by a suitably qualified auditor.</i>	2020 Independent Environmental Audit			The 2020 Lead Auditor meets the requirements of this condition and was endorsed by DPIE.	Complies	
Sch 7 Cond 10		Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.	2020 Independent Environmental Audit			The audit report was submitted to DPIE and is published on the company website.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 11	Access To Information	From the end of 2009, the Proponent shall make the following information publicly available on its website: a copy of all current statutory approvals;	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			A copy of the relevant approvals and licenses were available on the website; however, the Environment Protection Licence (2019 version) was not the current (25 January 2024) version.	Non-Compliance	Ensure that all documents loaded onto the website are the current versions.
		a copy of the current environmental management strategy and associated plans and programs;	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			A copy of the Environmental management strategy and current versions of all plans were available on the website.	Complies	
		a summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			A summary of monitoring results and Annual Reviews were available on the website.	Complies	
		complaints register, which is to be updated on a monthly basis;	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			The Complaints register (2010 to 2024) was available on the website.	Complies	
		a copy of the minutes of CCC meetings;	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			CCC meeting minutes from 2013 to November 2023 were loaded onto the website.	Complies	
		a copy of any Annual Reviews (over the last 5 years);	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			Annual reviews from 2015 to 2022 were loaded onto the website. Note that the 2023 Annual Review was finalised while this audit report was being prepared.	Complies	
		a copy of any independent Environmental Audit, and the proponent's response to the recommendations in any audit; and	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			Copies of IEA and the Proponents responses from 2012 to 2021 were loaded onto the website.	Complies	
		any other matter required by the Director-General.	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports	Environment and Community Superintendent – The DG has not required any additional materials to be uploaded to the website.			Not Triggered	

Environment Protection Licence Compliance Table

Appendix A2

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
A1.1	Administrative Conditions What the licence authorises and regulates	<p>This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.</p> <p>Coal Works 2,000,000 – 5,000,000 T handled.</p>	<p>Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review</p> <p>Metropolitan Coal -Coal and Coal Reject Trucking 1 January 2023 – 31 December 2023.</p>	<p>Environment & Community Superintendent – Coal production summaries are provided in each Annual Review (Table 4). We are not required to break down by month but do update the truck and rail register (on website) every 6 months. The Annual Reviews and data provided by the Environment and Community Superintendent reported the following production qualities:</p> <ul style="list-style-type: none"> 2021: ROM Coal Extraction 1,130,139 tonnes. 2021: Coal Transport from site (by Rail) 1905,510 tonnes. 2022: ROM Coal Extraction 2,047,404 tonnes 2022: Coal Transport from site (by Rail) 1,699,843 tonnes. 2023: ROM Coal Extraction 12,527,376 tonnes. 2023: Coal Transport from site (by Rail) 2,043,937 tonnes. 		<p>The Annual Reviews and data provided by the Environment and Community Superintendent reported the following production qualities:</p> <p>2018: ROM Coal Extraction 2,024,404 tonnes. 2018: Coal Transport from site (by Rail) 1,584,898 tonnes.</p> <p>2019: ROM Coal Extraction 1,851,831 tonnes 2019: Coal Transport from site (by Rail) 1,456,847 tonnes.</p> <p>2020: ROM Coal Extraction 981,100 tonnes. 2020: Coal Transport from site (by Rail) 929,453.</p>	Complies	
A2.1	Premises or plant to which this licence applies	The licence applies to the following premises: Metropolitan Colliery, Parkes Street Helensburgh NSW 2508					Noted	
A3.1	Information supplied to the EPA	<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. In this condition the reference to "the licence application" includes a reference to:</p> <p>a) the applications for any licenses (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>					Noted	
P1.1	Discharges to Air and Water and Applications to Land Location of monitoring / discharge points	<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: EPA 1 Dust Gauge EPA 2 Dust Gauge EPA 3 Dust Gauge EPA 4 Dust Gauge EPA 5 Dust Gauge EPA 11 Dust Gauge EPA 12 Dust Gauge EPA 13 Dust Gauge EPA 14 Dust Gauge EOA 15 Dust Gauge EPA 16 Ambient Air Monitoring</p>					Noted	

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
P1.2	Location of monitoring / discharge points	All Points are marked on the map titled "Discharge & Monitoring Points, Drawing Number 2, May 2023" held on EPA file DOC23/357066-1.					Noted	
P1.3	Location of monitoring / discharge points	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.					Noted	
P1.4	Location of monitoring / discharge points	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. Water and Land: EPA 7 Discharge to Waters EPA 8 Discharge to Waters / Volume Monitoring EPA 9 Discharge Water Quality Monitoring EPA 10 Volume Monitoring EPA 18 Discharge Water Quality Monitoring EPA 19 Discharge Water Quality Monitoring EPA 20 Ambient Water Quality Monitoring EPA 21 Ambient Water Quality Monitoring					Noted	
P1.5	Location of monitoring / discharge points	The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises. EPA 17 Meteorological Station					Noted	

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Assessment	Compliance Finding	Recommendation
L1.1	Limit Conditions Pollution of Waters	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	<p>Metropolitan Coal 2021 Annual Review / Metropolitan Coal 2022 Annual Review / Metropolitan Coal 2023 Annual Review</p> <p>Letter from Metropolitan Collieries (S Love) to DPIE (S O'Donoghue) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 22 March 2021.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (S O'Donoghue) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 29 March 2021.</p> <p>Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled "Metropolitan Coal Project Approval (08_0149) Incident Report – Surface Water Discharge to Camp Creek March 2021", dated 7 April 2021.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to EPA (G Newman) titled "Request for incident report – opaque groundwater seep near clean water drain discharge – Condition R3 – Licence Number 767", dated 12 January 2022.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 13 January 2022.</p> <p>Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 20 January 2022.</p> <p>Email from Metropolitan (S Love) to the EPA (A Couldridge) titled "Stockpile Drain and Turkeys Nest", dated 4 July 2022.</p> <p>Penalty Infringement Notice No. 3173531030) issued by the EPA, dated 7 June 2022.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to DPE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 7 August 2023.</p> <p>Letter from Metropolitan Collieries (J Harrigan) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 14 August 2023.</p> <p>Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled "Incident Report – Slope Stability Incident 6 August 2023", dated 24 August 2023.</p>	<p>Environment and Community Superintendent – All discharges through licensed discharge point 7 (WTP) complied with relevant volume and criteria.</p> <p>After more than 100mm of rainfall a discharge through LDP8 (Turkeys Nest Dam) in October 2022 occurred, potentially in contravention of a prevention notice issued by EPA. Currently subject of a prosecution by EPA. A summary of the particular is provided in Table 13 of 2022 AR.</p> <p>Photograph 3 shows the desilting of the Turkey's Nest Sediment Pond observed during this Audit.</p> <p>Photograph 4 shows the remediation works in the area of the landslip.</p> <p>Photograph 5 shows Camp Creek downstream from the site.</p>	<p>The Metropolitan Coal Mine operates an SAP based maintenance system that monitors and manages scheduled and unscheduled maintenance.</p> <p>On several occasions in 2022 including 18 January 2022, 17 August 2022, and 8 September 2022, the EPA observed that the Turkey's Nest Dam contained coal material which had collected in the dam.</p> <p>On 7 July 2022, the EPA issued a penalty notice to Metropolitan Collieries Ptd Ltd for contravention of Condition O2.1 of the Environment Protection Licence. The PIN related to the maintenance of freeboard in the Turkey's nest retention basin.</p>	Non-Compliance	Ensure that the routine inspection of all surface water management infrastructure, including sediment ponds is undertaken and that all required cleaning and maintenance is undertaken.

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition			Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation	
L2.1	Concentration Limits (Point 7)	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.							Noted		
L2.2		Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges							Noted		
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.							Noted		
L2.4		Water and/or Land Concentration Limits			Metropolitan Coal Environmental Protection Licence Monitoring Summary 2021 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2022 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2023 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2024						
		Pollutant	Units	100 percentile Limit				No exceedances of the water quality limits were detected at Point 9 during 2021, 2022 or 2024. During 2023, exceedances were recorded (pH and TSS) however Metropolitan reported that no discharges to Camp Creek at Point 7 occurred during that period.	Complies		
		Oil and Grease	mg/l	10					Complies		
		pH	pH	6.5 – 8.5					Complies		
	TSS	mg/l	30				Complies				
<i>The monitoring at Point 9 required by condition M2 is conducted by the licensee to determine compliance with the limits specified for Point 7 in condition L2.4. A non-compliance is only taken to have occurred if the results of water quality monitoring required by the licence at point 9 are greater than the limits in L2.4 and there is a discharge occurring from Point 7 at the time of sampling.</i>							Noted				
O1.1	Operating Conditions	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					Inspection of materials storage (including fuels and lubricants) found that the use and storage of those materials were being undertaken in an appropriate manner. The location and manner of hazardous substance storage has not been changed during this audit period.	At the time of the audit the processing, handling, movement and storage of materials and other substances was being undertaken in an appropriate manner.	Complies		
	Activities must be carried out in a competent manner	b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity					Inspection of waste storage found that the use and storage of those materials were being undertaken in an appropriate manner. The location and manner of waste collection and storage has not been changed during this audit period.	At the time of the audit the handling and storage of wastes was being undertaken in an appropriate manner.	Complies		

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
O2.1	Maintenance of plant and equipment	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	EPA Penalty Notice number 3173531030 dated 7 July 2022. EPA Prevention Notice 3503648 dated 9 September Peabody Work Order Details Reports (Work Order Number 1049621) Peabody Work Order Details Reports (Work Order Number 115304533)	Environment and Community Superintendent – Peabody uses SAP to track maintenance works across the Peabody platform both on the surface and underground.	During the site inspection all areas inspected were appropriately organised and maintained. No evidence of improper equipment operations or maintenance were observed.	The Metropolitan Coal Mine operates an SAP based maintenance system that monitors and manages scheduled and unscheduled maintenance. On several occasions in 2022 including 18 January 2022, 17 August 2022, and 8 September 2022, the EPA observed that the Turkey's Nest Dam contained coal material which had collected in the dam. On 7 July 2022, the EPA issued a penalty notice to Metropolitan Collieries Ptd Ltd for contravention of Condition O2.1 of the Environment Protection Licence. The PIN related to the maintenance of freeboard in the Turkey's nest retention basin.	Non-Compliance	Ensure that the routine inspection of all surface water management infrastructure, including sediment ponds is undertaken and that all required cleaning and maintenance is undertaken.
		b) must be operated in a proper and efficient manner.	Peabody Work Order Details Reports (Work Order Number 1049621) Peabody Work Order Details Reports (Work Order Number 115304533)	Environment and Community Superintendent – Peabody uses SAP to track maintenance works across the Peabody platform both on the surface and underground.	During the site inspection all areas inspected were adequately organised and maintained. No evidence of improper equipment operations or maintenance were observed.	No evidence of improper equipment operations or maintenance were observed during the audit.		
O3.1	Dust	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Complaints Register		All dust suppression equipment was operational. No visual evidence of significant dust generation was sighted. Dust control has not been changed during this audit period.	No dust generation issues were noted during the audit. One dust complaint was received during the audit period.	Complies	
O4.1	Sediment Basin Operation	The licensee must: I. maintain sediment accumulated in the Turkey's Nest Dam and Settling Pond below 25% of the total volume of each storage, averaged over 12 months.				Condition O4.1 was added to the EPL on 25 January 2024. The Auditor did identify any evidence of non-compliances against this License Condition for the period from 25 January 2024.	Complies	
		II. empty the Turkey's Nest Dam of accumulated sediment & water every second year for inspection and maintenance.			Accumulated Sediment was being removed from the Turkey's Nest Dam at the time of this IEA.		Complies	
		III. empty the Settling Pond of accumulated sediment & water every second (alternate) year for inspection and maintenance					Complies	
		IV. until the completion of the condition Storage Dam Capacity Monitoring System, monitor the volume of sediment and percentage of the total volume in Turkey's Nest Dam fortnightly and provide the results available to the EPA upon request.					Complies	
		V. maintain wet weather storages at the premises to retain 160 millimetres of rainfall over any consecutive five-day period,					Complies	

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
04.1	Sediment Basin Operation	VI. report the relevant monitoring data, verification information, and a short explanation on each of the above in the Annual Return Supplement.				This condition will apply to the next Annual Return.	Not Triggered	
		Note: The EPA will give consideration to extreme rainfall events should there be any non-compliance with the above requirements.					Noted	
M1.1	Monitoring Records	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.					Noted	
M1.2	Monitoring Records	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;	Certificate of Analysis – ALS Environmental, EW2305059, dated 27 November 2023. Chain of Custody Record Issued by ALS, dated 13/11/2023.			Monitoring records covering the audit period were available and were accessible and legible.	Complies	
		b) kept for at least 4 years after the monitoring or event to which they relate took place; and				Monitoring results from 2021 to March 2024 were sighted during the audit.	Complies	
		c) produced in a legible form to any authorised officer of the EPA who asks to see them.				Monitoring records covering the audit period were available and were accessible and legible.	Complies	
M1.3	Monitoring Records	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;	Certificate of Analysis – ALS Environmental, EW2305059, dated 27 November 2023. Chain of Custody Record Issued by ALS, dated 13/11/2023.			Certificates of analysis and dust monitoring recorded sighted contained details of sampling locations and dates.	Complies	
		b) the time(s) at which the sample was collected;	Chain of Custody Record Issued by ALS, dated 13/11/2023.			Chain of custody sheets containing the sampling time and dates are provided by the testing laboratory and kept on file at Metropolitan.	Complies	
		c) the point at which the sample was taken; and	Chain of Custody Record Issued by ALS, dated 13/11/2023.			Chain of custody sheets identifying the sample location (coded) are provided by the testing laboratory and kept on file at Metropolitan.	Complies	
M1.3	Monitoring Records	d) the name of the person who collected the sample.	Chain of Custody Record Issued by ALS, dated 13/11/2023.			Chain of custody sheets identifying the person and contact phone number are provided by the testing laboratory and kept on file at Metropolitan.	Complies	

ENVIRONMENT PROTECTION LICENCE 767											
Cond.	Short Title	Condition				Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
M2.1	Monitoring Requirements	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:								Noted	
		Pollutant	Unit	Freq uen cy	Method						
M2.2	Air Monitoring Requirements	EPA Points 1, 2, 3, 4 and 5				Metropolitan Coal Environmental Protection Licence Monitoring Summary 2021 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2022 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2023 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2024			Certificates of analysis for dust monitoring recorded sighted contained details of the test method used for this analysis.	Complies	
		Ash	g/m²/month	Monthly	AS 3580.10.1-2003					Complies	
		Combustible Solids	g/m²/month	Monthly	AS 3580.10.1-2003					Complies	
		Insoluble Solids	g/m²/month	Monthly	AS 3580.10.1-2003					Complies	
		EPA Points 11, 12, 13, 14 and 15				Metropolitan Coal Environmental Protection Licence Monitoring Summary 2021 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2022 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2023 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2024			Certificates of analysis for dust monitoring recorded sighted contained details of the test method used for this analysis.	Complies	
		Ash	g/m²/month	Monthly	AS 3580.10.1-2003					Complies	
		Combustible Solids	g/m²/month	Monthly	AS 3580.10.1-2003					Complies	
		Insoluble Solids	g/m²/month	Monthly	AS 3580.10.1-2003					Complies	
		EPA Point 16				Metropolitan Coal Environmental Protection Licence Monitoring Summary 2021 - 2024			Certificates of analysis for dust monitoring recorded sighted contained details of the test method used for this analysis.	Complies	
		PM10	mg/m ₃	Monthly	AS 3580.9.6:2003						

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition				Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation	
M2.3	Water Monitoring Requirements	EPA Point 9										
		Pollutant	Unit	Freq	Method							
		Alkalinity	mg/l	Monthly During Discharge	Grab Sample	Metropolitan Coal Environmental Protection Licence Monitoring Summary 2021 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2022 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2023 Metropolitan Coal Environmental Protection Licence Monitoring Summary 2024				Test results and certificates of analysis for water analysis recorded sighted contained details of the test method used for this analysis. Note that prior to 25 January 2024 that only Oil & Grease, TSS and pH were required to be monitored at this sampling point.	Complies	
		Aluminium	mg/l									
		Antimony	mg/l									
		Arsenic	mg/l									
		Bicarbonate Alk.	mg/l									
		Chromium	mg/l									
		Electrical Conductivity	uS/cm									
		Molybdenum	mg/l									
		Nickle	mg/l									
		Nitrogen (dis)	mg/l									
		Nitrogen (total)	mg/l									
		Nitrogen Oxides	mg/l									
		pH	pH									
		Phosphorous	mg/l									
		Reactive Phosphorous	mg/l									
		TSS	mg/l									
		Turbidity	NTU									
		Vanadium	mg/l									
		EPA Point 18, 19, 20, 21										
		Electrical Conductivity	uS/cm	Continuous	In situ	Metropolitan Coal Environmental Protection Licence Monitoring Summary 2024				Test results and certificates of analysis for water analysis recorded sighted contained details of the test method used for this analysis. Note that prior to 25 January 2024 no testing was required at these points.	Complies	
		pH	pH									
		Temperature	°C									
		Turbidity	NTU									
M2.4	Monitoring Requirements	All continuous monitoring equipment must be operated and maintained to achieve an availability of 90% during the reporting period.							The first applicable reporting period covers the 2024 calendar year, with continuous monitoring commencing after 25 January 2024. Compliance with this condition cannot be determined until the end of the first reporting period.	Noted		

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
M2.5	Monitoring Requirements	The licensee must provide public access on its website to the real time monitoring data collected under the licence for points 8, 10, 18, 19, 20 and 21.	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine			Real time monitoring for all Points was available on the mine website.	Complies	
M2.6	Monitoring Requirements	The Point 19, "Monitor located in Camp Gully Creek near Point 8 spillway" must be reading continuously by 29 February 2024.	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine			Real time monitoring data for Point 19 was available on the mine website.	Compliance	
M3.1	Testing Methods – concentration limits	Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.					Noted – Refer to Condition M2.2 above	
M3.2	Testing Methods – concentration limits	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.					Noted – Refer to Condition M2.3 above	
M 4.1	Weather Monitoring	At the point(s) identified below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively. Point 17 Parameter: Rainfall Sampling Method: Continuous Units of Measure: Millimeters Averaging Period: 24 Hours Frequency: Continuous			The Auditor has sighted the weather station located on Robertson Street.	The required meteorological station is operational and includes rainfall recording.	Complies	
M5.1	Recording of Pollution Complaints	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.	Complaints Register			A complaints register is maintained and is available on the website.	Complies	

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
M5.2	Recording of Pollution Complaints	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.	Complaints Register			A review of the Metropolitan Coal Complaints Register identified that the personal details of the complainant are not currently collected in order to maintain privacy when the Register is published on the company website. Following the 2020 IEA, Metropolitan Coal updated the Complaints Register to include a complainant details column, which will be hidden when the Complaints Register is published on the Metropolitan website	Complies	
M5.3		The record of a complaint must be kept for at least 4 years after the complaint was made.	Complaints Register			The complaints register provides details for the previous four years.	Complies	
M5.4		The record must be produced to any authorised officer of the EPA who asks to see them.					Noted	
M6.1	Telephone Complaints Line	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine			Community complaint hotline number 1800 115 003 is listed on the mine website	Complies	
M6.2		The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine			Community complaint hotline number 1800 115 003 is listed on the mine website	Complies	
M6.3		The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.					Noted	
M7.1	Requirement to monitor volume or mass	For each discharge point or utilisation area specified below, the licensee must monitor: a) the volume of liquids discharged to water or applied to the area; b) the mass of solids applied to the area; c) the mass of pollutants emitted to the air; at the frequency and using the method and units of measure, specified below.					Noted	
		Point 8 – Continuous – Kilotres per day – Electronic level sensor and continuous logger. Point 10 – Kilotres per day – Flow meter and continuous logger.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			Flowmeter is used to measure daily volume of water flow from water treatment plant to Camp Creek. These results are presented in the Annual Return summaries submitted to EPA.	Complies	

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
M8.1	Other Monitoring and Recording Conditions	The licensee must monitor and record the following information in relation to discharges that occur through point 8: a) the time, date and length of time that a discharge occurs; b) the daily volume of discharge; c) the cumulative rainfall total for the preceding 5 days up to the time of discharge; and d) the quantity of sediment and water stored in both dams prior to, during, and following the rainfall and discharge events. The information above must be reported in the Annual Return Supplement.				The first applicable reporting period covers the 2024 calendar year, with continuous monitoring commencing after 25 January 2024. Compliance with this condition cannot be determined until the end of the first reporting period and submission of the Annual Return for the next reporting period.	Noted	
M8.2	Other Monitoring and Recording Conditions	All continuous monitoring equipment must be operated and maintained to achieve an availability of 90% of the time during the reporting period.				The first applicable reporting period covers the 2024 calendar year, with continuous monitoring commencing after 25 January 2024. Compliance with this condition cannot be determined until the end of the first reporting period.	Noted	
R1.1	Reporting Conditions Annual Returns	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: 1. a Statement of Compliance, 2. a Monitoring and Complaints Summary, 3. a Statement of Compliance - Licence Conditions, 4. a Statement of Compliance - Load based Fee, 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan, 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and 7. a Statement of Compliance - Environmental Management Systems and Practices. 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.	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=767&id=767&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=lsued			Metropolitan has issued Annual Returns to the EPA in accordance with the Conditions every year covered by this audit period.	Complies	
R1.2	Annual Returns	An Annual Return must be prepared in respect of each reporting period, except as provided below.	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=767&id=767&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=lsued			Metropolitan has issued Annual Returns to the EPA in accordance with the Conditions every year covered by this audit period.	Complies	
R1.3	Annual Returns	Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.				No transfer of licence has occurred during the audit period.	Not Triggered	

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
R1.4	Annual Returns	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.				The EPL was not surrendered during the audit period.	Not Triggered	
R1.5	Annual Returns	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').	https://apps.epa.nsw.gov.au/prpoeoap/Detail.aspx?instid=767&id=767&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=Isued			Metropolitan has issued Annual Returns to the EPA in accordance with the Conditions every year covered by this audit period.	Complies	
R1.6	Annual Returns	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.	2022 Annual Return			Copies of singed annual returns are kept by Metropolitan.	Complies	
R1.7	Annual Returns	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.	2022 Annual Return 2020 Metropolitan Coal – Environmental Protection Licence Monitoring Summary			Copies of singed annual returns are kept by Metropolitan.	Complies	

ENVIRONMENT PROTECTION LICENCE 767

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
R2.1	Notification of Environmental Harm	Notifications must be made by telephoning the Environment Line service on 131 555.	Metropolitan Coal 2021 Annual Review / Metropolitan Coal 2022 Annual Review / Metropolitan Coal 2023 Annual Review Letter from Metropolitan Collieries (S Love) to DPIE (S O'Donoghue) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 22 March 2021.				Complies	
R2.2		The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.					Complies	
R3.1	Written Report	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.	Letter from Metropolitan Collieries (J Degotardi) to DPIE (S O'Donoghue) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 29 March 2021. Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled "Metropolitan Coal Project Approval (08_0149) Incident Report – Surface Water Discharge to Camp Creek March 2021", dated 7 April 2021. Letter from Metropolitan Collieries (J Harrigan) to EPA (G Newman) titled "Request for incident report – opaque groundwater seep near clean water drain discharge – Condition R3 – Licence Number 767", dated 12 January 2022. Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 13 January 2022. Email from Metropolitan (S Love) to the EPA (A Couldridge) titled "Stockpile Drain and Turkeys Nest", dated 4 July 2022. Penalty Infringement Notice No. 3173531030 issued by the EPA, dated 7 June 2022. Letter from Metropolitan Collieries (J Harrigan) to DPE (G Dragicevic) titled "Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)", dated 7 August 2023.			Nine water related incidents were recorded during this audit period. Summaries of those incidents are provided in Section 7.2. The EPA was notified of all incidents and written reports provided to the EPA.	Complies	
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.					Complies	
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.				The incidents resulted in the EPA issuing three Penalty Infringement Notices and five Clean-up notices. The causes of the water incidents included: • Insufficient freeboard being maintained in the sediment dams; • Insufficient maintenance of drains (inspection and clearing of blockages) • Periods of heavy rainfall overwhelmed the surface water collection system.	Complies	
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.					Noted	

ENVIRONMENT PROTECTION LICENCE 767								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
G1.1	General Conditions Copy of Licence	A copy of this licence must be kept at the premises to which the licence applies.	https://www.peabodyenergy.com/Peabody/media/MediaLibrary/Operations/Australia%20Mining/New%20South%20Wales%20Mining/Metropolitan%20Mine/Environmental-Protection-Licence-767.pdf			A copy of the EPL is maintained on the company website.	Complies	
G1.2		The licence must be produced to any authorised officer of the EPA who asks to see it.	https://www.peabodyenergy.com/Peabody/media/MediaLibrary/Operations/Australia%20Mining/New%20South%20Wales%20Mining/Metropolitan%20Mine/Environmental-Protection-Licence-767.pdf			A copy of the EPL is maintained on the company website.	Complies	
G1.3		The licence must be available for inspection by any employee or agent of the licensee working at the premises.	https://www.peabodyenergy.com/Peabody/media/MediaLibrary/Operations/Australia%20Mining/New%20South%20Wales%20Mining/Metropolitan%20Mine/Environmental-Protection-Licence-767.pdf			A copy of the EPL is maintained on the company website.	Complies	

Compliance Register

Mining Leases

Appendix A3

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
Conditions 1 to 4 are administrative only								
D1-C4	Protection of the environment and rehabilitation Must prevent or minimise harm to environment	(1) The holder of a mining lease must take all reasonable measures to prevent, or if that is not reasonably practicable, to minimise, harm to the environment caused by activities under the mining lease.	Metropolitan Coal 2021 Annual Review / Metropolitan Coal 2022 Annual Review / Metropolitan Coal 2023 Annual Review Letter from Metropolitan Collieries (S Love) to DPIE (S O’Donoghue) titled “Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)”, dated 22 March 2021. Letter from Metropolitan Collieries (J Degotardi) to DPIE (S O’Donoghue) titled “Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)”, dated 29 March 2021. Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled “Metropolitan Coal Project Approval (08_0149) Incident Report – Surface Water Discharge to Camp Creek March 2021”, dated 7 April 2021. Letter from Metropolitan Collieries (J Harrigan) to EPA (G Newman) titled “Request for incident report – opaque groundwater seep near clean water drain discharge – Condition R3 – Licence Number 767”, dated 12 January 2022. Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled “Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)”, dated 13 January 2022. Letter from Metropolitan Collieries (J Degotardi) to DPIE (G Dragicevic) titled “Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)”, dated 20 January 2022. Email from Metropolitan (S Love) to the EPA (A Couldridge) titled “Stockpile Drain and Turkeys Nest”, dated 4 July 2022. Penalty Infringement Notice No. 3173531030) issued by the EPA, dated 7 June 2022. Letter from Metropolitan Collieries (J Harrigan) to DPE (G Dragicevic) titled “Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)”, dated 7 August 2023. Letter from Metropolitan Collieries (J Harrigan) to DPIE (G Dragicevic) titled “Condition 6, Schedule 7 of the Metropolitan Coal Project Approval (08_0149)”, dated 14 August 2023. Letter from DPE (K Orielly) to Metropolitan (J Degotardi) titled “Incident Report – Slope Stability Incident 6 August 2023”, dated 24 August 2023.	Environment and Community Superintendent – All discharges through licensed discharge point 7 (WTP) complied with relevant volume and criteria. After more than 100mm of rainfall a discharge through LDP8 (Turkeys Nest Dam) in October 2022 occurred, potentially in contravention of a prevention notice issued by EPA. Currently subject of a prosecution by EPA. A summary of the particular is provided in Table 13 of 2022 AR. Photograph 3 shows the desilting of the Turkey’s Nest Sediment Pond observed during this Audit. Photograph 4 shows the remediation works in the area of the landslide. Photograph 5 shows Camp Creek downstream from the site.	Nine water related incidents were recorded during this audit period. Summaries of those incidents are provided in Section 7.2. The EPA was notified of all incidents, while DPE / DPIE was notified of four of the incidents. The incidents resulted in the EPA issuing three Penalty Infringement Notices and five Clean-up notices. The causes of the water incidents included: <ul style="list-style-type: none">Insufficient freeboard being maintained in the sediment dams;Insufficient maintenance of drains (inspection and clearing of blockages)Periods of heavy rainfall overwhelmed the surface water collection system. The Surface Water Management Plan was not revised during this audit period.	Non-Compliance	Review all water incidents, determine the root causes of the incidents. Based on the lessons learned, review and revise the surface water management plan.	
		(2) In this clause—harm to the environment has the same meaning as in the <i>Protection of the Environment Operations Act 1997</i> .					Explanatory Clause Only.	Noted
D1-C5	Protection of the environment and rehabilitation Rehabilitation to occur as soon as reasonably practicable after disturbance	The holder of a mining lease must rehabilitate land and water in the mining area that is disturbed by activities under the mining lease as soon as reasonably practicable after the disturbance occurs.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review		Surface works and adjacent areas were inspected during the audit. Rehabilitation works associated with the landslide were underway (Photograph 4).	There is limited opportunity for progressive rehabilitation to be undertaken during this stage of the operations. Noting however that rehabilitation works associated with stream impacts in the catchment are progressing.	Complies	Continue progressive rehabilitation works with the objective of meeting the established progressive rehabilitation targets

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D1-C6	Protection of the environment and rehabilitation	(1) The holder of a mining lease must ensure that rehabilitation of the mining area achieves the final land use for the mining area.		Environment and Community Superintendent - As mining is underground, disturbed surface footprint in active mine area. Stream remediation is ongoing.		The condition has not been triggered and it applies to the final landform.	Not Triggered	
	Rehabilitation must achieve final land use	(2) The holder of the mining lease must ensure any planning approval has been obtained that is necessary to enable the holder to comply with subclause (1).	Planning Approvals 08_0149 EPL 767			The required planning approvals and licences are in place.	Complies	
D1-C6	Protection of the environment and rehabilitation Rehabilitation must achieve final land use	(3) The holder of the mining lease must identify and record any reasonably foreseeable hazard that presents a risk to the holder's ability to comply with subclause (1) . Note— Clause 7 requires a rehabilitation risk assessment to be conducted whenever a hazard is identified under this subclause.	Rehabilitation Management Plan Version R01, dated 1 August 2022.			Appendix 1 of the Rehabilitation Management Plan provides a Surface Disturbance Register and Surface Disturbance Assessment Form that provide a framework for the assessment of remediation requirements.	Complies	
		(4) In this clause—final land use for the mining area means the final landform and land uses to be achieved for the mining area— a. as set out in the rehabilitation objectives statement and rehabilitation completion criteria statement, and				Explanatory Clause Only.	Noted	
		b. for a large mine—as spatially depicted in the final landform and rehabilitation plan, and				Explanatory Clause Only.	Noted	
		c. if the final land use for the mining area is required by a condition of development consent for activities under the mining lease—as stated in the condition.				Explanatory Clause Only.	Noted	
		Planning Approval Means a) a development consent within the meaning of the <i>Environmental Planning and Assessment Act 1979</i> , or				Explanatory Clause Only.	Noted	
		b) an approval under that Act, Division 5.1.				Explanatory Clause Only.	Noted	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D2-7	Risk Assessment Rehabilitation risk assessment	(1) The holder of a mining lease must conduct a risk assessment (a rehabilitation risk assessment) that— a) identifies, assesses, and evaluates the risks that need to be addressed to achieve the following in relation to the mining lease— (i) the rehabilitation objectives, (ii) the rehabilitation completion criteria (iii) for large mines—the final land use as spatially depicted in the final landform and rehabilitation plan, and	Rehabilitation Management Plan Version R01, dated 1 August 2022.			Section 3 and Attachment A to the Rehabilitation Management Plan presents the rehabilitation risk assessment that was undertaken during preparation of the Rehabilitation Management Plan	Complies	
		b) identifies the measures that need to be implemented to eliminate, minimise or mitigate the risks.	Rehabilitation Management Plan Version R01, dated 1 August 2022			Section 3 and Attachment A to the Rehabilitation Management Plan presents the rehabilitation risk assessment that was undertaken during preparation of the Rehabilitation Management Plan	Complies	
		(2) The holder of the mining lease must implement the measures identified.					Noted	
		(3) The holder of a mining lease must conduct a rehabilitation risk assessment— (a) for a large mine—before preparing a rehabilitation management plan, and (b) for a small mine—before preparing the rehabilitation outcome documents for the mine, and (c) whenever a hazard is identified under clause 6(3)—as soon as reasonably practicable after it is identified, and (d) whenever given a written direction to do so by the Secretary	Rehabilitation Management Plan Version R01, dated 1 August 2022			The risk assessment was completed prior to completion of the Rehabilitation Management Plan.	Complies	
D3-8	Records, Reporting and Notification Application of Division 3	(1) This Division does not apply to a mining lease unless— a) the security deposit required under the mining lease is greater than the minimum deposit prescribed under the Act, section 261BF in relation to that type of mining lease, or b) the Secretary gives a written direction to the holder of the mining lease that this Division, or a provision of this Division, applies to the mining lease.				This condition is administrative only. Lodgement of the security deposits required for each of the mining leases was verified in the 2020 IEA. The value of those deposits is greater than the minimum security deposit set under the Mining Act Regulations. Therefore, this division applies.	Noted	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D3-9	Rehabilitation Documents	A document required to be prepared under this Division must—	Rehabilitation Management Plan Version R01, dated 1 August 2022			The current version of the rehabilitation Management Plan meets the requirements for Rehabilitation Management Plans, as published by the Resource Regulator (<i>Form and Way Rehabilitation Management Plan for Large Mines, February 2024</i>)	Complies	
	General requirements for documents	(a) be in a form approved by the Secretary, and					Complies	
		(b) include any matter required to be included by the form, and	Rehabilitation Management Plan Version R01, dated 1 August 2022					
		(c) if required to be given to the Secretary—be given in a way approved by the Secretary.				Administrative Condition Only	Noted	
D3 C10	Rehabilitation Documents Rehabilitation management plans for large mines	(1) The holder of a mining lease relating to a large mine must prepare a plan (a rehabilitation management plan) for the mining lease that includes the following—	Rehabilitation Management Plan Version R01, dated 1 August 2022			Section 6 of the Rehabilitation Management Plan describes the rehabilitation methodology.	Complies	
		(a) a description of how the holder proposes to manage all aspects of the rehabilitation of the mining area						
		(b) a description of the steps and actions the holder proposes to take to comply with the conditions of the mining lease that relate to rehabilitation,	Rehabilitation Management Plan Version R01, dated 1 August 2022			Section 2.1 of the Rehabilitation Management Plan describes the regulatory (Mining Lease) requirements for rehabilitation.	Complies	
		(c) a summary of rehabilitation risk assessments conducted by the holder,	Rehabilitation Management Plan Version R01, dated 1 August 2022			Section 3 and Attachment A to the Rehabilitation Management Plan presents the rehabilitation risk assessment that was undertaken during preparation of the Rehabilitation Management Plan	Complies	
		(d) the risk control measures identified in the rehabilitation risk assessments,	Rehabilitation Management Plan Version R01, dated 1 August 2022			Attachment A to the Rehabilitation Management Plan presents the rehabilitation risk assessment and actions to be taken to mitigate those risks.	Complies	
		(e) the rehabilitation outcome documents for the mining lease	Rehabilitation Management Plan Version R01, dated 1 August 2022			The requirements of the rehabilitation outcome document are provided in Section 4 of the Rehabilitation Management Plan.	Complies	
		(f) a statement of the performance outcomes for the matters addressed by the rehabilitation outcome documents and the ways in which those outcomes are to be measured and monitored.	Rehabilitation Management Plan Version R01, dated 1 August 2022			Section 4 describes the rehabilitation objectives and performance indicators.	Complies	
		(2) If a rehabilitation outcome document has not been approved by the Secretary, the holder of the mining lease must include a proposed version of the document.	Metropolitan Colliery Forward Program Monday 1 January 2024 to Thursday 31 December 2026.			The approved Forward Program is available on the Metropolitan Coal Website.	Not Triggered	
		(3) A rehabilitation management plan is not required to be given to the Secretary for approval.				Administrative Condition only	Noted	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D3 C10	Rehabilitation Documents Rehabilitation management plans for large mines	(4) The holder of the mining lease— (a) must implement the matters set out in the rehabilitation management plan, and (b) if the forward program specifies timeframes for the implementation of the matters—must implement the matters within those timeframes					Noted	
D3 C11	Rehabilitation Documents Amendment of Rehabilitation Plans	The holder of a mining lease must amend the rehabilitation management plan for the mining lease as follows— a) to substitute the proposed version of a rehabilitation outcome document with the version approved by the Secretary—within 30 days after the document is approved	Rehabilitation Management Plan Version R01, dated 1 August 2022			The original Remediation Management Plan required by Condition D3 C10 has not been revised during this audit period.	Not Triggered	
		b) as a consequence of an amendment made under clause 14 to a rehabilitation outcome document—within 30 days after the amendment is made,				The original Remediation Management Plan required by Condition D3 C10 has not been revised during this audit period.	Not Triggered	
		c) to reflect any changes to the risk control measures in the prepared plan that are identified in a rehabilitation risk assessment—as soon as practicable after the rehabilitation risk assessment is conducted,				The original Remediation Management Plan required by Condition D3 C10 has not been revised during this audit period.	Not Triggered	
		d) whenever given a written direction to do so by the Secretary—in accordance with the direction.				The original Remediation Management Plan required by Condition D3 C10 has not been revised during this audit period.	Not Triggered	
D3 C12	Rehabilitation Documents	(1) The holder of a mining lease must prepare the following documents (the rehabilitation outcome documents) for the mining lease and give them to the Secretary for approval— (a) the rehabilitation objectives statement , which sets out the rehabilitation objectives required to achieve the final land use for the mining area	Screen shot from the Resource Regulator Portal provided by Metropolitan.			The initial version of the rehabilitation objectives statement and completion criteria were uploaded to the Resource Regulator Portal on 15 August 2022.	Complies	
	Rehabilitation outcome documents	(b) the rehabilitation completion criteria statement, which sets out criteria, the completion of which will demonstrate the achievement of the rehabilitation objectives,	Screen shot from the Resource Regulator Portal provided by Metropolitan.			The initial version of the rehabilitation objectives statement and completion criteria were uploaded to the Resource Regulator Portal on 15 August 2022.	Complies	
		(c) for a large mine, the final landform and rehabilitation plan, showing aspatial depiction of the final land use.	Rehabilitation Management Plan Version R01, dated 1 August 2022			Section 5 of the Rehabilitation Management Plan provides the final landform and rehabilitation plan for the mine.	Complies	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D3 C12	Rehabilitation Documents Rehabilitation outcome documents	(d) If the final land use for the mining area is required by a condition of development consent for activities under the mining lease, the holder of the mining lease must ensure the rehabilitation outcome documents are consistent with that condition.	Planning Approval 08_0149			The planning approval for the mine does not specify requirements for final landuse.	Not Triggered	
D3 C13	Rehabilitation Documents Forward program and annual rehabilitation report	(1) The holder of a mining lease must prepare a program (a forward program) for the mining lease that includes the following— a) a schedule of mining activities for the mining area for the next 3 years,	Metropolitan Colliery Forward Program Monday 1 January 2024 to Thursday 31 December 2026.			The Forward Program required by this Condition has been prepared and has been uploaded to the Metropolitan Coal Website. The Program has been prepared using the Resources Regulator’s proforma and meets the requirements of this Condition.	Complies	
		b) a summary of the spatial progression of rehabilitation through its various phases for the next 3 years,	Metropolitan Colliery Forward Program Monday 1 January 2024 to Thursday 31 December 2026.			The Program has been prepared using the Resources Regulator’s proforma and meets the requirements of this Condition.	Complies	
		c) a requirement that the rehabilitation of land and water disturbed by mining activities under the mining lease must occur as soon as reasonably practicable after the disturbance occurs.	Metropolitan Colliery Forward Program Monday 1 January 2024 to Thursday 31 December 2026.			The Program has been prepared using the Resources Regulator’s proforma and meets the requirements of this Condition.	Complies	
		(2) The holder of a mining lease must prepare a report (an annual rehabilitation report) for the mining lease that includes—	Metropolitan Colliery Annual Rehabilitation Report - Sunday 1 January 2023 to Sunday 31 December 2023.			The Report has been prepared using the Resources Regulator’s proforma and meets the requirements of this Condition.	Complies	
		(a) a description of the rehabilitation undertaken over the annual reporting period,	Metropolitan Colliery Annual Rehabilitation Report - Sunday 1 January 2023 to Sunday 31 December 2023.			The Report has been prepared using the Resources Regulator’s proforma and meets the requirements of this Condition.	Complies	
		(b) a report demonstrating the progress made through the phases of rehabilitation provided for in the forward program applying to the reporting period,	Metropolitan Colliery Annual Rehabilitation Report - Sunday 1 January 2023 to Sunday 31 December 2023.			The Report has been prepared using the Resources Regulator’s proforma and meets the requirements of this Condition.	Complies	
		(c) a report demonstrating progress made towards the achievement of the following— (i) the objectives set out in the rehabilitation objectives statement, (ii) the criteria set out in the rehabilitation completion criteria statement, (iii) for large mines—the final land use as spatially depicted in the final landform and rehabilitation plan.	Metropolitan Colliery Annual Rehabilitation Report - Sunday 1 January 2023 to Sunday 31 December 2023.			The Report has been prepared using the Resources Regulator’s proforma and meets the requirements of this Condition.	Complies	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D3 C13	Forward program and annual rehabilitation report	(3) If a rehabilitation outcome document has not been approved by the Secretary, the holder of the mining lease must rely on a proposed version of the document.		Environment and Community Superintendent - The rehabilitation outcome documents have not been approved		Administrative Condition Only	Noted	
D3 C13	Rehabilitation Documents	(4) The holder of the mining lease must give the forward program and annual rehabilitation report to the Secretary.	Screen shot from the Resource Regulator Portal provided by Metropolitan.			The forward program and annual rehabilitation report have been submitted to the Resource Regulator as follows: <ul style="list-style-type: none"> • Forward Program <ul style="list-style-type: none"> ○ Initial Program – 31 January 2023 ○ Revised Program - 28 March 2024 • Annual Rehabilitation Report <ul style="list-style-type: none"> ○ 5 June 2023 ○ 28 March 2024 	Complies	
	Forward program and annual rehabilitation report	(5) In this clause—annual reporting period means each period of 12 months commencing on— <ul style="list-style-type: none"> (a) the date on which the mining lease is granted, or (b) if the Secretary approves another date in relation to the mining lease— the other date. 				Administrative Condition Only	Noted	
D3 C14	Rehabilitation Documents	(1) This clause applies to— <ul style="list-style-type: none"> (a) a rehabilitation outcome document if the Secretary has approved it, and 		Environment and Community Superintendent - The rehabilitation outcome documents have not been approved.		Administrative Condition Only	Noted	
		(b) a forward program if it has been given to the Secretary.		Environment and Community Superintendent - The forward program has been provided to the RR.		Administrative Condition Only	Noted	
		(2) The holder of a mining lease must not amend a document to which this clause applies that relates to the mining lease unless—				The rehabilitation Outcome Document as presented in the Rehabilitation Management Plan has not been amended during this audit period.	Not Triggered	
		(a) the Secretary gives the holder a written direction to do so, or				The rehabilitation Outcome Document as presented in the Rehabilitation Management Plan has not been amended during this audit period.	Not Triggered	
		(b) the Secretary, on written application by the holder, gives a written approval of the amendment				The rehabilitation Outcome Document as presented in the Rehabilitation Management Plan has not been amended during this audit period.	Not Triggered	
		(3) The holder of the mining lease must amend the document in accordance with the Secretary’s direction or approval.				The rehabilitation Outcome Document as presented in the Rehabilitation Management Plan has not been amended during this audit period.	Not Triggered	
		(4) Nothing in this clause prevents the holder of a mining lease preparing a draft amendment for submission to the Secretary for approval					Noted	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D3-C15	Rehabilitation Documents Times at which documents must be prepared and given	(1) The holder of a mining lease must do the following before the end of the initial period— a) prepare a rehabilitation management plan, and	Rehabilitation Management Plan Version R01, dated 1 August 2022	.		The Rehabilitation Management Plan was issued on 1 August 2022, within the Initial Period.	Complies	
		(1) The holder of a mining lease must do the following before the end of the initial period— b) prepare rehabilitation outcome documents and give them, other than the rehabilitation completion criteria statement, to the Secretary for approval, and	Email from Metropolitan (S Love) to the Resource Regulator titled “Metropolitan Coal Forward Program and Rehabilitation Objectives Submission”, dated 29 July 2022.			Due to issues with the Resource Regulator website, the Rehabilitation Objectives Statement was issued to the Secretary on 15 August 2022, outside of the Initial Period (1 August 2022). The Auditor sighted email correspondence with the RR informing them of the problem.	Complies	
		(1) The holder of a mining lease must do the following before the end of the initial period— c) prepare a forward program and give it to the Secretary.	Email from Metropolitan (S Love) to the Resource Regulator titled “Metropolitan Coal Forward Program and Rehabilitation Objectives Submission”, dated 29 July 2022.			Due to issues with the Resource Regulator website, the initial forward program was issued to the Secretary on 31 January 2023, outside of the Initial Period (1 August 2022). The Auditor sighted email correspondence with the RR informing them of the problem.	Complies	
		(2) The holder of the mining lease must prepare a forward program and annual rehabilitation report and give them to the Secretary before— a) 60 days after the last day of each annual reporting period, commencing with the annual reporting period in which the forward program was given to Secretary under subclause (1)(c), or	Screen shot from the Resource Regulator Portal provided by Metropolitan.			The forward program and annual rehabilitation report have been submitted to the Resource Regulator as follows: <ul style="list-style-type: none">Forward Program<ul style="list-style-type: none">Initial Program – 31 January 2023Revised Program - 28 March 2024Annual Rehabilitation Report<ul style="list-style-type: none">5 June 202328 March 2024	Complies	
		b) a later date approved by the Secretary.					Not Triggered	
		(3) A rehabilitation completion criteria statement relating to completion of rehabilitation during a period covered by a forward program must be given to the Secretary for approval when the forward program is required to be given to the Secretary.	Metropolitan Colliery Annual Rehabilitation Report - Sunday 1 January 2023 to Sunday 31 December 2023.			No areas of rehabilitation have been completed.	Not Triggered	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D3-C15	Rehabilitation Documents Times at which documents must be prepared and given	(4) The holder of the mining lease must prepare updated rehabilitation outcome documents for the mining lease and give them to the Secretary for approval before— (a) 60 days after a development consent is modified following an application referred to in clause 20(1)(b), or				No modifications to the Approvals have been approved since the issue of the current rehabilitation outcome documents.	Not Triggered	
		(b) a later date approved by the Secretary					Noted	
		(5) A rehabilitation completion criteria statement is not required to be given to the Secretary under subclause (4) unless a rehabilitation completion criteria statement has already been given to the Secretary under subclause (3).				Administrative Statement only	Noted	
		(6) The Secretary may, by written notice, direct the holder of a mining lease to prepare, or give to the Secretary, a document required to be prepared under this Division at a time other than that specified in this clause.		Environment and Community Superintendent – no notices have been issued by the Resource Regulator regarding the preparation of the rehabilitation outcome documents during this audit period.		No notices have been issued by the Resource Regulator regarding the preparation of the rehabilitation outcome documents during this audit period.	Not Triggered	
		(7) The holder of the mining lease must comply with the direction.					Not Triggered	
		(8) In this clause—initial period means the period commencing when the mining lease is granted and ending— (a) 30 days, or other period approved by the Secretary, after this Division first applies to the mining lease, or				Administrative Condition Only	Noted	
		(b) if this Division applies to the mining lease because of an increase in the required security deposit— (i) when the surface of the mining area is disturbed by activities under the mining lease, or (ii) at a later date approved by the Secretary.				Administrative Condition Only	Noted	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D3-C16	Rehabilitation Documents Certain documents to be publicly available	(1) This clause applies to the following documents— a) a rehabilitation management plan, b) a forward program, c) an annual rehabilitation report				Administrative Condition Only	Noted	
		(2) The holder of a mining lease must make a document to which this clause applies publicly available by— (a) publishing it on its website in a prominent position, or	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			The Rehabilitation Outcome documents (including the Rehabilitation Management Plan) have been uploaded to the Metropolitan Coal website.	Complies	
		(b) if the holder does not have a website— providing a copy of it to a person— (i) on the written request of a person, and (ii) without charge, and (iii) within 14 days after the request is received.	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			The Rehabilitation Outcome documents (including the Rehabilitation Management Plan) have been uploaded to the Metropolitan Coal website.	Not Triggered	
		(3) If a document is published on the website of the holder of the mining lease, the holder must ensure that it is published— (a) for a rehabilitation management plan—within 14 days after it is prepared or amended, or	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			The Rehabilitation Outcome documents (including the Rehabilitation Management Plan) have been uploaded to the Metropolitan Coal website.	Complies	
		(b) for a forward program or an annual rehabilitation report— within 14 days after it is given to the Secretary or amended,	https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Metropolitan-Mine/Approvals,-Plans-Reports			The Rehabilitation Outcome documents (including the Rehabilitation Management Plan) have been uploaded to the Metropolitan Coal website.	Complies	
		(4) Personal information within the meaning of the Privacy and Personal Information Protection Act 1998 is not required to be included in a document made available to a person under this clause.				Administrative Condition Only	Noted	
D4-C17	Records, Reporting and Notification Records demonstrating compliance	The holder of a mining lease must create and maintain records of all actions taken that demonstrate compliance with each of the conditions set out in this Part. Note— The Act, sections 163D and 163E provide for the form in which records must be kept and the period for which they must be retained.				Other than screen shots and the documents that are available on the Metropolitan Website, records demonstrating compliance with the standard conditions (for example correspondence, including email responses from the Resource Regulator) were not able to be provided to the Auditor.	Non-Compliance	Establish and maintain compliance records as required by Condition D4 - C17

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D4-C18	Records, Reporting and Notification Report on non-compliance	(1) The holder of a mining lease must provide the Minister with a written report detailing any non-compliance with- (a) a condition of the mining lease,	Screen shot from the Resource Regulator Portal provided by Metropolitan.			The Auditor was unable to verify whether the non-compliances against the reporting requirements in the Standard Mining Lease Conditions were reported to the Resources Regulator. Compliance with this condition could not be verified.	Non-Compliance	Establish and maintain compliance records as required by Condition D4 - C17
		(b) a requirement of the Act or this Regulation relating to activities under the mining lease.		Environment and Community Superintendent – no non-compliances in relation to the Act or Regulations have occurred.		No non-compliances in relation to the Act or Regulations (since 2 July 2022 when these conditions came into force) have been identified.	Not Triggered	
		(2) The holder of the mining lease must provide the report within 7 days after becoming aware of the non-compliance					Noted	
		(3) The holder of the mining lease must ensure the report— a) identifies the condition of the mining lease, or the requirement of the Act or this Regulation, to which the non-compliance relates, and					Noted	
		b) describes the non-compliance and specifies the date or dates on which, or the period during which, the non-compliance occurred, and					Noted	
		c) describes the causes or likely causes of the non-compliance, and					Noted	
		d) describes the action that has been taken, or will be taken, to mitigate the effects, and to prevent any recurrence, of the non-compliance.					Noted	

Standard Mining Lease Terms (Applies from 2 July 2022)								
Cond.	Title	Condition	Documents Reviewed	Interviews	Audit Inspections	Assessment	Finding	Recommendations
D4-C19	Records, Reporting and Notification Nominated contact person	(1) The holder of a mining lease must nominate a natural person to be the contact person with whom the Secretary can communicate in relation to the mining lease for the purposes of the Act.	Letter from Metropolitan (M Carter) to the Resource Regulator (undated). Screen shot from the Resource Regulator Portal provided by Metropolitan.			The Screen shot from the Portal (submissions received) confirmed the NCP submission.	Complies	
		(2) The holder of the mining lease must give written notice to the Secretary of— (a) the full name and contact details of the nominated person—within 28 days after the date on which the standard conditions apply to the mining lease under clause 31A of this Regulation, and	Letter from Metropolitan (M Carter) to the Resource Regulator (undated). Screen shot from the Resource Regulator Portal provided by Metropolitan.			The Screen shot from the Portal (submissions received) confirmed the NCP submission was received on 15 December 2023. The submission was outside of the 28-day period required by the Condition.	Non-Compliance	Ensure that submissions to the RR meet the timelines required by the Mining Lease Standard Conditions.
		(b) any change in nomination or in the nominated person’s contact details—within 28 days after the change occurs.				Not triggered in this audit period.	Not Triggered	
		(3) The holder of the mining lease must ensure that the contact details for the nominated person include the person’s phone number and postal and email addresses.	Letter from Metropolitan (M Carter) to the Resource Regulator (undated). Screen shot from the Resource Regulator Portal provided by Metropolitan.			The Screen shot from the Portal (submissions received) confirmed the NCP submission.	Complies	
D5-20	Applications relating to development consent Additional requirements—application for or to modify development consent	(1) The holder of a mining lease must give written notice to the Secretary within 10 days after— (a) making an application for development consent that relates to the mining area, or				There have been no modifications to the Approval since October 2013.	Not Triggered	
		(b) making an application for modification of a development consent— (i) under the <i>Environmental Planning and Assessment Act 1979</i> , section 4.55(2), and (ii) that proposes to modify a condition of the consent that relates to rehabilitation of the mining area in a way that may affect an obligation under the mining lease relating to rehabilitation of the mining area.				There have been no modifications to the Approval since October 2013.	Not Triggered	
		(2) This clause does not apply if the development is State significant development.				Administrative Condition Only.	Noted	

Consolidated Coal Lease 703 (1973)

Condition	Title / Summary	Evidence Reference	Finding
1	Extraction of Coal – maximise coal extraction	Production Records – 2021, 2022	Complies
2	Mining Operations Plan – contents	Mining Operations Plan	Complies
3	Annual Environmental Management Report	Annual Reviews – 2021, 2022	Complies
9	Barriers – Directions from Minister	No directions issued during this audit period.	Noted
11	Barriers – no prospecting without approval within nominated areas	Annual Reviews – 2021, 2022	Complies
13	Barriers – no mining within nominated areas	Mining Operations Plan, Longwall Extraction Plans, Annual Reviews	Complies
14	Shafts, Drifts and Adits – conduct mining in safe manner	Incident Register, Annual Reviews	Complies
15	Dumps – comply with Inspector Directions regarding deposition or removal of material	No directions issued during this audit period.	Not Triggered
16	Dumps – comply with Minister's Directions regarding deposition or removal of material	No directions issued during this audit period.	Not Triggered
17	Dust – minimise dust emissions	Dust monitoring results / Dust Mitigation Measures implemented.	Complies
18	No interference with fences on adjacent lands	Complaints Register	Complies
19	Comply with Minister's directions regarding minimising public inconvenience or damage	No directions issued during this audit period.	Not Triggered
20	Comply with Minister's directions regarding survey of structures etc	No directions issued during this audit period.	Not Triggered
21	If directed by the Minister, rehabilitate lands disturbed by mining	No directions issued during this audit period.	Not Triggered
22	Upon completion of mining, rehabilitate mine	Mine Operational during this audit period.	Not Triggered
23	If directed by the Minister, rehabilitate any other lands	No directions issued during this audit period.	Not Triggered
24	Minimise fire risk	No fires during this audit period	Complies
25	Prevent contamination impacts on water courses	Refer to water incidents	Not Comply
27	If directed by Minister, minimise disturbance to flora and fauna	No directions issued during this audit period.	Not Triggered
29	If directed by Minister, plant and maintain aboral screen	No directions issued during this audit period.	Not Triggered
30	Minimise soil erosion	No significant soil erosion occurred during this audit period.	Complies
31	Pay Council etc costs incurred to make good any damage to infrastructure	No damage reported during this audit period. No claims for compensation were received	Not Triggered
32	If directed by the Minister, make good any damage to infrastructure	No directions issued during this audit period.	Not Triggered

Consolidated Coal Lease 703 (1973)

Condition	Title / Summary	Evidence Reference	Finding
34	Operations to have no impact on Woronora Special Area.	Annual Reviews	Complies
41	Do not interfere with power lines	No impacts on power infrastructure during this audit period	Complies
43	Do unapproved impacts on Indigenous Heritage	No impacts reported during this audit period.	Complies
44	Minimum scale of labour force	Annual Reviews	Complies
45	Provide information as requested by the Minister	No directions issued during this audit period.	Not Triggered
46	Service of notices to landowners	No notices required to be served on landowners during this audit period	Not Triggered
47	Comply with directions from Inspectors	No directions issued during this audit period.	Not Triggered
48	Metropolitan to Indemnify the Crown		Noted
49	Metropolitan shall not seek compensation from the Crown		Noted
50	Prospecting – notify the Director General of all proposed prospecting.		Noted
51	Security Deposit	Verified during 2018 IEA	Complies
54	Payment of Royalties		Noted
59	Mining to be restricted to approved lease areas	Longwall Extraction Plans	Complies
60	Metropolitan shall comply with all SCA (WaterNSW) requirements with catchment	Annual Reviews / WaterNSW consultation	Complies
61	Subsidence Management – prepare and implement a Subsidence Management Plan.	Coal Extraction Plans	Complies

Mining Lease 1610 (1992)

Condition	Title / Summary	Evidence Reference	Finding
1	Notify Landowners of granting of mining lease	Verified during previous audits	Complies
2	Rehabilitate disturbed lands to the satisfaction of the Minister		Noted
3	Mining Operations Plan and Annual Rehabilitation Report	Mining Operations Plan	Complies
4	Compliance Report	Annual Reviews	Complies
5	Environmental Incident Report	No environmental incidents were recorded on the area covered by this lease.	Not Triggered.
7	The leaseholder must recover the minerals covered by the lease.	Longwall Extraction Plan – mining has been undertaken in areas covered by this lease.	Complies
8	Payment of Group Security	TAS Reports confirms that the required securities have been paid.	Complies

Mining Lease 1610 (1992)			
Condition	Title / Summary	Evidence Reference	Finding
9	Make reasonable attempt to cooperate with adjacent lease holders		Noted
10	Methane drainage and capture proposals to be advised to the Department's Mine Safety.	No new methane drainage proposed during this audit period	Not Triggered.

Coal Lease 1702 2014			
Condition	Title / Summary	Evidence Reference	Finding
1	Notify Landowners of granting of mining lease	Verified during previous audits	Complies
2	Rehabilitate disturbed lands to the satisfaction of the Minister		Noted
3	Mining Operations Plan and Annual Rehabilitation Report	Mining Operations Plan	Complies
4	Compliance Report	Annual Reviews	Complies
5	Environmental Incident Report	No environmental incidents were recorded on the area covered by this lease.	Not Triggered.
6	Extraction Plan	Longwall Extraction Plan	Complies
7	The leaseholder must recover the minerals covered by the lease.	Longwall Extraction Plan – mining has been undertaken in areas covered by this lease.	Complies
8	Payment of Group Security	TAS Reports confirms that the required securities have been paid.	Complies
9	Make reasonable attempt to cooperate with adjacent lease holders		Noted
10	No mining within the Woronora Dam notification area without the approval of the minister.		Noted
11	Payment of public money	The Minister has not reimbursement for any additional costs.	Not Triggered.

Mining Purposes Lease 320 (1973)	
The mining lease documentation available did not contain any specific conditions. It is noted however that the lease refers to a Schedule of Conditions (1-39) that were appended to the original lease.	

Mining Lease 379 (1973)	
The mining lease documentation available did not contain any specific conditions.	

Water Licence Compliance Table

Appendix A4

Groundwater Licence 10BL603595

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
1	Mine Water	The Licence holder must develop and implement a methodology to estimate the annual volume of all groundwater intercepted (water budget) approved by the office of water (surface water, alluvial and hard rock groundwater volumes must be determined and presents separately). Water budgets must be set and approved one month prior to the beginning of each water year to enable implementation.	Metropolitan Coal Surface Facilities Water Management Plan, Revision SFWMP-R01-F, dated 26 August 2019. Metropolitan Coal Extraction Plan 308-310, LW308-310EP-R01-B, dated 22 November 2022. 2021 Annual Review 2022 Annual Review 2023 Annual Review			Details of water estimation is described in Section 5.4 of the Surface Facilities Water Management Plan and monitoring details reported in the Annual Reviews (Section 6.2.5-6.2.9). Mine water make is calculated from the difference between total mine inflows (reticulated water into the mine, moisture in the downcast ventilation and the ROM coal in situ moisture content) and mine outflows (reticulated water out of the mine, moisture in the exhaust ventilation, and moisture in the ROM coal).	Complies	
2	Alluvial Sediments	The licence holder must provide the office of water with a map of the licensed site showing areas of alluvial sediments and the limits to the mine works, including any alluvium intercepted or excavated by the mining operations.	Metropolitan Coal Longwalls 308-310 Water Management Plan, WMP-R01-C, dated 22 November 2022.			Relevant hydrogeological information is presented in the Longwall Water Management Plan.	Complies	
3	Surface Water	The licence holder must implement measures to prevent surface and/or alluvial groundwater flows entering the mine within six (6) months from the licence issue date, as approved by the office of water. The licence holder must also comply with any directions issued by the office of water with respect to installation and operation of necessary works to isolate the mine works from any surface and/or alluvial groundwater sources.	Metropolitan Coal Longwalls 308-310 Water Management Plan, WMP-R01-C, dated 22 November 2022. Metropolitan Coal Surface Facilities Water Management Plan, Revision SFWMP-R01-F, dated 26 August 2019	Environment and Community Superintendent – no notices have been issued by WaterNSW during the Audit Period.		The Surface Facilities Water Management Plan details the measures implemented to prevent inflows of surface water into the mine.	Complies	
4	Water Management Plan	The licence holder must develop and implement a management plan in consultation with the office of water and provide for approval within six months of issuing the licence. The management plan must include: - A. A groundwater monitoring plan including baseline data for water level and quality, and trigger criteria, B. A groundwater dependent ecosystem and stream monitoring plan C. A contingency plan including mitigation and remedial measure, and reporting schedule for exceedances in trigger criteria, and D. The identification of measure to be used to minimise ongoing seepage of surface and/or alluvial water to the mine works and for restoring the mine works above the final water level for when the pits are no longer being used. The additional information Requested in the template provided by the office of water.	Metropolitan Coal Longwalls 308-310 Water Management Plan, WMP-R01-C, dated 22 November 2022. Metropolitan Coal Surface Facilities Water Management Plan, Revision SFWMP-R01-F, dated 26 August 2019 2021 Annual Review 2022 Annual Review 2023 Annual Review			Baseline data and monitoring information are included in the Surface Facilities Water Management Plan and Annual Reviews. Detailed groundwater assessment, current status of groundwater model are included in Annual Reviews. Groundwater monitoring and assessment is presented in each Annual Review.	Complies	

Groundwater Licence 10BL603595

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
5	Compliance Report	<p>The licence holder will provide the office of water an annual compliance report, to report on the results of the groundwater monitoring and contingency plan, within one month of the end of the water year being reported on.</p> <p>The annual compliance report must:-</p> <ul style="list-style-type: none"> A. Assess compliance with the licence, B. Summary of new bored or pits constructed during that year including a map of locations, C. Provide details analysis of the monitoring data collected for each bore for the last water year and compared with baseline data and trigger criteria D. A digital copy of all the data collected in the last water year to be presents to the office of water in excel format, E. Present contingency events that have impacted on groundwater during the last water year, Including actions taken to remedy the situation and extra monitoring results, F. Any recommendations for improvements for the new water year, and G. A review of the management plan for the new water year. 	<p>2021 Annual Review</p> <p>2022 Annual Review</p> <p>2023 Annual Review</p>			<p>The requirements of this reporting condition are covered in each of the Annual Reviews.</p>	Complies	
6	Monitoring and Reporting	<p>An extraction measurement device must be installed and maintained on each extraction device (pump) used for extraction of water under this licence, and such devices must be a type and standard, and must be maintained in a manner, which is acceptable to the office of water.</p>	<p>Metropolitan Coal Longwalls 308-310 Water Management Plan, WMP-R01-C, dated 22 November 2022.</p> <p>Metropolitan Coal Surface Facilities Water Management Plan, Revision SFWMP-R01-F, dated 26 August 2019</p> <p>2021 Annual Review</p> <p>2022 Annual Review</p> <p>2023 Annual Review</p>			<p>Section 5.2 of the Surface Facilities Water Management Plan describes the water extraction monitoring locations (continuous flow meters).</p> <p>Section 8 of the Annual Reviews report water usage (including extraction) across the site.</p>	Complies	
7	Independent Audit	<p>A) The licence holder must ensure that an independent environmental (water) audit is carried out at the end of the 5-years licence period and submitted to the office of water as a comprehensive report (Environmental Audit Report).</p> <p>B) The audit must:-</p> <p>C) Be carried out in accordance with guidelines and general principles for environmental auditing and procedures for environmental auditing approved by the office of water,</p> <p>D) Assess compliance with the requirements of the licence, including the management plan,</p> <p>E) Review actual impacts of the extractions on any aquifers, groundwater dependent exo-systems and any streams in the area,</p> <p>F) Make comparisons between actual and predicted impacts on groundwater</p> <p>G) Be conducted by an independent certified auditor, nominated by the licence holder, and</p> <p>H) Be carried out at the cost of the licence holder.</p>	<p>Email from R Pascoe (former Metropolitan Coal Environment and Community Manager) to S Love (Current Environment and Community Superintendent) titled "Proposed Conditions for Groundwater Application 10BL603595", dated 10 December 2012 (including email trail).</p> <p>The email evidences communications between Metropolitan and NOW in relation to the water license application.</p> <p>2018 Independent Environmental Audit.</p>	<p>Environment and Community Superintendent - Metropolitan met with NoW in 2012 to discuss the proposed license conditions. We subsequently provided a table (also attached) outlining how our existing reporting covered all of the conditions listed, including the IEA and it's availability on the Metropolitan website. Since that time neither NoW or NRAR have indicated the need for us to specifically submit the IEA.</p>		<p>Metropolitan have elected to cover this condition in the (including this) Independent Environmental Audits.</p> <p>Metropolitan reported that they have presented this proposal to NOW. The cover letter to the GW License is from NOW (W. Conners), who received the previous correspondence from Metropolitan.</p> <p>The Auditor notes that the scope of this IEA provides a high-level assessment of compliance with this Condition and may not provide the detail expected by WaterNSW.</p> <p>This condition requires that Metropolitan submit the audit report to WaterNSW – that requirement has not been satisfied.</p>	Complies	

Groundwater Licence 10BL603595								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
8	Limits	I) The Volume of groundwater extracted from the works authorised by the licence, (and by licence(s) N/A, shall not exceed 182.5 megalitres (ML) in any 12-month period commencing 1st July. (This is referred to as the "groundwater only allocation").	2021 Annual Review 2022 Annual Review 2023 Annual Review			Annual Groundwater extraction quantities are presented in the Annual Reviews. Groundwater extraction (from within the mine) did not exceed this criterion during the audit period.	Complies	
9	Dewatering	J) This a special purpose (mine de-watering) licence. As such, the licence, including the volumetric groundwater allocation, is not transferrable and the licence will lapse at the conclusion of mining operations upon the office of water providing confirmation that satisfactory compliance with these conditions has been achieved.					Noted	

Audit Photos

Appendix B



Photo 1 - Waratah Rivulet



Photo 2 - Iron Staining (ETO)



Photo 3 – Desilting the Turkeys Nest Sediment Pond



Photo 4 - Stabilisation works associated with the landslide.



Photo 5 - Camp Creek downstream from the mine



Photo 6 – Coal Washery Rejects Stockpile



Photo 7 - Product Stockpile



Photo 8 - Oil Store

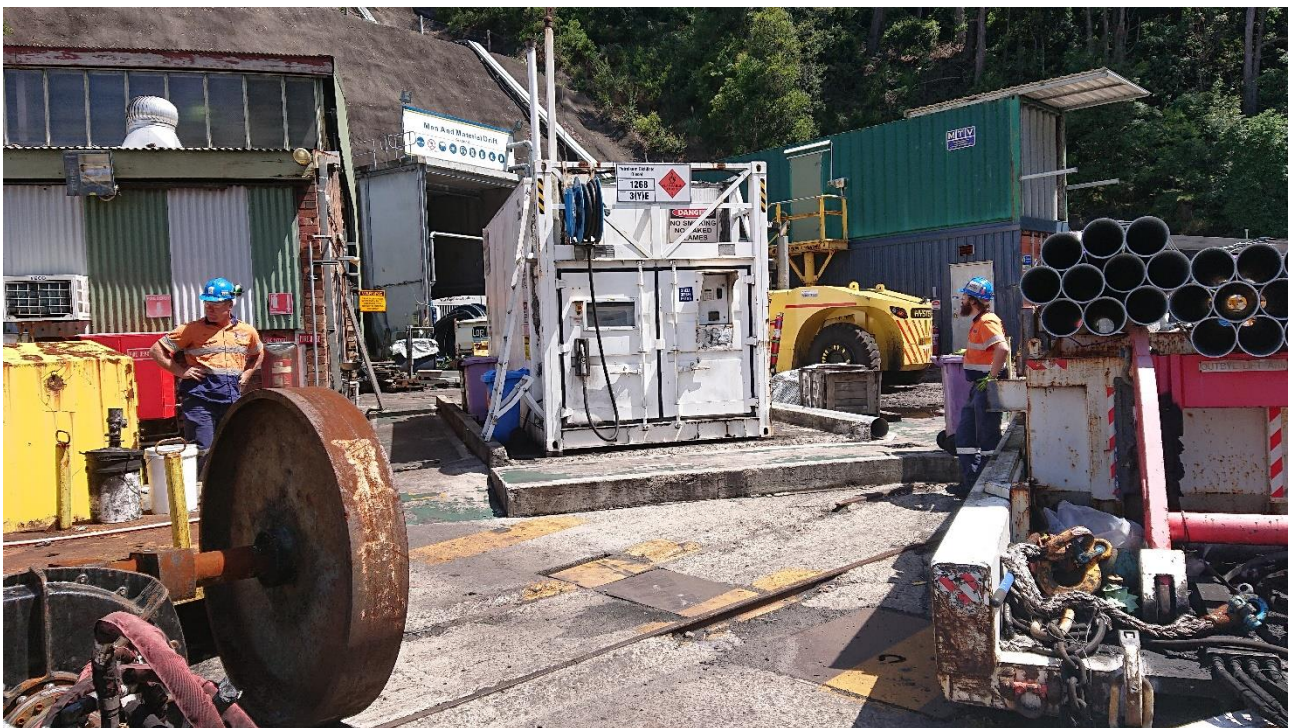


Photo 9 - Fuel Storage and Refueling Area

DPIE Auditor Approval

Appendix C



Department of Planning and Environment

Contact: Georgia Dragicevic
Phone: 4247 1852
Fax: 4224 9470
Email: Georgia.Dragicevic@planning.nsw.gov.au

Mr Jon Degotardi
Technical Services Manager
Metropolitan Coal
Off Parkes Street
Helensburgh, NSW 2508

27 November 2023

Dear Mr Degotardi

**Metropolitan Coal Project (MP 08_0149)
Independent Environmental Audit 2023**

I refer to your letter of 21 November 2023 seeking approval of Mr Ken Holmes of Barnett and May as the lead auditor for the upcoming Independent Environmental Audit of Metropolitan Coal Project (the project), in accordance with Schedule 7, Condition 8 of project approval MP 08_0149, as modified (the approval).

Having considered the qualifications and experience of the Mr Holmes, the Planning Secretary endorses the appointment of Mr Holmes as the lead auditor in accordance with Schedule 7, Condition 8 of the approval. This approval is conditional on Mr Holmes being independent of the project and maintaining a relevant industry accreditation.

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

Notwithstanding, the Department requests that the audit team also includes experts in hydrology (surface and ground water), hydrogeology, aquatic ecology, and subsidence. Consequently, you are requested to nominate suitably qualified, experienced and independent experts in hydrology (surface and ground water), hydrogeology, aquatic ecology and subsidence, for Planning Secretary's approval, prior to undertaking the audit.

The audit is to be conducted in accordance with AS/NZS ISO 19011 Australian/New Zealand Standard: Guidelines for quality and/or environmental management systems auditing and you may wish to consider the Audit Post Approval Requirements (Department 2020 or as updated). A copy of this guideline can be located at <http://planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/Integrated-Mining-Policy>.

The audit report is to include the following:

- consultation with the relevant agencies;
- a compliance table indicating the compliance status of each condition of approval and any relevant EPL;
- not use the term "partial compliance";
- recommend actions in response to non-compliances;
- review the adequacy of plans and programs required under this consent; and
- identify opportunities for improved environmental management and performance.

Within six weeks of completing of this audit, Metropolitan is to submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report and a timetable to implement the recommendations.

Prior to submitting the audit report to the Planning Secretary, it is recommended that Metropolitan review the report to ensure it complies with the relevant approval condition.

Failure to meet these requirements will require revision and resubmission of the Audit Report.

Should you have any enquiries in relation to this matter, please contact Georgia Dragicevic, Senior Compliance Officer, on (02) 4247 1852 or by email to Georgia.Dragicevic@planning.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'K. O'Reilly', enclosed in a thin black rectangular border.

Katrina O'Reilly
Team Leader Compliance
as nominee of the Planning Secretary

NSW Planning ref: MP08_0149-PA-101

Mr Stephen Love
Environment & Community Superintendent
METROPOLITAN COLLIERIES PTY. LTD.
Metropolitan Coal Off Parkes Street
Helensburgh New South Wales 2508
19/03/2024

Sent via the Major Projects Portal only

Subject: Metropolitan Coal – Independent Environmental Audit

Additional Audit team member - subsidence expert nomination

Dear Mr Love

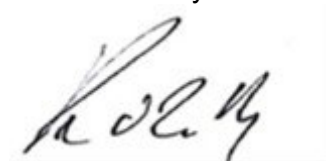
Reference is made to your post approval matter, MP08_0149-PA-101, request for the Planning Secretary's approval of an additional suitably qualified, experienced, and independent person as part of the audit team undertaking the Independent Environmental Audit (IEA) for Metropolitan Coal, submitted as required by Schedule 7, Condition 8 of MP08_0149, as modified (the approval) to NSW Department of Planning, Housing and Infrastructure (NSW Planning) on 18 March 2024.

NSW Planning has reviewed the independent auditor nomination and based on the information you have provided is satisfied that the proposed person is suitably qualified, experienced, and independent. Consequently, as nominee of the Planning Secretary, I approve the appointment of Mr Steven Ditton (subsidence expert) of Ditton Geotechnical Services Pty Ltd as part of the IEA team.

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

Should you wish to discuss the matter further, please contact me on 0429400261 or email compliance@planning.nsw.gov.au

Yours sincerely



Katrina O'Reilly
Team Leader - Compliance
Compliance
As nominee of the Planning Secretary

NSW Planning ref: MP08_0149-PA-110

Stephen Love
Environment & Community Superintendent
Metropolitan Collieries Pty Ltd
Metropolitan Coal Off Parkes Street
HELENSBURGH, NSW 2508
30/01/2025

Sent via the Major Projects Portal only

Subject: Metropolitan Coal - Auditor 2025

Dear Mr Love

I refer to your letter of 30 January 2025 seeking approval of Ms Zoe Lagerroth of GHD as an alternative aquatic ecology expert for the upcoming Independent Environmental Audit of Metropolitan Coal Project (the project), in accordance with Schedule 7, Condition 8 of project approval MP 08_0149, as modified (the approval).

Having considered the qualifications and experience of Ms Lagerroth, the Planning Secretary endorses the appointment of Ms Lagerroth to undertake aquatic ecology part of the audit in accordance with Schedule 7, Condition 8 of the approval. This approval is conditional on Ms Lagerroth being independent of the project.

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

The audit is to be conducted in accordance with AS/NZS ISO 19011 Australian/New Zealand Standard: Guidelines for quality and/or environmental management systems auditing and you may wish to consider the Audit Post Approval Requirements (Department 2020 or as updated). A copy of this guideline can be located at

<http://planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/Integrated-Mining-Policy>.

The audit report is to include the following:

- consultation with the relevant agencies;
- a compliance table indicating the compliance status of each condition of approval and any relevant EPL;
- not use the term "partial compliance";
- recommend actions in response to non-compliances;
- review the adequacy of plans and programs required under this consent; and

- identify opportunities for improved environmental management and performance.

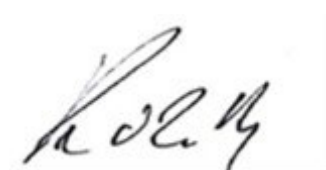
Within six weeks of completing of this audit, Metropolitan is to submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report and a timetable to implement the recommendations.

Prior to submitting the audit report to the Planning Secretary, it is recommended that Metropolitan review the report to ensure it complies with the relevant approval condition.

Failure to meet these requirements will require revision and resubmission of the Audit Report.

Should you have any enquiries in relation to this matter, please contact Georgia Dragicevic, Senior Compliance Officer, on (02) 4247 1852 or by email to Georgia.Dragicevic@planning.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read "K. O'Reilly".

Katrina O'Reilly
Team Leader - Compliance
Compliance

As nominee of the Planning Secretary

NSW Planning ref: MP08_0149-PA-116

Mr Stephen Love
Environment & Community Superintendent
Metropolitan Collieries Pty Ltd
Metropolitan Coal Off Parkes Street
HELENSBURGH, NSW 2508
18/03/2025

Sent via the Major Projects Portal only

Subject: Metropolitan Coal - IEA Groundwater Specialist

Dear Mr Love

I refer to your request of 17 March 2025 seeking approval of Mr Jonathon Tait of EMM Consulting Pty Limited as an alternative groundwater specialist for the upcoming Independent Environmental Audit of Metropolitan Coal Project (the project), in accordance with Schedule 7, Condition 8 of project approval MP 08_0149, as modified (the approval).

Having considered the qualifications and experience of Mr Tait, the Planning Secretary endorses the appointment of Mr Tait to undertake groundwater part of the audit in accordance with Schedule 7, Condition 8 of the approval. This approval is conditional on Mr Tait being independent of the project. Mr Tait as the endorsed expert must attend the site inspection component of the audit and provide a relevant report and or section/s to be included in the audit report addressing the areas of his expertise.

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

The audit is to be conducted in accordance with AS/NZS ISO 19011 Australian/New Zealand Standard: Guidelines for quality and/or environmental management systems auditing and you may wish to consider the Audit Post Approval Requirements (Department 2020 or as updated). A copy of this guideline can be located at <http://planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/Integrated-Mining-Policy>.

The audit report is to include the following:

- consultation with the relevant agencies;
- a compliance table indicating the compliance status of each condition of approval and any relevant EPL;
- not use the term “partial compliance”;
- recommend actions in response to non-compliances;

- review the adequacy of plans and programs required under this consent; and
- identify opportunities for improved environmental management and performance.

Within six weeks of completing of this audit, Metropolitan is to submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report and a timetable to implement the recommendations.

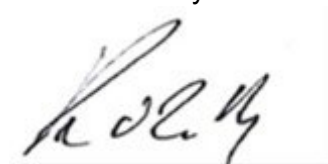
Prior to submitting the audit report to the Planning Secretary, it is recommended that Metropolitan review the report to ensure it complies with the relevant approval condition.

Failure to meet these requirements will require revision and resubmission of the Audit Report.

Lastly, please be advised that the commissioning of the Audit is the date of the site inspection and that the site inspection must be undertaken at the start of each audit period.

Should you have any enquiries in relation to this matter, please contact Georgia Dragicevic, Senior Compliance Officer, on (02) 4247 1852 or by email to Georgia.Dragicevic@planning.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read "K. O'Reilly".

Katrina O'Reilly
Team Leader - Compliance
Compliance
As nominee of the Planning Secretary

Stakeholder Consultation

Appendix D

From: [Katrina O'Reilly](#)
To: [Ken Holmes](#)
Cc: [Jessie Evans](#)
Subject: RE: Metropolitan Coal Mine - 2024 Independent Environmental Audit - Consultation Request DPE
Date: Thursday, 11 April 2024 11:41:19 AM

Good afternoon Ken,

NSW Planning would like the below to be focused on:

- Surfacewater and Groundwater impacts – compliance/monitoring/ reporting against trigger levels (and actions implemented/developed as a result of TARPS) and water licensing
- Biodiversity/aquatic – impacts of subsidence on biodiversity values/swamps/creeks/aquatic
- Heritage – impacts of subsidence on Aboriginal heritage values
- Compliance with footprint as per EA and consent appendices
- Compliance with management plan commitments
- Rehabilitation progress
- Compliance with SUBSIDENCE Performance Measures – Natural and Heritage Features and Built Features
- Adaptive management measures
- Complaints register and management thereof
- Greenhouse Gas emissions reporting and assessment
- Comparison of EA prediction vs actual

NSW Planning also requests that agencies consulted include:

EPA
Resource Regulator
WaterNSW
NRAR
Biodiversity Conservation Division (BCD)
Wollondilly, campbelltown and wollongong Councils
Sydney Catchment Authority
TfNSW
NSW Heritage
Dams safety
CCC

Regards
Katrina

From: Ken Holmes <Ken@baeckea.com.au>
Sent: Saturday, 6 April 2024 3:40 PM
To: Katrina O'Reilly <Katrina.OReilly@planning.nsw.gov.au>
Subject: FW: Metropolitan Coal Mine - 2024 Independent Environmental Audit - Consultation Request DPE

Katrina,

I emailed Georgia (please see below) requesting inputs into the 2024 IEA of the Metropolitan Coal Mine and have received a response saying she is on leave and to contact you for input.

Thanks

Ken Holmes
Principal Environmental Consultant
Director

Barnett & May

P +61 (0)438 046 261
E ken@baecka.com.au
A PO Box 365 Belrose NSW 2085

From: Ken Holmes
Sent: Monday, March 11, 2024 10:42 AM
To: 'georgia.dragicevic@planning.nsw.gov.au' <georgia.dragicevic@planning.nsw.gov.au>
Subject: Metropolitan Coal Mine - 2024 Independent Environmental Audit - Consultation Request DPE

Good Morning Georgia,

I have been commissioned by Peabody Energy to undertake the 2024 Independent Environmental Audit (**IEA**) of Metropolitan Coal Mine, near Helensburgh, south of Sydney. The IEA will be undertaken accordance with Project Approval 08_0149, that requires:

By the end of December 2011, and every three years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:

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

The Project Approval Conditions require that the auditor consults with relevant agencies.

I would therefore appreciate if you could provide me with any information, comments or concerns the DPE may have regarding the environmental performance of the operation (over the past three years – the audit period) and details of any specific issues you suggest that the Auditor addresses during the audit.

Please do not hesitate to contact me if you require any additional information.

Thanks and Regards,

Ken Holmes
Lead Auditor

Principal Environmental Consultant
Director

Barnett & May

P +61 (0)438 046 261

E ken@baeckea.com.au

A PO Box 365 Belrose NSW 2085

Memorandum

To	Cyril Gunaratne	Page	1
CC	D P Lee Shoy - TfNSW Ken Holmes - Barnett & May Nicolas Tucker - Metropolitan Colliery		
Subject	Metropolitan Colliery: Environmental Audit		
From	Henk Buys		
File/Ref No.	60546156/1.2	Date	11-May-2024

1.0 Introduction

1.1 Overview

Barnett & May has been commissioned to carry out an Independent Environmental Audit (IEA) of Metropolitan Colliery. The IEA will be undertaken as required by the regulator (at that time the NSW Department of Planning) in accordance with Project Approval 08_0149.

A glossary of terms used in this memo is provided at the end of this memo.

1.2 Purpose

The purpose of this memo is to provide information to Barnett and May to assist them in meeting their audit requirements as far as subsidence impacts on TfNSW infrastructure is concerned. The audit period covers the three years from April 2021 to April 2024. During this time 4 longwalls (LW306 to LW309) were extracted.

1.3 History of subsidence management

TfNSW requires its infrastructure within five times seam depth to be assessed for mine subsidence impacts and an appropriate SMP or BFMP developed to manage risks associated with the proposed mining. TfNSW infrastructure potentially impacted in the current audit period included the following:

- M1 Princes Motorway
- Cawley Road Bridge
- M1 Bridge over Princes Highway (Bridge 2)
- Cuttings and embankments

The initial BFMP for longwalls LW20 to LW22 was issued in 2011 and by the start of the current audit period in 2021, extraction of LW306 commenced under the BFMP for LW305-LW307. During the current audit period the closest proximity of the longwalls to TfNSW infrastructure was approximately 1,200m during extraction of LW306, increasing to 2,150m at commencement of LW310 at the end of the period. Subsidence impacts at the start of the current audit period were of a low order with minor impacts on the pavements. With increasing distance of the longwalls from TfNSW infrastructure, movements identified by monitoring instrumentation gradually reduced to being essentially within environmental limits, so that mining related movements could not be readily differentiated.

2.0 Audit requirements

The IEA will be undertaken by Barnett & May in accordance with the regulator's Project Approval 08_0149. The regulator's audit requirements as provided by Barnett & May are listed in italics below. Items relevant to TfNSW as a stakeholder are highlighted in yellow and are discussed in the section below.

This audit must:

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

3.0 Audit items

3.1 General

Brief descriptions of processes followed are provided in this section, more detailed information can be found in the project BFMPs, risk assessments, meeting summaries and status reports.

3.2 Consultation with TfNSW

3.2.1 BFMPs

During the audit period the BFMP for LW305 to LW307 active at the commencement of the period. MC produced the BFMP for LW308 to LW310 during the audit period. These BFMPs were produced by MC and reviewed and discussed in detail at TC meetings prior to sign off.

3.2.2 Risk assessment

Risk assessment workshops were held as part of the development of each BFMP. These workshops were attended by representatives from Metropolitan Colliery and TfNSW, and their consultants MSEC, AECOM and Stantec, and were facilitated by an independent risk consultant, ARUP. These workshops provided a detailed understanding for all parties of the potential impacts of mining, their possible consequences and mitigation. These risk assessments formed the basis for monitoring plans and trigger action response plans.

3.2.3 Technical Committees

Consultation between Metropolitan Colliery and TfNSW has been through a Technical Committee (TC) comprising representatives from Metropolitan Colliery, TfNSW, MSEC, AECOM and Stantec. The relevant BFMPs were developed by Metropolitan Colliery in close consultation with and signed off by the TC.

TC meetings were held at regular intervals with timing appropriate to the distance of the active longwall from TfNSW infrastructure. Discussion items at the meetings included monitoring, impacts to TfNSW infrastructure, remedial action where required (bridges and pavements), EoP surveys, and updates to and development of new BFMPs. Key discussion items from these meetings are provided in Table 1. A total of 10 TC meetings were held during the audit period.

3.2.4 Status reports

A total of 27 Status reports were produced. These were generally produced monthly, except when no active longwall extraction was taking place.

3.3 Adequacy of strategies, plans and programs

No unplanned interventions were required for TfNSW infrastructure during the audit period, and there were no delays to the mining program as a result of infrastructure impacts. This was a function of the detailed planning and consultation during development of the BFMPs and pro-active risk management during mining, and also the increasing distance of the longwalls from TfNSW infrastructure. Where pavement damage did occur, it was able to be repaired as part of a normal maintenance program.

3.4 Measures to improve performance

As indicated in the previous section there have been no unplanned interventions during the course of this project and hence the comment below is a broader comment rather than project specific.

It is 13 years since the commencement of longwall mining in this application area. During this time there have been significant advances in technologies to monitor and manage risks to infrastructure subject to mine subsidence. These new technologies have been incorporated into the monitoring plans and infrastructure risk management on an ongoing basis to improve monitoring accuracies and reduce potential impacts on TfNSW infrastructure. The dissemination of these learnings to the wider industry has been driven through participation in the activities of technical societies such as the Mine Subsidence Technical Society.

4.0 Glossary

4.1 General

Acronym	Description
BFMP	Built Features Management Plan
EoP	End of Panel
FBG	Fibre Bragg Grating – Fibre optic strain gauge
IEA	Independent Environmental Audit
MC	Metropolitan Colliery
SMP	Subsidence Management Plan
TC	Technical committee
TfNSW	Transport for New South Wales

Henk Buys
Technical Director
henk.buys@aecom.com
Mobile: +61 0448 997 500

Table 1: Key discussion points from TC meeting summaries

TCM (Date)	LW Progress	Monitoring	Pavement	Bridges (Bridge 2 and Cawley Rd)	Future BFMPs
TCM1-21MC (19-01-2021)	LW305 completed end 2020. LW306 Prep nearing completion – commencement would depend on market conditions.	No changes of concern with respect to TfNSW assets reported. Noted that maximum compressive strain of - 0.6mm/m on M1 was measured between Marks FW207-208, the site of a compression bump.	Minor compression bump at FW207.15 investigated by AECOM and reported with rectification recommendations in memo dated 11/8/20 (Metropolitan Coal – Assessment of Pavement Defects at FW207.15). TfNSW advised pavement under observation and rectification included in the normal remedial works program for completion by end 6/22.	Due to substantial distance of LW from bridge, and lack of impacts, the TC agreed to review the need for the Bridge 2 FBG monitoring system following completion of LW305.	
TCM2-21MC (3-08-2021)	LW306 – commenced on 15/6/21, progress – 314m. Face 2.1km from Bridge 2 and 1.33km from M1.	No changes of concern with respect to TfNSW assets. Liaison between TfNSW and Metrop flagged to resolve issues regarding maintenance of survey line.	Defect at FW207.15, TfNSW advised that pavement condition here is under observation. Resheeting of several kms of the M1 is planned in this area with additional heavy patching near FW207.15 as part of normal remedial works program for completion by end 6/22.	Bridge 2 monitoring system reviewed. TC agreed FBG system on Bridge 2 longer required. System to be decommissioned.	

TCM3-21MC (7-12-2021)	LW306 –progress 915m. Face 1.50km from Bridge 2 and 1.37km from M1.	No changes of concern with respect to TfNSW assets. Bridge 2 FBG monitoring system decommissioned.	No impacts to TfNSW assets reported.	Bridge 2 FBG monitoring system decommissioned.	Heads up for development of draft BFMP LW308 to LW310.
TCM1-22MC (8-02-2022)	LW306 – progress 1589m. Face 1.20km from both Bridge 2 and M1.	No changes of concern with respect to TfNSW assets.	No impacts to TfNSW assets reported.		Draft BFMP for LW308-310 reviewed by the TC members separately. Amendments discussed and agreed at meeting for incorporation into final document.
TCM2-22MC (29-03-2022)	LW306 – completed on 23/3/22. Face 1.16km from both Bridge 2 and M1.	No changes of concern with respect to TfNSW assets. Liaison between MC/TfNSW – agreed GNSS units at selected locations would replace pavement monitoring lines in future. Future monitoring would not be impacted by pavement rectification.	No impacts to TfNSW assets reported.		BFMP for LW308-310 awaiting regulator response.
TCM3-22MC (9-08-2022)	LW307 – progress 845m. Face 1.61km from M1 Princes Motorway.	No changes of concern with respect to TfNSW assets.	No impacts to TfNSW assets reported.		
TCM4-22MC (13-12-2022)	LW307 – completed. Face 1.36km from M1 Princes Motorway.	No changes of concern with respect to TfNSW assets.	No impacts to TfNSW assets reported.		BFMP for LW308-310 approved by regulator.

TCM1-23MC (28-03-2023)	LW308 progress to half-way point. Face 1.8km from the M1 Princes Motorway. LW308 is expected to be completed in July 2023 as scheduled.	No changes of concern with respect to TfNSW assets.	No impacts to TfNSW assets reported.	Bridge 2 & Cawley Rd Bridge inspected jointly by Stantec and TfNSW. Report finds no structural defects caused by mining.	BFMP LW305-307 close out: Bridge inspections complete – no structural impacts, Cuttings stability assessment to be completed.
TCM2-23MC (25-07-2023)	LW308 completed on 7/7/23. Final face position 1575m from the M1 Princes Motorway. LW309 expected to commence that week.	No changes of concern with respect to TfNSW assets.	No impacts to TfNSW assets reported.		BFMP LW305-307 close out: Post-mining slope risk assessments of all 8 cuttings completed. Report (dated 23/6/23) concludes no impacts due to recent mining.
TCM3-23MC (28-11-2023)	LW309 commenced on 28/7/23 from Ch 1820 and progressed to Ch 517. Expected completion date is early 3/24. LW310 scheduled to start early 4/24 and be completed in late 9/24.	No changes of concern with respect to TfNSW assets.	No impacts to TfNSW assets reported.		LW308 End of Panel report in progress. BFMP LW311-316: TC agreed a BFMP would not be required, but sign off will be required by TfNSW.

Our ref: DOC24/316838

Your ref: MP08_0149

Ken Holmes

Principal Environmental Consultant

Barnett & May

ken@baeckea.com.au

Independent Environmental Audit – State Significant Development

Proposal: Metropolitan Coal Mine

Major Project reference: MP 08_0149

Received: 24 April 2024

Dear Ken,

Thank you for your referral seeking comment from Heritage NSW on the scope for the Independent Environmental Audit for the above State Significant Development. Thank you for the continued opportunity to comment on the project.

In respect to the scope of audit for Aboriginal cultural heritage, Heritage NSW notes the requirements for the multiple rounds of monitoring of Aboriginal sites for subsidence and environmental impacts, as per the Metropolitan Coal Heritage Management Plan.

It is recommended that the Department of Climate Change, Energy, the Environment and Water Compliance Team be contacted via info@environment.nsw.gov.au to determine if there is any non-compliance with Conditions of Consent for the project.

If you have any questions regarding these comments, please contact Alison Lamond, Senior Assessments Officer, at Heritage NSW on 0419 762 918 or alison.lamond@environment.nsw.gov.au.

Yours sincerely

Nicole Davis

Nicole Davis

Manage, Assessments

Heritage NSW

Department of Climate Change, Energy, the Environment and Water

As Delegate under National Parks and Wildlife Act 1974

7 May 2024

AREQ0052697

Mr Ken Holmes
Barnett & May
PO Box 365
Belrose NSW 2085
By email: ken@baeckea.com.au

Dear Mr Holmes,

Subject: Metropolitan Colliery – Independent Environmental Audit

Thank you for your email dated 11 March 2024 requesting consultation on the independent environmental audit to be undertaken of the Metropolitan Colliery which is covered by the following mining leases.

- CCL703 (1973)
- CL379 (1973)
- ML1610 (1992)
- ML1702 (1992)
- MPL320 (1973)

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

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. It is noted that the 5 mining leases that comprise Metropolitan Colliery have been approved by the Regulator to be treated as a single lease for the purposes of Part 2 of Schedule 8A.

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
9 April 2024

From: [Lisa Andrews](#)
To: [Ken Holmes](#)
Subject: Fwd: Metropolitan Coal Mine - 2020 Independent Environmental Audit - Consultation Request
Date: Wednesday, 20 March 2024 2:50:33 PM

Further to my email of 23/2/24, I wish to advise that I have not received any comments or concerns back from CCC members for inclusion in the IEA.

Best regards
Lisa

Lisa Andrews
Independent Chairperson &
Director
Articulate Solutions Pty Ltd
t: 0401 609 693
e: lisaandrews.ic@gmail.com

The information contained in this email and attachments is confidential and may be subject to privilege and is intended for the exclusive use of the addressees. You may not disclose or use the information in the email and attachments without the prior consent of the sender.

If you have received this email in error, please notify the sender and delete this email. The unauthorised use of this email may result in liability for breach of confidentiality, privilege or copyright. No warranties are provided that the email is computer virus or other defect free.

----- Forwarded message -----

From: Lisa Andrews <lisaandrews.ic@gmail.com>
Date: Tue, Feb 23, 2021 at 12:12 PM
Subject: Re: Metropolitan Coal Mine - 2020 Independent Environmental Audit - Consultation Request
To: Ken Holmes <Ken@baeckea.com.au>

Thank you for your email Ken. The Metropolitan Coal Community Consultative Committee meets on a regular basis (3 times per year). The company provides a comprehensive report to members on its environmental performance and operations. A site inspection is usually held annually (depending on weather and COVID restrictions). Peabody effectively consults with the broader community and meets its obligations.

The company is receptive to matters raised by committee members and provides appropriate information when requested.

I have forwarded your email through to the CCC and asked for feedback on any issues they wish to be addressed during the course of your audit. Should any information be forthcoming, I will let you know.

Best regards
Lisa

Lisa Andrews
Independent Chairperson &
Director

Articulate Solutions Pty Ltd
t: 0401 609 693
e: lisaandrews.ic@gmail.com

On Wed, Feb 3, 2021 at 8:09 AM Ken Holmes <Ken@baeckea.com.au> wrote:

Good Morning Lisa,

I have been commissioned by Peabody Energy to undertake the 2020 Independent Environmental Audit (IEA) of Metropolitan Coal Mine, near Helensburgh, south of Sydney. The IEA will be undertaken accordance with Project Approval 08_0149, that requires:

By the end of December 2011, and every three years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:

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

The Project Approval Conditions require that the auditor consults with relevant agencies.

I would therefore appreciate if you, as chair of the Community Consultative Committee could provide me with any information, comments or concerns the CCC may have regarding the environmental performance of the operation (over the past three years – the audit period) and details of any specific issues the CCC suggests that the Auditor addresses during the audit.

Please do not hesitate to contact me if you require any additional information.

Thanks and Regards,

Ken Holmes

Lead Auditor

Principal Environmental Consultant

Director

Barnett & May

P +61 [0]438 046 261

E ken@baeckea.com.au

A PO Box 365 Belrose NSW 2085

From: Ron Zwicker
To: Ken Holmes
Subject: RE: Metropolitan Coal Mine - 2024 Independent Environmental Audit - Consultation Request - Council
Date: Tuesday, 12 March 2024 8:37:37 AM
Attachments: [image016.png](#)
[image017.png](#)
[image019.png](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image005.png](#)
[image006.png](#)

Hi Ken,

Thank you for the opportunity to provide issues / matters for consideration, as part of your independent assessment of the Metropolitan Colliery.

In this respect, Council would like the following issues / matters to be assessed as part of the independent review of the colliery:

- Commentary as to whether the level of subsidence is in line with the predicted subsidence levels contained in the original Environmental Assessment Report for the colliery.
- Advice on the health of Waratah Rivulet as a result of subsidence related impacts from the longwall mining.
- Commentary on the level of success of grouting measures used for the remediation of creek bedrock within Waratah Rivulet.
- Commentary on the health of the creek below the colliery pit top, where coal fines were previously deposited into the creekline, due to heavy rainfall event(s).
- Advice on the level of success of the remediation of the creek below the pit top, in removing the coal fines.

Regards,



Ron Zwicker | Special Projects and Planning Support Manager
Phone +61242277639
Email rzwicker@wollongong.nsw.gov.au | wollongong.nsw.gov.au



We acknowledge the Traditional Custodians of the land on which our city is built, the Aboriginal people of Dharawal Country. We recognise and appreciate their deep connection to this land, waters and the greater community.



From: Ron Zwicker
Sent: Monday, March 11, 2024 10:59 AM
To: Ken Holmes <Ken@baeckea.com.au>
Subject: RE: Metropolitan Coal Mine - 2024 Independent Environmental Audit - Consultation Request - Council

Thanks Ken.

I'll give some thought to this and will endeavour to provide some comments back to you by the end of the week.

Regards, Ron



Ron Zwicker | Special Projects and Planning Support Manager
Phone +61242277639
Email rzwicker@wollongong.nsw.gov.au | wollongong.nsw.gov.au



We acknowledge the Traditional Custodians of the land on which our city is built, the Aboriginal people of Dharawal Country. We recognise and appreciate their deep connection to this land, waters and the greater community.



From: Ken Holmes <Ken@baeckea.com.au>
Sent: Monday, March 11, 2024 10:49 AM
To: Ron Zwicker <RZwicker@wollongong.nsw.gov.au>
Subject: Metropolitan Coal Mine - 2024 Independent Environmental Audit - Consultation Request - Council

[EXTERNAL EMAIL] This email was sent from outside of Wollongong City Council – be cautious, particularly with links and attachments.

Good Morning Ron,

I have been commissioned by Peabody Energy to undertake the 2024 Independent Environmental Audit (IEA) of Metropolitan Coal Mine, near Helensburgh, south of Sydney. The IEA will be undertaken accordance with Project Approval 08_0149, that requires:

By the end of December 2011, and every three years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:

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

The Project Approval Conditions require that the auditor consults with relevant agencies.

I would therefore appreciate if you could provide me with any information, comments or concerns that Council may have regarding the environmental performance of the operation (over the past three years – the audit period) and details of any specific issues you suggest that the Auditor addresses during the audit.

Please do not hesitate to contact me if you require any additional information.

Thanks and Regards,

Ken Holmes
Lead Auditor

Principal Environmental Consultant
Director

Barnett & May

P +61 (0)438 046 261
E ken@baeckea.com.au
A PO Box 365 Belrose NSW 2085

Lead Auditor CV

Appendix E

KEN HOLMES

Senior Principal Environmental Consultant



Contact

Email ken@baeckea.com.au

Mobile +61 0438 046 261

Qualifications & professional affiliations

- Bachelor of Science (Industrial Chemistry)
- Master of Applied Science (Waste Management)
- Master of Business Administration (MBA)
- Accredited Lead Environmental Auditor (Exemplar Global #: 14065)

Ken Holmes is an acknowledged industry leader in environmental auditing, environmental management and project approvals. His career spans over 30 years and includes experience across Australia, Africa, Europe and South-east Asia.

Ken's extensive Environmental Audit, Infrastructure Planning and Approvals experience includes that preparation of environmental impact statements for major projects, pre-construction approvals, and operations environmental management experience.

He has led large scale projects on major road, rail, renewable energy, mining and water infrastructure projects across Australia. The projects presented below are a sample of the range and complexity of projects that Ken has delivered.

Project experience

Environmental Auditing (Audits completed in the recent years)

Project Energy Connect (2024 – on-going). Ken is currently undertaking the independent environmental audits of construction phase of this major (900km) electricity infrastructure project that consists of high voltage power line and associated infrastructure construction between Wagga Wagga and South Australia.

Victoria Cross Over Station Development IEA (2023 – on-going) Construction phase bi-annual independent audits - Ken has commenced a program of (six) environmental compliance audits of this landmark construction project in the North Sydney CBD. The audit program covered two separate Planning Approvals (for adjacent office tower construction sites). The audits cover the conditions of the project's Planning Approval requiring bi-annual independent environmental audit of compliance against the DP&E (NSW) Conditions of Approval. The project is part of the development of Sydney's commuter rail network expansion.

Hunter Power Project (Construction Phase IEA 2022 – on-going) - Ken has been commissioned to undertake the construction phase independent environmental audits on the Hunter Power Project. The Hunter Power Project is the construction of a new gas fired power station located in the Hunter Valley in NSW. The conditions of approval for the project requires bi-annual independent environmental audit of compliance against:

- o DP&E Conditions of Approval / Development Approvals;
- o Commonwealth Approvals;;

The independent environmental audit are being undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

As auditor, Ken's role covers all technical areas including construction management, waste, greenhouse gas, surface water management, air quality and noise management.

Kurri Kurri Lateral Pipeline (Construction Phase IEA 2023 - 2025)- Ken has been commissioned to undertake the construction phase independent environmental audits on the Kurri Kurri gas pipeline project located in the Hunter Valley in NSW. The conditions of approval for the project requires bi-annual independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Commonwealth Approvals;

The independent environmental audit are being undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

As auditor, Ken's role covers all technical areas including construction management, waste, greenhouse gas, surface water management, air quality and noise management.

Dargues Gold Mine IEA (2023)- Ken led the independent environmental audit of environmental compliance audit of the this gold mining project located near Braidwood in southern NSW. The conditions of approval for the mine requires a two-yearly independent environmental audit of compliance against:

- o DP&E Conditions of Approval / Development Approvals;
- o Water Licences;
- o Environment Protection Licences;
- o Mining Leases;

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning audit guidelines.

In addition to his role as lead auditor managing a multidisciplinary team, Ken covered the role as technical expert in air quality and noise management.

Martin Place Over Station Development (2020 – 2023) Construction phase annual independent audits) - Ken undertook the (six) environmental compliance audits of this landmark construction project in the Sydney CBD. The audit program covered two separate Planning Approvals (for adjacent office tower construction sites). The audits covered the conditions of each project's Planning Approval requiring annual independent environmental audit of compliance against the DP&E (NSW) Conditions of Approval. The project is part of the development of Sydney's commuter rail network expansion.

Mt Thorley / Warkworth Mine IEA (2023)- Ken led the multi-disciplinary team that completed the 2023 independent environmental audit of environmental compliance audit of this large mining complex located in the Hunter Valley, NSW. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Commonwealth Approvals;
- Water Licences;
- Environment Protection Licences;
- Mining Leases;

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

In addition to his role as lead auditor managing a multidisciplinary team, Ken covered the role as technical expert in air quality and noise management.

Hera Gold Mine (2019 and 2023)- Ken led the independent

environmental audits for the environmental compliance audit of the Hera Gold Mine in western NSW. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Commonwealth Approvals;
- Water Licences;
- Environment Protection Licences;
- Mining Leases; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

In addition to his role as lead auditor managing a multidisciplinary team, Ken covered the role as technical expert in surface water management, air quality and noise management.

Bingo Industries Eastern Creek Resource Recovery Facility and Landfill (2022) - Ken led the environmental compliance audit of Bingo's Resource Recovery Facility and Landfill located in western Sydney. The conditions of project's Planning Approval requires a three-yearly independent environmental audit of compliance against:

- DP&E (NSW) Conditions of Approval / Development Approvals;

Environment Protection Licence.

The Audit also included an odour audit and surface water audits undertaken by specialists within the audit team.

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines and the EPBC element of the audit against the DAWE Audit Guidelines.

In addition to his role as lead auditor managing a multidisciplinary team, Ken covered the role as technical expert in air quality and noise management.

McArthur River Mine (Northern Territory) (2022) - Ken is currently leading the environmental compliance audit of McArthur River Mine in the Cape of Carpentaria, NT. EPBC Approval requires an annual independent environmental audit of compliance against that Approval.

The independent environmental audit is being undertaken in accordance with AS/NZS ISO 19011:2014 and the DAWE Audit Guidelines.

Moolarben Coal Mine (2019 and 2022) - Ken led the environmental compliance audits of Moolarben Coal Mine located near Mudgee in Western NSW. The conditions of project's Planning Approval requires a three-yearly independent environmental audit of compliance against:

- EPBC Approval
- DP&E (NSW) Conditions of Approval / Development Approvals;
- Water Licences;

Environment Protection Licence; and all Mining Leases.

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines and the EPBC element of the audit against the DAWE Audit Guidelines.

In addition to his role as lead auditor managing a multidisciplinary team, Ken covered the role as technical expert in surface water management, air quality and noise management.

Tomingley Gold Mine (2021 and 2024) - Ken was the lead auditor for the environmental compliance audit of the Tomingley Gold Mine in western NSW. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Water Licences;
- Environment Protection Licence;
- Mining Leases; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

Tritton Copper Mine (2018 and 2024) - Ken was the lead auditor for the environmental compliance audit of the Tritton Copper Mine in western NSW. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Water Licences;
- Environment Protection Licence;
- Mining Leases; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

Bingo Industries Mortdale Resource Recovery Facility (2022) - Ken undertook the environmental compliance audit of waste recycling plant and transfer station located in Mortdale, NSW. The conditions of project's Planning Approval requires a three-yearly independent environmental audit of compliance against:

- DP&E (NSW) Conditions of Approval / Development Approvals;
- Environment Protection Licence.

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines and the EPBC element of the audit against the DAWE Audit Guidelines.

Client: Port Waratah Coal Loader (2018, 2021 and 2024)- Ken was the lead auditor for the last two independent environmental compliance audits of the Port Waratah Coal Loader located on Kooragang Island near Newcastle. The conditions of approval for the facility Barnett & May

requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Water Licences;
- Environment Protection Licence; and the
- EIS (Statement of Commitments).

These independent environmental audit were undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

In addition to his role as lead auditor managing a multidisciplinary team, Ken covered the role as technical expert in surface water, air quality and noise management.

North Parkes Mine (2021 and 2024)- Ken was the lead auditor for the environmental compliance audit of the Tritton Gold Mine in western NSW. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Water Licences;
- Environment Protection Licence;
- Mining Leases; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

Metropolitan Coal Mine (2018, 2021 and 2024)

Ken was the independent environmental auditor for the last two independent environmental compliance audits of the Metropolitan Coal Mine south of Sydney, NSW. These conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Commonwealth Approvals;
- Water Licences;
- Environment Protection Licences;
- Mining Leases; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines

In addition to his role as lead auditor managing a multidisciplinary team, Ken covered the role as technical expert in surface water management (covering the mine infrastructure areas), air quality and noise management.

Stratford and Duralie Coal Mines – (2020) Ken was the lead auditor for the environmental compliance audit of Ashton Coal Mine in the Hunter Valley. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Water Licences;
- Environment Protection Licence;
- Mining Leases and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in

accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

Ashton Coal Mine (2020) - Ken was the lead auditor for the environmental compliance audit of Ashton Coal Mine in the Hunter Valley. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- EPBC Approvals;
- Water Licences;
- Environment Protection Licence;
- Mining Leases; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

Newcastle Coal Infrastructure Group (2019 and 2022) - Ken was the lead auditor for the environmental compliance audits of the NCIG Coal Loader located on Kooragang Island near Newcastle. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- EPBC Approvals;
- Water Licences;
- Environment Protection Licence; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

Kables Sand Quarry EPBC Audit (2019) – Ken was the auditor for the EPBC audit of Hansons Kables Sand Quarry located in the Blue Mountains in NSW. The audit was a requirement of the project EPBC approval and was undertaken in accordance with the DAWE Audit Guidelines.

Bendicks Recycling Mayfield (2019)- Ken was the lead auditor for the environmental compliance audit of the Benedicks waste facility in Newcastle. The conditions of approval for the mine requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Environment Protection Licence; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

Oberon Quarries (2019) - Ken was the lead auditor for the environmental compliance audit of this Gravel Quarry located in near Oberon in western NSW. The conditions of approval for the quarry requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Environment Protection Licence; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the

Department of Planning and NSW EPA audit guidelines.

Sibelco Dunes Sand Mine (2018 / 2019) – Ken was the auditor for the environmental compliance audit of the Sibelco Sand located near Nelson Bay in NSW. The conditions of approval for the mine required an independent environmental audit of against:

- DP&E Conditions of Approval / Development Approvals;
- EIS predications against actual impacts.

The Approval required that the audit be conducted within 12 months of completion of mining and focussed on mine site rehabilitation.

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines

Ardglen Quarry (Daracon) (2018) - Ken was the lead auditor for the environmental compliance audit of the Ardglen Gravel Quarry located in the upper Hunter Valley. The conditions of approval for the quarry requires a three-yearly independent environmental audit of compliance against:

- DP&E Conditions of Approval / Development Approvals;
- Environment Protection Licence; and the
- EIS (Statement of Commitments).

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

Holcim Hume Quarry (2017/8) - Ken was auditor for the environmental compliance audit of Holcim' hard rock quarry located near Queanbeyan in NSW. Ken undertook the compliance audits of the quarry's Conditions of Approval. The conditions of approval required a detailed assessment of compliance against:

- DP&E Conditions of Approval / Development Approvals
- Water Licences
- Environment Protection Licences.

The independent environmental audit was undertaken in accordance with AS/NZS ISO 19011:2014 and the Department of Planning and NSW EPA audit guidelines.

PGH Bricks (2017/8) - Ken was the lead auditor for the environmental compliance audits of PGH's NSW, QLD, Vic and SA quarries. Ken undertook the compliance audits of the quarries as required by the Conditions of Approval for each site. The conditions of approval required a detailed assessment of compliance against:

- DP&E Conditions of Approval / Development Approvals (for non-NSW sites)
- Mining (and Exploration) Leases
- Environment Protection Licences (or equivalent)

Enviroking (2017/8) - Ken was the lead auditor for an independent environmental audit undertaken in accordance with AS/NZS ISO 19011:2014 "Guidelines for auditing management systems" for the liquid waste facility. The audit reviewed Enviroking's compliance with conditions of approval, made recommendations to address non-compliances and identified opportunities for improvement in the project's environmental management and performance.

Ken has also undertaken environmental management system and statutory compliance audits for a wide range of industries and projects including:

- Cowal Gold Mine
- Manildra Limited / Castlereagh Coal
- Bougainville Copper Limited (Bougainville, PNG)
- News Limited
- Fairfax News Papers
- Norske Skog
- Alcoa
- Ok Tedi Mining (PNG)
- Albright & Wilson
- Seafood Specialities
- Rio Tinto
- Hunter Water
- Department of Foreign Affairs and Trade
- Sydney Water
- Transport for NSW
- Mount Isa Mines
- Scott Transport
- Roads and Traffic Authority (now Roads and Maritime Services)
- AbiGroup (now LendLease)
- Leighton Contractors (now CPB Contractors)
- John Holland Group
- Queensland Transport
- PMP (Printing)
- Straits Resources
- Mount Isa Mines
- Philips (electronics)
- Bonlac Foods
- BHP

Ken has also led a wide range of Acquisition / Due Diligence audits for private sector clients in Australia, PNG, Africa, South Pacific, New Zealand, China, Singapore, Indonesia, Thailand.

Project Approvals

Central Station Re-development – Transport for NSW - Ken led the team responsible for gaining the environmental approvals (preparation of EMPs /construction licences etc.) for the Sydney Central Station project. In this role, Ken was responsible for the interpretation of the Approval requirements (Minister's Conditions of Approval) and the provision of strategic advice on the approvals, licencing, construction environmental management and stakeholder management.

Sydney Metro – Transport for NSW - Transport for NSW (TfNSW) commissioned two demolition contractors to demolish a number of multistorey buildings within the Sydney CBD in preparation for the construction of the Sydney Metro project. Ken led the team responsible for the preparation of environmental management plans for these works (TfNSW was not comfortable that the demolition contractors had the appropriate skills to prepare the required plans and gain the required approvals for the works). Ken worked with the demolition contractors to streamline their internal management processes and to add the requisite environmental management functions within both their corporate and project management systems.

M2 Widening Project Approvals (Roads and Maritime Services) – Ken (Project Manager) led the environmental

approvals team for the preparation of the Environmental Impact Assessment and construction approvals (preparation of EMPs /construction licence etc.) for the M2 widening project.

The management and minimisation of vegetation clearing on this project (along with the minimisation of impacts on residents a high priority. Ken oversaw all the specialist studies that supported the preparation of the Environmental Impact Assessment and subsequent Environmental Management Plans, including:

- Ecological survey;
- Tree reports;
- Noise and vibration impact assessments;
- Contamination assessments;
- Traffic impact assessments; and
- Ground and surface water impact assessments.

Sydney Light Rail – Acciona / Transport for NSW - Ken led the team responsible for leading the construction approvals program and setting up the environmental management system for this significant brown fields infrastructure construction project. His responsibilities included:

- Establishing the project Environmental Management System;
- Interpreting the Conditions of Approval and the Project Deed and advising the Acciona management team on all aspects of compliance with those key approval and contractual documents;
- Gaining the construction environmental approvals (preparation of EMPs /construction licences etc.) for the Sydney Light Rail project. In this role, Ken provided strategic advice on the approvals, licencing, construction environmental management and stakeholder management. He was also responsible for all internal (Acciona / KMH) document quality control.
- Selecting, commissioning and supervising the wide range of specialist environment service providers including ecological survey, tree reports, and pre-construction vegetation clearance reports.
- Advising the design and construction teams on tree clearing and management and integration of construction requirements into the flora and fauna management plans.

Ken also led the consultation with the NSW Government regulators and supported and mentored the Acciona Construction Environmental Manager. In addition, Ken personally led the community and business reference group consultation process on behalf of the design and construction joint venture, successfully gaining signoff from these consultation bodies on the environmental plans and strategies.

Environmental Management Representative (ER) - The role of Independent Environmental Representative on major infrastructure projects in NSW was established in 1998 and continues to be a requirement of the Conditions of Approval for all major infrastructure projects in NSW. The appointees are nominated by the project proponent or construction consortium but are approved by and report to the Director General of the Department of Planning and Environment (DPE).

- The scope of the ER's role is broad range and includes:
 - Interpreting and advising on requirements of the Project Approval.
 - Reviewing and assessing the performance of the project against the Conditions of Approval, Project Deed and other relevant project related approvals. In that role, the ER reviews and approves all environmental related plans (EMPs), audits the implementation of environmental management plans and strategies, verifies (through audit and surveillance) compliance with the relevant project approval and project deed requirements, monitors and reports on regulatory compliance and provides reports to the Department and the project proponent on these matters.
 - Reports on compliance related issues to the public and investigates environmental and compliance issues, complaints and incidents.
 - Review and approval of vegetation clearing and other high (environmentally) impact activities.

Ken has fulfilled the role of Independent Representative on seven major infrastructure projects:

- Hunter Expressway (Motorway construction, Hunter Valley) - (2011 – 2013)
- Integral Energy 9JA Project (Transmission Line Construction Western Sydney) - (2006-2007)
- Westlink M7 (40km Motorway project, Western Sydney) - (2003-2005)
- Towra Beach Nourishment Project (Wet land protection, dredging project, Botany Bay) - (2004)
- Warragamba Dam Auxiliary Spillway Project– (1998 – 2013)
- Cronulla Sewage Treatment Plant Upgrade – (1998 – 2000)
- Liverpool Sewage Treatment Plant Upgrade – (2000)

Upper Hunter Valley Alliance (UHVA) – Leighton Contractors /ARTC - Ken led the team responsible for the provision of the environmental approvals (preparation of EMPs /construction licences etc.) on this major ARTC rail infrastructure program in the Hunter Valley of New South Wales. Ken's team on this project provided the entire environment and community and stakeholder team as a Sub-Alliance partner. In this role, Ken provides strategic advice on the approvals, licencing, construction environmental management and stakeholder management. His responsibilities included:

- Establishing the project Environmental Management System;
- Interpreting the Conditions of Approval and the Project Deed and advising the Leighton management team on all aspects of compliance with those key approval and contractual documents;
- Gaining the construction environmental approvals (preparation of EMPs /construction licences etc.) for range of projects delivered by the Alliance. In this role, Ken provided strategic advice on the approvals, licencing, construction environmental management and stakeholder management. He was also responsible for all internal document quality control.
- Selecting, commissioning and supervising the wide range of specialist environment service providers

- including ecological survey, tree reports, and pre-construction vegetation clearance reports.
- Advising the design and construction teams on tree clearing and management and integration of construction requirements into the flora and fauna management plans.

Other relevant Infrastructure Projects led by Ken include:

- Joint Defence Headquarter Construction Project (ACT) – Environment Approvals Manager
- Melbourne Desalination Plant Project – EMP preparation
- Ballina Bypass (Pacific Highway construction project) - Environment Approvals Manager
- Northern Hume Alliance (Hume Highway Duplication) - Environment Approvals and Community Manager
- Anvil Hill Coal Mine (Hunter Valley) - Environment Approvals Manager
- Shannon Creek Dam Construction Project - Environment Approvals and Community Manager
- Liverpool to Ashfield Pipeline Project (Sydney Water) - Environmental Approvals Manager
- Networks Alliance (Sydney Water –water and sewage mains renewals project) – KMH Management Representative
- Technical Reviewer and Economic Impact Analyst – DEC Construction Noise Management Guidelines (2006)
- Northwest Transit Way - Environment Approvals Manager
- Lane Cove Tunnel - Environment Advisor to Approvals and Construction Team
- North Connex – Environmental Management Plan preparation, consistency assessments and preparation of Environmental Impact Assessments to support variations to the project approvals
- Sydney Desal Plant -Internal QA Reviewer
- Keepit Dam Safety Upgrade – Project Director
- Cordeaux Water Treatment Plant – Lead Consultant and Project Manager

Investigative / Expert Roles

Minter Ellison – Expert Opinion / Report (2018/9) - Ken was commissioned by Minter Ellison on behalf of their client (a consortium of major construction contractors) to provide an expert opinion regarding the interpretation of impact of changes to the Conditions of Approval for a major Sydney linear infrastructure project on environmental investigation and reporting obligations and project cost impacts. This expert opinion was commissioned to support the resolution of a contractual dispute between the consortium and their client.

Environment Protection Authority — Investigation of Illegal Land Clearing and Waste Disposal Activities (April 2015 – July 2017) - Ken was the lead auditor for the investigations undertaken by the KMH team commissioned by the NSW Environment Protection Authority (EPA) to investigate an alleged illegal vegetation clearing and waste disposal operations located in the Hunter Valley, Hawkesbury River Basin and Arcadia (north western Sydney). Ken developed and supervised the implementation site investigation strategies that included a series of investigative processes designed to identify the location and extent of vegetation clearing, and to determine the depth and volumes

of buried construction and demolition wastes.

Environment Protection Authority — Expert Reports Illegal Land Clearing and Waste Disposal Activities (2018)

- Ken was commissioned by the NSW Environment Protection Authority (EPA) to provide expert opinion regarding the alleged illegal vegetation clearing and waste disposal at a site in the Hawkesbury River Basin and Arcadia (north western Sydney).

Ken was subsequently briefed to provide expert opinion in the legal actions taken by the EPA in these matters.

Qenos Mandatory Environmental Audit - Ken was commissioned as the Expert Independent Environmental Auditor (Lead Auditor) for the Qenos Mandatory Audit. As a result of a series of environmental incidents, Qenos were required by the NSW EPA to commission an independent auditor to determine if the plant is capable of being operated and maintained and if the plant is being competently operated and maintained, in order to minimise the risk of environmental incidents and better protect the environment.

In doing this, the audit Assessed the:

- adequacy of Risk Assessment procedures and practices
- adequacy of maintenance and operational Systems
- physical condition and reliability of the Plant
- adequacy and suitability of environmental risk management
- adequacy and suitability of performance monitoring equipment
- processes and procedures for identifying and rectifying plant and equipment issues.

Incidents and assessed of the adequacy the investigations and responses to those incidents.

Orica Port Botany Ground Water Remediation Project – Expert Auditor - Ken was the lead auditor for the independent compliance audit of the Orica groundwater remediation project. These annual audits were a condition of licence established by the (then) Department of Environment and Climate Change and the Department of Planning.

Other

Kelian Equatorial Mining (Kalimantan, Indonesia) - Ken led a specialist environmental and social impact audit team that was established by Rio Tinto (and approved by the Government) to investigate and report on the environmental and social impacts associated with alluvial mining operations

(downstream) from the Rio Tinto (major owner) operated gold mine located in the remote, mountainous region of Kalimantan. The audit team included Government representatives and was undertaken to address the concerns of local village communities that were being impacted socially and economically.

Bougainville Copper Limited (Bougainville, PNG) - Ken led two specialist projects for Bougainville Copper Limited. Including Investigation of the Loloho Port Facility on Bougainville Island. Ken lead the investigation team commissioned to identify and plan for the clean-up of hazardous chemicals left after BCL evacuated Bougainville at the commencement of the civil war in 1990. The investigation covered gases, PCBs, and minerals processing chemicals. The second project was clean up and destruction of chlorine and other compressed gases located at the Loloho Port facility on Bougainville Island.

Ken subsequently lead a team dispatched to Bougainville to chemically destroy 1 tonne of chlorine and other toxic gases. The team built a treatment plant on site and successfully removed the toxic gas threat.

Waste Management

Review of Energy to Waste Technologies – Client Confidential (Australian Based Waste Management Company)

Ken participated (as technical reviewer) in the preparation of a technical review of energy to waste technologies for a major waste management group operating in Australia. The purpose of the review has to provide the client with a detailed assessment of all available and emerging energy to waste technologies available including determining the barriers to implementation within the Australian market, political and social framework.

Shredder Waste Disposal Assessment – Sims Metal

Metal shredders produce a complex waste stream consisting of a mixture of plastic, rubber, metal and other materials that is costly to dispose of. Ken led the KMH team that researched the options for management of this waste stream and prepared recommendations for the development of waste treatment and disposal options (including energy extraction) for Sims Metal.

Technical Specialist's Reports

Appendix F

Metropolitan Mine Independent Environmental Audit 2021–2023

Water specialist report

Prepared for Peabody Energy Australia Pty Ltd

April 2025

Metropolitan Mine Independent Environmental Audit

2021–2023

Water specialist report

Peabody Energy Australia Pty Ltd

E240122 RP1

April 2025

Version	Date	Prepared by	Reviewed by	Comments
v1	22 April 2025	Lachlan Hammersley Jonathon Tait	Lachlan Hammersley	Draft
v2	28 April 2025	L Hammersley Jonathon Tait	Lachlan Hammersley	Final

Prepared by



Lachlan Hammersley
Associate Water Resources Engineer
28 April 2025

Level 3 175 Scott Street
Newcastle NSW 2300
ABN: 28 141 736 558



Jonathon Tait
Associate Hydrogeologist
28 April 2025

Level 3 175 Scott Street
Newcastle NSW 2300
ABN: 28 141 736 558

This report has been prepared in accordance with the brief provided by Peabody Energy Australia Pty Ltd and, in its preparation, EMM has relied upon the information collected at the times and under the conditions specified in this report. All findings, conclusions or recommendations contained in this report are based on those aforementioned circumstances. This report is to only be used for the purpose for which it has been provided. Except as permitted by the *Copyright Act 1968* (Cth) and only to the extent incapable of exclusion, any other use (including use or reproduction of this report for resale or other commercial purposes) is prohibited without EMM's prior written consent. Except where expressly agreed to by EMM in writing, and to the extent permitted by law, EMM will have no liability (and assumes no duty of care) to any person in relation to this document, other than to Peabody Energy Australia Pty Ltd (and subject to the terms of EMM's agreement with Peabody Energy Australia Pty Ltd).

© EMM Consulting Pty Ltd, Level 10, 201 Pacific Highway, St Leonards NSW 2065. 2025.
ABN: 28 141 736 558

TABLE OF CONTENTS

1	Introduction	1
1.1	Limitations and qualifications	1
1.2	Site inspection	2
1.3	Information reviewed	2
2	Response to agency consultation	3
3	Assessment of environmental performance	4
3.1	Surface water	4
3.2	Groundwater	5
4	Review of strategies, monitoring and management plans	7
4.1	Surface water	7
4.2	Groundwater	7
4.3	Water licensing	7
5	Recommended measures or actions	9
5.1	Surface water	9
5.2	Groundwater	9

Tables

Table 1.1	Scope requirements for the audit	1
Table 1.2	Information reviewed	2

1 Introduction

EMM Consulting Pty Ltd (EMM) was engaged to provide both surface water and groundwater specialist roles to inform the 2024 Independent Environmental Audit (IEA) on the Metropolitan Coal Mine (also known as the Helensburgh Coal Mine).

The mine is located off Parkes Street, Helensburgh, New South Wales (NSW) and is operated by Peabody Energy Australia Pty Ltd (Peabody). The lead auditor role for the IEA was Barnett & May and it is assumed that this report will form an attachment of the overall audit report.

This is the first audit completed by EMM on this site. The period of the review for the audit is 1 January 2021 to 31 December 2023. The scope of the audit for the water specialists', as requested by the NSW Department of Planning Housing and Infrastructure (DPHI), is summarised in Table 1.1.

Table 1.1 Scope requirements for the audit

Audit scope	Where addressed
a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary	Lachlan Hammersley and Jonathon Tait of EMM were the endorsed specialists
b) include consultation with the relevant agencies	Undertaken by Barnett & May, refer to Chapter 2
c) assess the environmental performance of the development and assess whether it is complying with the requirements in this consent, and any other relevant approvals, relevant EPL/s and/or Mining Lease/s (including any assessment, plan or program required under these approvals)	Refer to Chapter 3
d) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals	Refer to Chapter 4
e) recommend measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under these approvals.	Refer to Chapter 5

The review of surface water and groundwater components of the project has been undertaken by the DPHI endorsed specialists Lachlan Hammersley and Jonathon Tait of EMM.

EMM understand that Barnett & May had prepared a whole-of-site audit initially with Rev 1 issued to DPHI in June 2024. Following a requirement by the DPHI, Peabody was required to have completed specific specialist audits for surface water and groundwater project elements.

This report has been prepared as a summary of the surface water and groundwater outcomes from the audit.

1.1 Limitations and qualifications

The team for this audit only consisted of those people approved by the DPHI, as noted above. The audit did not include any involvement from others within EMM, specifically those people who are current members of the Independent Expert Advisory Panel for Mining (IEAPM).

EMM's professional opinions are based upon its professional judgement, experience, and training. These opinions are also based upon data derived from the site inspection and historical documents described in this document. EMM believes that its opinions are reasonably supported by the site inspection and historical review that has been done.

1.2 Site inspection

EMM attended a site inspection, with aquatic ecology and subsidence specialists, on Friday 21 March 2025. Leading up to the site inspection, there was approximately 2 millimetres (mm) of rainfall over the prior five days (based on the nearby Bureau of Meteorology (BoM) Station 68024). During the site inspection there was light rainfall falling.

The areas inspected included during the site inspection for the audit included:

- Waratah Rivulet, the section of watercourse between pools C to G and included example of previous grouting of an impacted pool.
- Eastern Tributary, the section of watercourse local to pools ETM and ETO and included inspection of some groundwater monitoring sites.
- Woronora Reservoir wall, spillway and picnic area.
- The mine surface facilities area and coal handling infrastructure including downstream area of Camp Gully.

Following the site inspection, a follow up discussion was had in the site office before the site inspection was concluded.

1.3 Information reviewed

Table 1.2 outlines the reports reviewed by EMM within the audit.

Table 1.2 Information reviewed

Document	Published date
Metropolitan Coal Mine, Independent Environmental Audit, Rev 1 (Barnett and May)	12 June 2024
Catchment Monitoring Program (Version F)–(CMP-R01-F)	February 2018
Surface Facilities Water Management Plan (Version-F) – (SFWMP-R01-F)	August 2019
Environment Protection Licence (EPL) 767	22 March 2025
Extraction Plan Longwalls 305 to 307 Water Management Plan (Version C)	June 2021
Extraction Plan Longwalls 308 to 310 Water Management Plan (Version C)	November 2022
Annual Review 2021, inclusive of: <ul style="list-style-type: none">• Six monthly and annual surface water reviews and groundwater reviews.• Water Performance Measure Assessment.	31 March 2022
Annual Review 2022 inclusive of: <ul style="list-style-type: none">• Six monthly and annual surface water reviews and groundwater reviews.• Water Performance Measure Assessment.	31 March 2023
Independent Expert Advisory Panel for Mining, Advice Re: Water Quality Performance Measures for Metropolitan Coal Mine (IEAPM 202310-1)	October 2023
Annual Review 2023 inclusive of: <ul style="list-style-type: none">• Six monthly and annual surface water reviews and groundwater reviews.• Water Performance Measure Assessment.	31 March 2024

2 Response to agency consultation

Consultation was completed by the lead auditor as part of the IEA Rev 1.

Wollongong City Council (WCC) provided some commentary on surface water elements to be considered in the audit. There was no additional information to provide in response to consultation from WCC from EMM based on the outcomes of the site inspection and discussion with site staff.

3 Assessment of environmental performance

3.1 Surface water

3.1.1 Catchment

Surface water data from monitoring programs is held and maintained by Metropolitan Coal Mine's lead surface water consultant ATC Williams and the data set was sighted or reviewed as part of this audit.

Metropolitan Coal Mine relies on the review role of specialists from both ATC Williams and University of Queensland (UoQ) to support investigations following a trigger occurring on a performance measure.

Based on monitoring data results presented as part of the annual reviews, mining impacts for longwalls (LW) 306 to 309 on surface water systems within the catchment have been generally in line with predictions and observations made from previous extraction plans. Changes are likely connected to adverse subsidence outcomes due to mining activities, which has been connected to cases of valley closure of in excess of 200 mm, however, there have also been potential impacts when mining induced subsidence has been less than this.

Potential mining-related impacts which are being investigated within the audit period include within the Eastern Tributary. Investigations are covering increased iron staining and subsequent poor water quality. The outcome from these investigations in 2023 have indicated that there has been a negligible reduction in the quality of water entering Woronora Reservoir and are generally within the predictions of the project and management plans.

Water quality within the Woronora Reservoir within the audit period exceeded the defined thresholds from baseline data within the 2023 annual review for aluminium and iron. ATC Williams through their technical review indicated that:

- aluminium sources from catchment into the reservoir are unlikely to be connected with mining related impacts
- iron sources could potentially be from the Eastern Tributary which has been subject to mining related impacts
- manganese sources could potentially be from a combination of Woronora River, not subject to mining activities, and Eastern Tributary.

Whilst the investigation concluded that there was no exceedance of defined performance measures based on historical water quality data from upstream watercourses having similar or higher concentrations (2019) and during that time there was no significant change on the reservoir water quality. This outcome generally considered that the source of elevated water quality was more attributable to catchment conditions (namely rainfall totals) and not solely potential mining-related activities or impacts.

It was noted from the investigation that other reservoirs intermittently had comparable water quality concentrations to Woronora River, and the water quality standards for bulk water supply from WaterNSW were not exceeded.

It is recommended that further evidence be considered to confirm that mining activities are not materially influencing water quality within the reservoir. The outcome occurred in each year of the audit period, each at different severities. It is noted that a difference in water quality concentrations may be present between WaterNSW total and Metropolitan Coal Mine dissolved monitoring data and comparison of total sample type is required in comparisons to remove an aspect of potential uncertainty. This recommendation, EMM understands, has been also provided by the IEAPM in 2023, along with an improved understanding of metal loads over a set period.

Poor water quality was reported in 2023 for SP1, SR1 and SR2 which are minor watercourses in the scheme of the networks draining to the reservoir. Further discussion of these results was not provided in either the technical review by ATC Williams or the annual review document.

3.1.2 Surface facilities area

The site inspection included the surface facilities area. The inspection reviewed the downstream area of Camp Gully which was densely vegetated but relatively stable. A flow was present with Camp Gully with some turbidity to the water evident. The surface facilities area includes a single spur rail line and a product coal loading pad and is surrounded by steep terrain limiting available space.

Drainage features around the site were inspected including the water treatment plant which was in operation at the time. Discussion with the site staff indicated a preference to rely on the automatic function of the water treatment plant to dynamically vary the dosage rates of treatment chemical based on the feed water quality. The water treatment system is serviced and chemicals supplied by external contractors.

The site was well maintained with the Turkey's Nest storage desilted and the Sediment Pond being setup for desilting activities. The site water management system had a number of upgrades and augmentations that were identified in the site visit however these were installed following the audit period. The site indicated a range of contingency surface water management systems that can be triggered in the event of significant rainfall.

The annual reviews indicated discharges via EPL Point 7, from the water treatment plant to Camp Gully, of 95 to 116 ML/year (slightly greater than mine water make) during the audit period, with water quality below the defined EPL limits.

i Incidents

A number of surface water incidents have occurred within the surface facilities area of the site within the audit period which were subject to investigation and reporting. These incidents have been identified and reviewed by the lead auditor with improvement recommendations identified.

The incident investigations have not been reviewed by EMM and support the recommendations and outcomes of the independent audit. EMM understand that works are underway and have been completed on the site to improve the robustness of the water management system. It is noted that within the current EPL (recent revisions have occurred such as Condition O5.1) there are a range of conditions and programs that define the operating performance requirements for the system specifically associated with minimum freeboard in storages and the systems overall capacity to retain specified rainfall depths.

A key recommendation for the Surface Facilities Water Management Plan (SFWMP) is that following any incident that occurs, evidence is documented that a review of the management plan has taken place and any required updates are made to ensure that similar incidents do not happen again, or other additional management tasks are enacted by all operational staff. It is understood that the site has a Pollution Reduction Program (PRP) specifically requiring updates to the SFWMP.

3.2 Groundwater

EMM is generally in agreement with the lead auditor's compliance findings relating to groundwater aspects outlined in Schedule 3, Condition 1: Table 1 – Performance Measures detailed in Appendix A1 of the IEA (Barnett & May 2020).

The Metropolitan Coal Mine's groundwater consultant SLR have completed six monthly reviews of groundwater data for 2021, 2022 and 2023. Metropolitan Coal Mine has completed annual reviews for 2021, 2022 and 2023 which summarise SLR's six monthly reviews.

Groundwater level and quality monitoring was conducted across perched (swamp), shallow (Hawkesbury Sandstone), and deep (below the Bald Hill Claystone) groundwater systems, in general accordance with the approved Extraction Plans (EPs), related Water Management Plan (WMP) and the Catchment Monitoring Program (CMP). This monitoring coincided with the extraction of LW 306 to 309.

The following observations and trends were noted during the audit:

- There was no evidence of mining impact to swamps within the LW 306 to 309 area.
- SLR has assessed trigger exceedances at transect bores T3 to T5 during the 2020, 2022, and 2023 reviews, as per the Trigger Action Response Plans (TARPs).
- Transect bores T3 to T6 exhibit stepped declines in groundwater levels, characteristic of longwall mining. The overall groundwater gradient remains positive, flowing from the shallow aquifer towards the Woronora Reservoir.
- Vibrating wire piezometers (VWPs) PHGW2A, PM02, and 9EGW2A, which have defined trigger levels, were closely monitored throughout the period. Despite observed depressurisation in shallow sensors at 9EGW2A during LW 307 to 309 extraction, the groundwater gradient towards Woronora Reservoir remains positive.
- The sudden increase in pressure in shallow sensors at 9EGW2A from September 2023 onwards should be watched closely as deeper sensors showed this response prior to significant depressurisation.
- There is no evidence of connectivity between the shallow groundwater system and mine working because of extraction. The 20 day average for cumulative mine water make for the audit period was less than 0.5 ML/day which is less than the Level 2 TARP trigger.
- Areas of shallow aquifer depressurisation have been observed, indicating that some drawdown due to mining is occurring in localised areas. Available information indicates that Woronora Reservoir is not being impacted.

EMM is generally in agreement with the lead auditor's compliance findings relating to groundwater aspects outlined in Schedule 3, Condition 1: Table 1 – Performance Measures detailed in Appendix A1 of the IEA (Barnett & May 2020).

4 Review of strategies, monitoring and management plans

4.1 Surface water

The main documents reviewed for surface water in the audit were the EP WMP, CMP, annual reviews and SFWMP.

The surface water monitoring network in the EP WMP and CMP is adequate for detecting potential impacts associated with mining activities. The EP WMP and CMP include appropriate performance criteria designed to identify and assess any mining-related surface water impacts. The CMP should be updated for the most current EP WMP.

The annual reviews provided good detail for surface water matters with reliance on technical reviews by ATC Williams and UoQ.

Water management for the site is managed through the SFWMP. The plan addresses the requirements of the site and provides a good level of detail, however the plan is out of date, is missing details on the system capacity and requires an update. In addition to the updates identified by the lead auditor, plan revision should consider:

- Update of data sets relevant to informing management actions (e.g. water balance and groundwater make).
- Changes in licence information and conditions (i.e. EPL and water licensing).
- Outcomes from and changes to management protocols for water management within the coal handling facility area.
- Inspections are noted in above normal rainfall conditions, but this inspection should cover water management operation and downstream of the site, not only areas of potential erosion events.
- Detail of comprehensive baseline water quality upstream of the site (monitoring location A) to enable comparison of water quality at discharge points against Condition L1.1 of EPL 767.

It is understood that the site has a PRP specifically requiring updates to the SFWMP.

4.2 Groundwater

The groundwater monitoring network in the EP WMP and CMP is adequate for detecting potential impacts associated with mining activities. The EP WMP and CMP include appropriate performance criteria designed to identify and assess any mining-related groundwater impacts.

EMM does not agree with the lead auditor's initial compliance findings regarding groundwater aspects in Schedule 3, Condition 2: Catchment Monitoring Program (CMP) as detailed in Appendix A1 of the IEA (Barnett & May 2024). The current CMP is outdated—it was last updated in 2018 using groundwater observation data that extends only to 2010. EMM recommends that the CMP be revised to incorporate new monitoring locations, up to date observation data and updated mine plans to reflect current groundwater conditions. An action response from the mine was defined in the 2021 audit that the CMP was to be updated from LW 308.

4.3 Water licensing

Activities subject to water licensing for the site is understood to include groundwater dewatering and surface water extractions from Camp Gully.

Groundwater dewatering for the site is covered by Water Access Licence (WAL) 36475 and Water Supply Work Approval 10WA118774 (previously licensed as 10BL603595). Over the audit period average dewatering rates ranged from 0.11 to 0.18 ML/day (40.2 to 65.7 ML/year), which falls within Metropolitan Coal Mine's total available entitlement, under WAL 36475, of 182.5 ML. Daily dewatering volumes were reported within the annual review documents. EMM did not review any other monitoring or recording information or datasets. Based on the information available for the audit, it was determined that the site is compliant with the approval conditions currently in place for 10WA118774.

Site operations have historically used water extracted from Camp Gully. The site has access to 130 ML/units under WAL 25410. Water is extracted via a weir located within Camp Gully which is authorised under Water Supply Work Approval 10WA103751. The annual review documents prepared within the audit period all indicated that no water was extracted from Camp Gully.

It is understood that Metropolitan Coal Mine does not hold a surface water WAL entitlement within the Woronora River Water Source to account for potential changes in surface water flow volumes (via diversion of water into underflow) within watercourses that may occur due to mining induced subsidence. It is recommended that consultation be undertaken with the NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) as part of any identified changes in surface water flow volumes potentially occurring as a result of mining induced subsidence.

5 Recommended measures or actions

5.1 Surface water

The following is recommended from the audit with respect to surface water:

- Consider incorporating within the EP WMP TARP Level 3 actions to refer to incident or non-compliance procedure (as defined by the development consent). Currently the TARP is not clear that a Level 3 trigger may require notification to regulators that an incident has occurred.
- Under the CMP, there is a statement that the water balance model for the catchment “*will be progressively updated using the latest monitoring data and verification checks will be undertaken*”. It is recommended that a section/statement be provided in the annual review of annual technical review documents whether there was a review undertaken and if so whether any changes in models were made.
- Update future annual review document template to cover the correct water licence information (i.e. the water supply work approvals for both groundwater and surface water [now expired], and respective WALs). The reference to licences issued under the *Water Act 1912* are now superseded by licences issued under the *Water Management Act 2000* following the commencement of water sharing plans within the catchment (i.e. water sharing plans for the Greater Metropolitan Region Groundwater Sources 2023 and Greater Metropolitan Region Unregulated River Water Sources 2023).
- Consultation be undertaken with NSW DCCEW as part of any identified changes in surface water flow volumes potentially occurring as a result of mining induced subsidence.
- With any new EP WMP, all associated related management plans (such as the CMP) should be revised and updated to ensure consistency in information.

5.2 Groundwater

The following is recommended from the audit with respect to groundwater:

- The CMP is recommended to be revised to incorporate new monitoring locations, up to date observation data and updated mine plans to reflect current groundwater conditions.

The EP WMP and CMP have adequate performance criteria to identify groundwater impacts. However, the following is recommended to improve the readability of six monthly reviews:

- A summary table detailing previous trigger exceedances and investigation outcomes would clearly provide historical context for impacted sites and help identify recurring patterns or ongoing issues.
- Swamp groundwater levels could be compared in metres below ground level (mbgl), rather than metres Australian height datum (mAHD). This will reduce the number of y-axes and make comparisons of swamp groundwater levels more intuitive.
- Cumulative rainfall deviation (CRD) could be presented on VWP hydrographs to provide better understanding of climatic influences on groundwater responses, particularly in the Hawkesbury Sandstone.
- The six monthly reviews should be focused on the review period and prioritise monitoring bores within the impact area for detailed discussion. This could be presented as a table that would allow readers to quickly identify site-specific trends during the six month review window.

- Historical information on groundwater level and quality trends could be placed in a table and moved to an appendix. This would keep the body of the report concise and focused on current conditions, while still maintaining historical data for reference.

Australia

SYDNEY

Level 10 201 Pacific Highway
St Leonards NSW 2065
T 02 9493 9500

NEWCASTLE

Level 3 175 Scott Street
Newcastle NSW 2300
T 02 4907 4800

BRISBANE

Level 1 87 Wickham Terrace
Spring Hill QLD 4000
T 07 3648 1200

CANBERRA

Suite 2.04 Level 2
15 London Circuit
Canberra City ACT 2601

ADELAIDE

Level 4 74 Pirie Street
Adelaide SA 5000
T 08 8232 2253

MELBOURNE

Suite 9.01 Level 9
454 Collins Street
Melbourne VIC 3000
T 03 9993 1900

PERTH

Suite 3.03
111 St Georges Terrace
Perth WA 6000
T 08 6430 4800

Canada

TORONTO

2345 Yonge Street Suite 300
Toronto ON M4P 2E5
T 647 467 1605

VANCOUVER

2015 Main Street
Vancouver BC V5T 3C2
T 604 999 8297

CALGARY

700 2nd Street SW Floor 19
Calgary AB T2P 2W2



[linkedin.com/company/emm-consulting-pty-limited](https://www.linkedin.com/company/emm-consulting-pty-limited)



emmconsulting.com.au



Metropolitan Coal Mine

Independent Audit Report 2024 (Aquatic Ecology Specialist Review)

Barnett & May

30 April 2025

→ The Power of Commitment



Project name		Metropolitan Coal Audit Report - Aquatic Ecology Review					
Document title		Metropolitan Coal Mine Independent Audit Report 2024 (Aquatic Ecology Specialist Review)					
Project number		12665024					
File name		12665024-REP-0_Metropolitan Coal 2024 Audit_aquatic ecology specialist review.docx					
Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S4	0	Z. Lagerroth	S. Harrow				30/04/25
.							
.							
.							
.							

GHD Pty Ltd | ABN 39 008 488 373

Contact: Zoe Lagerroth, Senior Aquatic Ecologist | GHD
GHD Tower, Level 3, 24 Honeysuckle Drive
Newcastle, New South Wales 2300, Australia
T +61 2 4979 9999 | **F** +61 2 9475 0725 | **E** ntlmail@ghd.com | **ghd.com**

© GHD 2025
This document is and shall remain the property of GHD. The document may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Contents

1.	Introduction	1
1.1	Purpose of this report	1
2.	Scope and limitations	2
2.1	Scope of work	2
2.1.1	Audit report requirements	2
2.2	Limitations	2
2.3	Assumptions	3
3.	Methodology	4
3.1	Site inspection	4
3.1.1	Opening meeting	4
3.1.2	Site inspections	4
3.1.3	Site interviews	5
3.2	Information review	5
3.3	Reporting	7
3.3.1	Compliance assessment criteria	7
4.	Approval conditions, commitments and performance indicators	9
4.1.1	Conditions of approval (MP 08_0149)	9
4.1.2	EPL conditions	9
4.1.3	Performance criteria	10
4.1.4	EIS predictions	12
5.	Stakeholder consultation	13
6.	Review of adequacy of monitoring/assessment of impacts from mining on aquatic ecology	15
7.	Recommendations	20
7.1	Recommended actions for non-compliance	20
7.2	Recommendations for improved environmental management and performance	20
8.	Summary of review	23
9.	References	24

Table index

Table 3.1	Information reviewed in completion of the aquatic ecology addendum report	5
Table 3.2	Compliance Assessment Matrix Assessment (NSW Government 2015)	7
Table 3.3	Risk level for non-compliances (NSW Government 2015)	8
Table 4.1	Conditions of approval MP 08_0149 relevant to aquatic ecology	9
Table 4.2	Monitoring commitments relating to aquatic ecology and aquatic habitat	9
Table 4.3	EPL 767 conditions relating to aquatic biota and ecosystems (EPA 2024)	10
Table 4.4	Performance criteria relating to aquatic ecology (reproduced from the LW 305-307 BMP)	11
Table 4.5	Predicted vs. actual impacts	12

Table 5.1	Responses to stakeholder comments (those relevant to aquatic ecology)	13
Table 6.1	Adequacy of monitoring/assessment of impacts from mining on aquatic ecology	15
Table 7.1	Recommendations for improved environmental management and performance relating to aquatic ecology	20

Appendices

Appendix A	Appointment of expert – Zoe Lagerroth
Appendix B	Site photographs from inspection on 21/03/2025
Appendix C	TARP responses from monitoring reports

1. Introduction

The Metropolitan Coal Mine (also known as the Helensburgh Coal Mine), is located off Parkes St, Helensburgh, New South Wales (NSW) and is operated by Peabody Energy. Metropolitan Coal Mine (Metropolitan Mine) is required to commission an independent environmental audit every three years, as per condition of consent 8 and 9 for Project Approval (08_0149) Schedule 5, which states:

C8 - "By the end of December 2011, and every 3 years thereafter, unless the Director-General directs otherwise the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development.

(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;

(b) include consultation with the relevant agencies;

(c) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any relevant EPL(s) (including any assessment, plan or program required under these approvals);

(d) review the adequacy of strategies, plans or programs required under the abovementioned approval or licences; and (e) recommend measures or actions to improve the environmental performance of the Development, and/or any strategy, plan or Program required un these consents.

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

C9 – Within 6 Weeks of completion of the audit, or as otherwise agreed by the Director-General, the Applicant must submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the Audit Report.

An independent audit report was prepared by Barnett & May Pty Ltd (Barnett & May) and submitted to Department of Planning, Housing and Infrastructure (DPHI), for the period from 1 January 2021 to 28 February 2024 (the Audit Period).

Following submission of this independent audit report by Barnett & May, DPHI requested a more detailed review of conditions of approval be undertaken by an aquatic ecology specialist. The aquatic ecology specialist review was undertaken by Zoe Lagerroth of GHD Pty Ltd (GHD), including a site visit on 21 March 2025.

1.1 Purpose of this report

The purpose of this report is to outline the findings of the review of Metropolitan Coal compliance with approval conditions (MP08_0149) relating to aquatic ecology, for the annual review periods of 2021 to 2023. This report will be attached as an addendum to the Metropolitan Coal independent audit report 2024.

2. Scope and limitations

2.1 Scope of work

The scope of works for the aquatic ecology specialist review for Metropolitan Coal was as follows:

- A site visit to observe existing conditions, concerns to aquatic ecosystems and associated control measures and conduct interviews with Metropolitan Coal personnel, as relevant.
- Review of relevant documents relating to Metropolitan Mine, including the Independent Environmental Audit report, Metropolitan Coal conditions of approval for MP08_0149, annual review documents, management plans and monitoring reports.
- Development of an independent audit report, as an addendum to the Metropolitan Coal Independent Environmental Audit report submitted to DPHI, that addresses compliance against conditions of approval relating to aquatic ecology in more detail.

While some conditions of approval relating to surface water, groundwater and terrestrial ecology (including swamp vegetation) are relevant to aquatic ecology and have been considered in this report, assessments of compliance have been undertaken separately by specialists from these disciplines.

This audit report has been prepared in consideration of the *Post-approval requirements for State significant development: Independent Audit Guideline (October 2015)* (NSW Government 2015).

2.1.1 Audit report requirements

As identified by the Department of Planning, Housing and Infrastructure (DPHI), in the appointment of expert letter dated 31 January 2025 (see Appendix A), the specialist report is to include the following:

- Consultation with the relevant agencies (see section Table 5.1).
- A compliance table indicating the compliance status of each condition of approval and any relevant EPL (see Table 4.1, Table 4.2 and Table 4.3).
- Not use the term “partial compliance”.
- Recommend actions in response to non-compliances (see Section 7.1).
- Review the adequacy of plans and programs required under this consent (see Table 6.1).
- Identify opportunities for improved environmental management and performance (see Table 7.1).

2.2 Limitations

This report: has been prepared by GHD for Barnett & May and may only be used and relied on by Barnett & May for the purpose agreed between GHD and Barnett & May as set out in Section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than Barnett & May arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer Section 3 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Barnett & May, Metropolitan Coal Mine and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information

2.3 Assumptions

Key areas relevant to the audit and aquatic ecology monitoring were visited by the auditor, however, aquatic ecology surveys were not undertaken. It is assumed that the aquatic ecology monitoring was undertaken using accepted methodology and that the results as outlined in the biannual monitoring reports accurately reflect the macroinvertebrate community condition at the time of sampling.

3. Methodology

The methodology for the audit of compliance with the conditions of approval for aquatic ecology involved:

- A site visit to Metropolitan Coal and visual inspection of the mine infrastructure and key environmental areas where aquatic ecology has the potential to be impacted by Metropolitan Coal activities (e.g. by subsidence from underground mining or licensed discharge of mine affected water (MAW)) (see Section 3.1).
- Review of documentation relating to Metropolitan Coal approvals and compliance (see Section 3.2).
- Assessment of compliance through comparison of conditions of approval with evidence of compliance with these conditions (e.g. aquatic ecology monitoring report).

3.1 Site inspection

A site inspection was conducted at Metropolitan Coal by Zoe Lagerroth (the Auditor) of GHD on 21 March 2025.

3.1.1 Opening meeting

Following site inductions, the opening meeting was held on-site. It was attended by the following personnel:

- Stephen Love (Environmental and Community Superintendent) – Metropolitan Mine
- Kane Organ (Environmental Officer) – Metropolitan Mine
- Zoe Lagerroth (Aquatic ecology auditor) – GHD

Other discipline experts, including hydrogeology, hydrology and subsidence were also in attendance.

Introductions were made, and the purpose and scope of the audit was outlined. An overview of the Metropolitan Coal operations, environmental concerns and monitoring programs was provided.

3.1.2 Site inspections

A tour of the site was undertaken on 21 March 2025 by the Auditor, under escort by Kane Organ (Metropolitan Coal Environmental Officer). Subsequent detailed inspections of specific areas of the operation were subsequently undertaken. The site inspection included observation of:

- Site access and security.
- Landslip rehabilitation works.
- Camp Gully Creek, downstream of the mine, EPL licensed discharge point and incident clean-up.
- Coal washing plant.
- Rail loop, loading and unloading facilities.
- Run of mine (ROM) and product stockpiles and conveyer system.
- Waste storage areas.
- Rehabilitation areas.
- Surface water management infrastructure.

The Auditor was provided access to all areas of the site.

Additionally, the following key waterways in potential mine subsidence impact areas were visited, under escort by Stephen Love (Environmental and Community Superintendent) – Metropolitan Mine:

- Waratah Rivulet, including remediated pools
- Eastern Tributary, including remediated pools

3.1.3 Site interviews

Audit interviews comprised of a series of meetings with the following personnel, throughout the on-site meetings and site inspections:

- Stephen Love (Environmental and Community Superintendent)
- Kane Organ (Environmental Officer)

3.2 Information review

The data and reports reviewed in completion of this addendum report are outlined in Table 3.1.

Table 3.1 Information reviewed in completion of the aquatic ecology addendum report

Report/data source	Summary of content	Relevance to aquatic ecology
Bio-Analysis aquatic ecology monitoring reports LW20-27, for the following periods: <ul style="list-style-type: none"> – Spring 2020 – Autumn 2021 – Spring 2021 – Autumn 2022 – Spring 2022 – Autumn 2023 	Details the monitoring methodology, data and results of aquatic ecology monitoring, including assessment of potential impacts from Metropolitan Coal activities. The watercourses included in monitoring for LW20-27 include: <ul style="list-style-type: none"> – Tributary C/Eastern Tributary – Waratah Rivulet and an un-named tributary of the Waratah Rivulet (Tributary B) – Control location 	Macroinvertebrate data in these reports, and the comparison to historical data allows for determination of impacts to the macroinvertebrate community due to Metropolitan Coal activities.
Metropolitan Coal Mine Annual Review reports for: <ul style="list-style-type: none"> – 2021 – 2022 – 2023 	Summary of mining activities undertaken in the calendar year, results of required environmental monitoring and assessment of compliance with conditions of approval or performance measures.	There is information detailed in the Annual Review that is required for identifying potential impacts from mining activities to aquatic biota or aquatic environments including: <ul style="list-style-type: none"> – Details of licensed discharge volumes to Camp Gully Creek (under EPL 767). – compliance statements for water quality in relation to licensed discharge (under EPL 767).
Metropolitan Coal Mine EPL 767	<ul style="list-style-type: none"> – Outlines licensed activities with potential to pollute (noise, dust and water) including licensed water discharge points and monitoring of discharge and in receiving waterways (i.e. Camp Gully Creek). 	Metropolitan Coal are licensed to discharge treated mine affected water (MAW) to Camp Gully Creek via licensed discharge point (LDP). EPL 767 also includes a Pollution Reduction Program (PRP) related to an environmental incident during which water containing coal fines was discharged from Turkeys Nest Dam to Camp Gully Creek and the Hacking River in July and September 2022. Subsequent to these incidents, aquatic ecology monitoring was required to be undertaken. <i>PRP19: Ongoing Waterway Monitoring and Coal Removal Program</i> required physical removal of coal fines from the watercourses.

Report/data source	Summary of content	Relevance to aquatic ecology
Metropolitan Coal Mine Water Management Plan (WMP)	<ul style="list-style-type: none"> – Details of water management systems and procedures to limit the potential for pollution of the environment. – Monitoring requirements, including water quality, quantity and aquatic ecology. – Performance criteria for water quality and other measures of effective mine and water management. – Trigger action response plans (TARPs) for exceedances of performance criteria. 	<p>Management of water and waste is relevant to maintaining water quality in Camp Gully Creek, adjacent to Metropolitan Coal. Soil or coal material transport to watercourses can impact aquatic ecology through sedimentation or impacts to water or sediment quality. Therefore, monitoring of water quality downgradient of mine activities and/or downstream of the licensed discharge point are relevant for determining potential impacts to aquatic ecology in Camp Gully Creek.</p> <p>The WMP identifies monitoring of water volume and quality as performance measures for subsidence related impacts to undermined watercourses. Changes to water volume or quality are potential mechanisms of subsidence related impacts to aquatic ecology.</p>
Metropolitan Coal Mine Longwalls 311-316 Biodiversity Management Plan (BMP)	Identifies the terrestrial flora and fauna species, communities and populations of concern in relation to Metropolitan Coal activities and required management actions and monitoring requirements.	<p>The BMP identifies monitoring of riparian vegetation in areas potentially influenced by subsidence from Metropolitan Coal undermining.</p> <p>Riparian vegetation has an influence on the condition of aquatic habitat for fish and aquatic invertebrates.</p>
Metropolitan Coal Catchment Monitoring Program	<p>Details on monitoring relating to watercourses and swamps associated with Metropolitan Coal, including:</p> <ul style="list-style-type: none"> – Stream flow – Surface water – Visual pool assessment – Groundwater monitoring (including swamps) – Select baseline water quality data for Woronora Reservoir 	Changes to water volume or quality are potential mechanisms of subsidence related impacts to aquatic ecology.
Metropolitan Coal Project Aquatic Ecology Assessment	<p>This document outlines the potential impacts of the project (Project Approval (08_0149) on aquatic ecology.</p> <p>This document forms the basis of the project approval in relation to impacts to aquatic ecosystems.</p>	<p>Predicted impacts that may influence aquatic biota or their habitat, including:</p> <ul style="list-style-type: none"> – Aquatic plants (i.e. macrophytes) – Surface water flows and water quality* – Macroinvertebrates – Fish
Fisheries Spatial Data Portal (online database)	<p>Online map viewer displaying layers generated by DPI Fisheries including:</p> <ul style="list-style-type: none"> – Fish Community Status. – Threatened species/population distributions (freshwater species/populations listed as threatened under the Fisheries Management Act 1994), noting some species may have been listed since the project was approved in 2009. – Recognised barriers to fish passage. – Key fish habitat layers. 	Used to check information presented in documents relating to ecological values e.g. the potential presence of threatened fish/aquatic invertebrates.

*Only relevant for natural watercourses or storages that discharge to natural watercourses.

3.3 Reporting

As identified in the DPHI appointment of expert letter dated 31 January 2025 (see Appendix A), this aquatic ecology review report includes:

- Evaluation of the implementation of management plans relevant to aquatic ecology.
- Identification of the compliance status of conditions of approval relevant to aquatic ecology.
- Outcomes of the physical site inspection of the development, covering development areas and environmental aspects that relate to aquatic ecology, as detailed in the water management plan/consent conditions.
- Outcomes of interviews with relevant key site personnel involved in the understanding issues relating to aquatic ecology.
- A high-level assessment of the adequacy of environmental management plans and sub-plans relevant to aquatic ecology (e.g. the biodiversity management plan and water management plan).
- Identification of opportunities for improvements for management of aquatic ecology.
- Other matters considered relevant, taking into account relevant regulatory requirements and legislation, knowledge of the development's past performance and comparison to industry best practices.

3.3.1 Compliance assessment criteria

The assessments of compliance are outlined in Section 4. These assessments of compliance were completed using notes and observations recorded during the site inspection and interviews and review of relevant documents pertaining to approvals or monitoring.

The compliance assessment criteria outlined in the *Post-approval requirements for State significant development: Independent Audit Guideline (October 2015)* (NSW Government 2015) have been adopted for the compliance assessment in this audit. The compliance assessment criteria are outlined in Table 3.2, with the risk matrix for non-compliance outlined in Table 3.3.

Table 3.2 Compliance Assessment Matrix Assessment (NSW Government 2015)

Assessment	Criteria
Compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit.
Not verified	Where the auditor has not been able to collect sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit. In the absence of sufficient verification the auditor may in some instances be able to verify by other means (visual inspection, personal communication, etc.) that a requirement has been met. In such a situation, the requirement should still be assessed as not verified. However, the auditor could note in the report that they have no reasons to believe that the operation is non-compliant with that requirement.
Non-compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent of one or more specific elements of the regulatory approval have not been complied with within the scope of the audit.
Administrative non-compliance	A technical non-compliance with a regulatory approval that would not impact on performance and that is considered minor in nature (e.g. report submitted but not on the due date, failed monitor or late monitoring session). This would not apply to performance-related aspects (e.g. exceedance of a noise limit) or where a requirement had not been met at all (e.g. noise management plan not prepared and submitted for approval).
Not triggered	A regulatory approval requirement has an activation or timing trigger that had not been met at the time of the audit inspection, therefore a determination of compliance could not be made.

Assessment	Criteria
Observation	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. Further observations are considered to be indicators of potential non-compliances or areas where performance may be improved.
Note	A statement or fact, where no assessment of compliance is required.

Table 3.3 Risk level for non-compliances (NSW Government 2015)

Risk level	Colour code	Description
High		Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium		Non-compliance with: <ul style="list-style-type: none"> – 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: <ul style="list-style-type: none"> – potential for moderate environmental consequences, but is unlikely to occur; or – potential for low environmental consequences, but is likely to occur
Administrative non-compliance		Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

4. Approval conditions, commitments and performance indicators

4.1.1 Conditions of approval (MP 08_0149)

The approval condition for MP 08_0149 most relevant to aquatic ecology was the development of BMPs in association with extraction plans, as outlined in Table 4.1. Relevant monitoring commitments identified in the BMP are summarised in Table 4.2.

Table 4.1 Conditions of approval MP 08_0149 relevant to aquatic ecology

Source/document	Condition #	Condition	Completion status
Project approval (MP 08_0149)	Sch 3 (F)	Biodiversity Management Plan, which has been prepared in consultation with OEH and DRE (Fisheries), to manage the potential environmental consequences of the Extraction Plan on aquatic and terrestrial flora and fauna, with a specific focus on swamps.	Compliant

Table 4.2 Monitoring commitments relating to aquatic ecology and aquatic habitat

Source/document	Category	Condition	Completion status
Longwalls 311-316 BMP	Aquatic biota/stream monitoring	Monitoring of macroinvertebrates and macrophyte biannually, in autumn and spring at sites relating to LWs 20 – 27.	Compliant Completed – six rounds of monitoring and reporting by Bio-Analysis in the Audit Period
		Assessment of results against performance criteria.	Compliant
		Where performance criteria are exceeded, escalation as per the TARP (see Table 4.4).	Compliant Investigation of potential impacts to threatened amphibians and flora undertaken

4.1.2 EPL conditions

Conditions stipulated in EPL 767 in relation to aquatic ecology, relate to incidents in July and September 2022 during which water containing coal fines was discharged from Turkey's Nest Dam to Camp Gully Creek and the Hacking River. Subsequent to these incidents, aquatic ecology monitoring and toxicity testing was required to be undertaken, as outlined in Table 4.3, as part of Pollution Reduction Program U1.1 *Discharge Impact Assessment Monitoring Program* (EPA 2024). Bio-Analysis undertook four rounds of aquatic ecology monitoring between September 2022 and May 2023.

PRP19: Ongoing Waterway Monitoring and Coal Removal Program required physical removal of coal fines from the watercourses. An unintended consequence of this physical removal would have been disturbance and/or removal of aquatic habitat (e.g. leaf litter) and macroinvertebrates.

Table 4.3 EPL 767 conditions relating to aquatic biota and ecosystems (EPA 2024)

Condition	Details	Completion status
Macroinvertebrate Assessment	Quantitative sampling and analysis of macroinvertebrates at sampling locations along Camp Creek and the Hacking River upstream and downstream of the discharges. There must be at least four sampling events with one sampling event undertaken during Autumn of 2023. The sampling events may include surveys already undertaken by the licensee in 2022.	Compliant
Toxicity testing	<p>Toxicity testing on at least three sampling occasions using the test species and methodology given below.</p> <p>Testing must be carried out at LDP7 and LDP8 as well as at an upstream sampling point and the nearest downstream sampling point(s) representative of fully mixed conditions.</p> <p>Toxicity testing should be undertaken using receiving water as the diluent.</p>	Compliant

4.1.3 Performance criteria

Table 4.4 outlines the performance criteria relating to aquatic ecology, as identified in the Metropolitan Coal BMP 305-307 Trigger Action Response Plan (TARP) - Monitoring of Aquatic Biota, Stream Monitoring. There were exceedances of the performance measure *Negligible impact on Threatened Species, Populations or Ecological Communities* identified in the Audit Period identified in biannual aquatic ecology monitoring reports as outlined in Appendix C. These were due to changes in macroinvertebrate/macrophyte community assemblage that had been previously identified, but constitute an exceedance of the performance indicator *The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence*. This performance indicator is from an EIS prediction and the details of the exceedances of this EIS prediction are summarised in Table 4.5.

The 2021 Annual Review identifies that “the subsidence impacts at Locations C2 and C4 have triggered an assessment against the biodiversity subsidence performance measure, which have been undertaken by Ecoplanning and Cenwest” (Ecoplanning 2022; Cenwest Environmental Services 2022). Cenwest Environmental Services (Cenwest; 2022) identified that the observed exceedances of performance criteria for macrophyte and macroinvertebrates in autumn 2021 are “very unlikely to adversely impact on the three threatened amphibian species (Red-crowned Toadlet, Giant Burrowing Frog and Littlejohns Tree Frog), and the biodiversity subsidence impact performance measure, viz; Negligible impact on Threatened Species and Populations, is considered to have been met.”.

As detailed in Table 8.1, macrophytes and macroinvertebrates, although indirectly relevant to threatened aquatic species, populations and communities (i.e. as potential habitat and food sources for threatened frogs), are not directly relevant to this performance indicator as there are no threatened macroinvertebrate or macrophyte species, populations or ecological communities identified as occurring. The potential presence of threatened dragonflies (Sydney Hawk Dragonfly and Adam’s Emerald Dragonfly) is screened during biannual macroinvertebrate monitoring and assessment.

Recommendations have been made in Section 8.2 for revising the assessment methodology in BMP TARP to reflect the appropriate performance criteria and practical assessment method.

Table 4.4 Performance criteria relating to aquatic ecology (reproduced from the LW 305-307 BMP)

Table 17
Trigger Action Response Plan – Monitoring of Aquatic Biota, Stream Monitoring

Performance Measure	Performance Indicator	Monitoring Sites	Parameters	Frequency/ Sample Size	Analysis Methodology	Error Types	Baseline	Significance Levels/ Triggers	Action/Response
Negligible impact on Threatened Species, Populations, or Ecological Communities	<i>The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence.</i>	<p>Two sampling sites (approximately 100 m in length) at the following locations:</p> <ul style="list-style-type: none"> Location WT3 on Waratah Rivulet and Locations ET1, ET3 and ET4 on the Eastern Tributary overlying Longwalls (LW) 20-27. Location WT4 on Waratah Rivulet adjacent to LW20-27. Location WT5 on the Waratah Rivulet and Location ET2 on the Eastern Tributary, downstream of LW20-27. Control Locations: WR1 on Woronora River; and OC on O'Hares Creek. 	<ul style="list-style-type: none"> Aquatic macroinvertebrates. Aquatic macrophytes. 	Biannually, in autumn and spring.	<ul style="list-style-type: none"> Analysis of macroinvertebrate and macrophyte multivariate¹ and univariate² data using PERMANOVA to test the null hypothesis of no significant change in relation to control places, bi-annually following completion of survey. 	Statistical significance levels. Significant = $P < 0.05$	<ul style="list-style-type: none"> LW20-22 stream sites, as detailed in the LW20-22 aquatic ecology monitoring reports for the spring 2008 to autumn 2010 surveys³. LW23-27 stream sites, as detailed in the LW23-27 aquatic ecology monitoring reports for the spring 2009 to spring 2013 surveys⁴. 	<p>Level 1</p> <p>Data analysis indicates no significant changes in relation to control places pre-mining⁵ compared to post-extraction⁷ occur in the aquatic macroinvertebrate and/or macrophyte assemblages at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW311-316.</p>	<p>Continue monitoring.</p> <p>Six monthly analysis and annual reporting.</p>
								<p>Level 2</p> <p>Data analysis indicates significant (not long-term⁸), changes in relation to control places pre-mining⁵ compared to post-extraction⁷ occur in the aquatic macroinvertebrate and/or macrophyte assemblages at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW311-316.</p>	<p>Consider recent stream features mapping results and pool water level monitoring data.</p> <p>Consider status/progress of stream remediation activities.</p> <p>Six monthly analysis and annual reporting.</p>
								<p>Level 3</p> <p>Data analysis indicates significant long-term changes⁸ in relation to control places pre-mining⁵ compared to post-extraction⁷ occur in the aquatic macroinvertebrate and/or macrophyte assemblages at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW311-316.</p>	<p>Initiate assessment against the performance measure⁹.</p> <p>Consider the need for management measures, in accordance with Sections 9 and 10.</p>

¹ Multivariate Analysis: comparisons of two (or more) samples based on the degree to which these samples share particular species, at comparable levels of abundance.

² Univariate Analysis: comparison of individual variables (e.g. total number of taxa, total abundance, abundances of individual taxa).

³ Cummins, S. P., Roberts, D. E. (2009a; 2009b; 2010a; 2010b). Aquatic Ecology Monitoring: Metropolitan Coal Longwalls 20-22 Spring 2008 to Autumn 2010 Survey Reports. Prepared for Metropolitan Coal Pty Ltd. BIO-ANALYSIS: Marine, Estuarine & Freshwater Ecology.

⁴ Cummins, S. P., Roberts, D. E. (2010a; 2010b; 2011; 2012a; 2012b; 2012c; 2013a; 2013b, 2014). Aquatic Ecology Monitoring: Metropolitan Coal Longwalls 23-27 Spring 2009 to Spring 2013 Survey Reports. Prepared for Metropolitan Coal Pty Ltd. BIO-ANALYSIS: Marine, Estuarine & Freshwater Ecology.

⁵ Pre-mining data is as follows: sites WT3 and ET1 (spring 2008 to autumn 2010); site ET3 (spring 2009 to autumn 2010); site ET4 (spring 2009 to spring 2013); site ET2 (will be assessed for two periods: spring 2008 to autumn 2010 [i.e. pre-mining of Longwalls 20-22] and spring 2009 to spring 2013 [i.e. pre-mining of Longwalls 23-27]).

⁷ Post-extraction data is represented as follows: sites WT3 and ET1 (from spring 2010 on); site ET3 (from spring 2010 on); site ET4 (from autumn 2014 on); site ET2 (will be assessed for two periods: spring 2010 on [Longwalls 20-22] and autumn 2014 on [Longwalls 23-27]).

⁸ Long-term changes to the macroinvertebrate and macrophyte assemblages are considered to be significant changes that are persistent (over time) and resulting from mining.

⁹ Threatened species, populations and ecological communities include those listed under the TSC Act, EPBC Act or Fisheries Management Act 1994 at the time of Project Approval (i.e. the lists current as at 22 June 2009).

4.1.4 EIS predictions

A comparison of EIS predictions against observed outcomes was undertaken with outcomes in Table 3.1. As outlined in Section 4.1.3 and Appendix C, there were exceedances of the EIS predictions for macroinvertebrates and macrophytes identified in the Audit Period, as detailed in Bio-Analysis (2024b). See Section 4.1.3 for details on investigations completed. The changes to macrophyte/macroinvertebrate communities are also influenced by remediation of bedrock fractures, which is ongoing in some areas.

Table 4.5 Predicted vs. actual impacts

Category	Predicted project impacts (as per Bio-Analysis 2008)	Observed impact - aquatic ecology specialist review*
Aquatic Ecology	<p>The Project is unlikely to have a significant impact on the composition or distribution of aquatic macrophytes.</p> <p>The Project is unlikely to have any significant long-term impacts on assemblages of macroinvertebrates.</p> <p>It is unlikely that the Project would further significantly impact on fish fauna.</p>	<p>Macroinvertebrates/macrophyte:</p> <p>Significant differences in macroinvertebrate/macrophyte communities in the Audit Period attributed to mining-related impacts (LW 20-27) include:</p> <ul style="list-style-type: none"> – C2 on tributary C: evidence of a mining related change to the assemblage of aquatic macrophytes in autumn 2021. – ET2 on the Eastern Tributary: altered numbers of Atyidae in autumn 2021 to autumn 2022 (and historically between spring 2015 and autumn 2018); but not during spring 2022 or autumn 2023. – ET4 on the Eastern Tributary: significant change to assemblage of macroinvertebrates detected in spring 2019 and subsequent surveys; altered patterns of diversity of macroinvertebrate taxa since autumn 2018; altered macrophyte assemblage since autumn 2018. – WT3 on the Waratah Rivulet: altered diversity of macroinvertebrate taxa in spring 2016, autumn 2018 to autumn 2023. <p>See Appendix C for more details.</p> <p>Fish: Fish have not been monitored so the EIS prediction relating to fish cannot be tested. However, as identified in Table 6.1, fish monitoring is not warranted.</p>

*Comments are derived from monitoring reports in the audit period only. Comments only relate to LW 20-27 as aquatic ecology monitoring is considered impractical in the Woronora Reservoir full supply level (i.e. areas relevant to LW 306-609).

5. Stakeholder consultation

Lead Auditor Ken Holmes undertook stakeholder consultation in preparation of the Metropolitan Coal Mine 2024 Independent Environmental Audit report (see Section 5 of the Metropolitan Coal Mine Independent Environmental Audit 2024 report). Comments relating to aquatic ecology collected during this consultation have been reproduced in Table 5.1, with additional responses by the aquatic ecology specialist.

Table 5.1 Responses to stakeholder comments (those relevant to aquatic ecology)

Department	Contact	Stakeholder Comments	Lead Auditor Response (reproduced from the main Audit Report)	Further comment by aquatic ecology specialist
NSW Department of Planning, Housing and Infrastructure	Katrina O'Reilly	Biodiversity/aquatic – impacts of subsidence on biodiversity values/swamps/creeks/aquatic	Compliance with the biodiversity performance indicators has been reviewed. Please refer to the detailed findings in Section 6.1 and Appendix A1.	Compliance with the biodiversity performance indicators relating to aquatic ecology have been reviewed. Refer to the detailed findings in Section 4.1.3 and Appendix C and recommendations for changes to these indicators (Table 7.1).
		Compliance with management plan commitments	A review of all management plans was undertaken. The operations are being undertaken in general accordance with the commitments contained in the management plans. It is noted, however that implementation of the requirements of the Surface Water Management Plan (for example maintenance of sediment basins and surface water drains) was not consistent.	A review of the BMP was undertaken, including the Trigger Action Response Plan (TARP). Aquatic ecology monitoring, and assessment of results in the Audit Period has been undertaken in accordance with the commitments in the BMP. Refer to comments on suitability of monitoring and assessment methodology in Table 6.1 and recommendations for alterations of the TARP in Table 7.1.

Department	Contact	Stakeholder Comments	Lead Auditor Response (reproduced from the main Audit Report)	Further comment by aquatic ecology specialist
Wollongong City Council	Ron Zwicker Special Projects and Planning Support Manager	Advice on the health of Waratah Rivulet as a result of subsidence-related impacts from the longwall mining.	The results of aquatic ecology monitoring is considered to be consistent with the potential subsidence impacts and environmental consequences described in the Project EA, Preferred Project Report, the Metropolitan Coal Water Management Plans and Biodiversity Management Plans.	Review of conclusions of the biannual aquatic ecology monitoring reports for Waratah Rivulet during the Audit Period indicate that impacts to water levels previously observed (based on site observations during biannual aquatic ecology monitoring), have largely resolved. There were some exceedances of the performance indicators for macrophyte/macrobenthos during the Audit Period which have been identified as being potentially mining related (see Appendix C). Refer to comments on monitoring and assessment methodology and performance indicators in Section 6.
		Commentary on the level of success of grouting measures used for the remediation of creek bedrock within Waratah Rivulet.	A preliminary review of post remediation pool drainage behaviour by Hydro Engineering and Consulting of pools on Waratah Rivulet between 2016 and 2020 concluded that all pools previously impacted appeared to be behaving in a similar manner to pre-impact or comparable control pools, with the exception of Pool A. Metropolitan plans to remobilise for additional works at Pool A in 2024.	
		Commentary on the health of the creek below the colliery pit top, where coal fines were previously deposited into the creek line, due to heavy rainfall event(s).	Bio-Analysis undertook four rounds of aquatic ecology monitoring between September 2022 and May 2023. The results indicate there is no evidence of an impact on the macroinvertebrate communities with Camp Gully Creek and the Hacking River downstream of the mine.	Camp Gully was visited by the aquatic ecology specialist on 21 March 2025 as part of the audit site visit. There was no visible evidence of coal fines in the area immediately downstream of the Turkey's Nest discharge point (see photograph in Appendix B).

6. Review of adequacy of monitoring/assessment of impacts from mining on aquatic ecology

Comments from the aquatic ecology specialist on the adequacy of monitoring/assessment of impacts from mining on aquatic ecology are provided in Table 6.1. Recommendations for changes to the monitoring program or assessment methodology are outlined in Table 7.1.

Table 6.1 Adequacy of monitoring/assessment of impacts from mining on aquatic ecology

Relevant performance indicator/measure/issue	Summary of monitoring/assessment methods	Adequacy of monitoring/assessment methods to fulfil the project commitments and predictions
EIS prediction: It is unlikely that the Project would further significantly impact on fish fauna.	No fish surveys completed following project approval.	<p>Fish communities are reportedly limited due to the elevation and presence of significant barriers to fish passage, both natural (e.g. waterfalls and cascades) and anthropogenic (vehicular tracks and Woronora Dam). This is supported by the Fish Community Status layer outlined in the Fisheries Spatial Data Portal (DPI Fisheries 2025), which identifies the Fish Community Status for Waratah Rivulet as 'Poor'. The Fish Community Status is also 'Poor' for most sections of Woronora Reservoir, while the Fish Community Status for some sections of Woronora River is identified as 'Fair'. Two native fish (Long-finned Eel and Australian Smelt) and the introduced Mosquito Fish were recorded during surveys for the Metropolitan Coal Project environmental assessment.</p> <p>There is no identified Fish Community Status in this layer for Eastern Tributary but given this is a lower stream order (stream order 3) than Waratah Rivulet and the fish barriers created by rock bars/cascades/waterfalls and Woronora Dam, the fish community can be reasonably considered to be limited in Eastern Tributary.</p> <p>Threatened fish species (Fisheries Management Act 1994 or Environment Protection and Biodiversity Conservation Act 1999) are not expected to occur in the potential impact area (see discussion below).</p> <p>This being the case, the aquatic ecologist specialist agrees there is limited value in undertaking fish monitoring in relation to the Metropolitan Coal Project.</p>

Biodiversity Management Plan Performance Indicator:

The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence.

LW20-27:

Post-mining monitoring of the following is conducted biannually in watercourses undermined by LW20-27:

- Macroinvertebrates:
 - Macroinvertebrates - AUSRIVAS methodology (non-quantitative).
 - Macroinvertebrates - quantitative sampling (1 minute sweep sample x 3 replicates).
 - Identification to family level (or as specified in AUSRIVAS) or species level if families indicate potential presence for threatened dragonflies.
- Aquatic macrophytes:
 - Within 5 x 0.25 m² 'haphazardly placed' quadrats, estimated percentage cover of floating, submerged and emergent macrophytes AND species richness.
 - Estimated cover class over 100 m reach of floating-attached, submerged and emergent macrophyte (in-stream and in the riparian zone) – Class1 (one plant or small patch i.e. few), Class 2 (not common; growing in a few places; i.e. scattered, and Class 3 (widespread i.e. common).
- Monitoring locations:
 - Four paired stream sites on Eastern tributary/Tributary C.
 - Three paired stream sites in Waratah Rivulet (and unnamed tributary).
 - Two paired stream sites in reference streams (Woronora River/O'Hares Creek).

Reports are produced biannually and potential impacts to macroinvertebrates from LW20-27 through:

- Calculation of macroinvertebrate richness and abundance and comparison between impact and control sites.
- AUSRIVAS model (which compares results to a reference database).
- Multivariate analysis comparing macroinvertebrate community assemblage between impact and control sites.
- Statistical significance tests for differences in richness and abundance between impact and control sites and before/after mining.

LW20-27:

The aquatic ecology monitoring locations sampled in the Audit Period appear suitable in relation to the underground mining footprint for LW20-27. Control locations on headwater sections of the Woronora River/O'Hares Creek are also monitored to allow for assessment of environmental effects on water levels and seasonal variation in macroinvertebrate and macrophyte condition. Woronora River in this location is a similar waterway type, being the same stream order (stream order 4) as Waratah Rivulet. These control locations are particularly important given the limited pre-mining data for some locations.

The monitoring frequency and number of monitoring locations are appropriate given the observed historical subsidence impacts to Waratah Rivulet and Eastern Tributary.

The methodology for monitoring of macroinvertebrates and macrophytes is generally appropriate for identifying impacts from subsidence (e.g. changes to these communities as a result of changes to water levels, flow regime and water quality). AUSRIVAS is standard methodology for collection of macroinvertebrates.

Environmental conditions have been considered through inclusion of rainfall plots and inclusion of sampling time as a factor in statistical analysis, as well as comparison to control sites on Woronora River/O'Hares Creek.

Assessment of results for macroinvertebrates and macrophytes have included statistical tests of significance in macroinvertebrate community assemblage and condition Before and After mining, and between Control and Impact sites.

However, the assessment of potential subsidence impacts from water quality may be enhanced by introduction of a pollution sensitivity macroinvertebrate index such as SIGNAL-2 (Chessman 2003) for sites where mining influences on water quality are indicated.

Macroinvertebrates may not be a suitable indicator for impacts from iron staining/growth of iron-reducing bacteria, especially as there has been no specific consideration of grazers (i.e. those invertebrates that eat algae and other periphyton). Periphyton surveys may be better suited for this.

Although temporal plots are provided allowing for assessment of changes in community structure over time, there is no identified threshold for when it is determined that 'long-term impacts' to macroinvertebrate/macrophyte assemblage has occurred.

Some minor changes to methods of data analysis are recommended, as outlined in Table 7.1.

Relevant performance indicator/measure/issue	Summary of monitoring/assessment methods	Adequacy of monitoring/assessment methods to fulfil the project commitments and predictions
	<p>Aquatic ecology reports assess potential impacts to macrophytes from LW20-27 through:</p> <ul style="list-style-type: none"> – Statistical significance tests for differences in macrophyte cover between impact and control sites and before/after mining. <p>Assessment of results against the performance criteria outlined in the TARP (Table 4.4) for macroinvertebrates and macrophytes is undertaken annually as part of the biannual aquatic ecology monitoring reports, however, note the comments regarding the limited relevance of the TARP for determining potential impacts of mining in relation to LWs 306-309.</p>	<p>LW 306-309:</p> <p>LWs 306-309 extend underneath the Woronora Reservoir. Aquatic ecology monitoring is considered impractical in the Woronora Reservoir full supply level due to the fluctuating water levels (i.e. sampling would be unsafe in times when the reservoir is near full supply, and the variable water levels would impede the interpretation of monitoring results). A single baseline aquatic ecology sampling event was undertaken in in 2006/2007 at four locations within Woronora Reservoir as part of the Metropolitan Coal Project Aquatic Assessment (Bio-Analysis 2008). Review of the reservoir levels indicated that the water level in 2006/2007 was exceptionally low, enabling sampling.</p> <p>As aquatic ecology monitoring cannot be undertaken in above the LWs, there will be a reduced potential for identification of impacts from mining LWs 301-311. It is acknowledged that due to the use of narrower panels and wider chain pillars beneath the reservoir, the proposed longwall mining is not expected to result in connective cracking between the longwalls and surface or result in change to water quality or quantity. There is surface water quality monitoring and flow gauging conducted in areas relevant to LWs 306-309 and this monitoring may be able to be used for qualitative assessment of potential impacts (i.e. as reduced flows or changes to would be the mechanism of impact to aquatic biota). The coverage of this surface water monitoring program has not been assessed by the aquatic ecology specialist as this would be considered in the surface water specialist report.</p> <p>Monitoring in Waratah Rivulet, Eastern Tributary and associated tributaries (i.e. the monitoring program established for LWs 20-27) has been continued to identify impacts (although unlikely) to aquatic ecology in these upstream watercourses during mining of the LW 301-311 series.</p> <p>Recommendations have been made in Table 7.1 to, as far as possible, articulated impacts to aquatic communities during mining of the LW 301-311 from recognised impacts from historical mining.</p>

Relevant performance indicator/measure/issue	Summary of monitoring/assessment methods	Adequacy of monitoring/assessment methods to fulfil the project commitments and predictions
<p>Performance measure: Negligible impact on Threatened Species, Populations or Ecological Communities</p>	<p>Assessment of results against the performance criteria outlined in the TARP (Table 4.4) for macroinvertebrates and macrophytes is undertaken annually as part of the biannual aquatic ecology monitoring reports.</p> <p>Review of the Metropolitan Coal aquatic ecology reports for 2021 to 2023 indicated that potential presence of threatened Species Sydney Hawk Dragonfly (<i>Austrocordulia leonardi</i>) and Adams Emerald Dragonfly (<i>Archaeophya adamsi</i>) have been considered by identifying dragonfly specimens to species-level. It is stated in the Spring 2022 Longwalls 20-27 Aquatic Ecology Monitoring report (Bio-Analysis (2024) that “confirmation of the presence of the Adams emerald dragonfly or Sydney hawk dragonfly would have triggered a response for further investigations of this species”.</p> <p>Also of note is that, within the Audit Period, assessments of potential impacts to threatened amphibians (due to loss of habitat or food source) have been undertaken for relevant exceedances of the performance criteria:</p> <p><i>The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence</i></p>	<p>The Metropolitan Coal Project Aquatic Ecology Assessment (Bio-Analysis 2008) stated that “none of the threatened aquatic biota listed in the schedules of the NSW Threatened Species Conservation Act, 1995, NSW Fisheries Management Act, 1994 or Commonwealth Environment Protection and Biodiversity Conservation Act, 1999 have been <u>recorded</u> within streams in the Project underground mining area or surrounds”.</p> <p>The threatened species Sydney Hawk Dragonfly (<i>Austrocordulia leonardi</i>) was historically (1960s) collected from Woronora River but has not been collected in this area since (DPI Fisheries 2016). Adams Emerald Dragonfly (<i>Archaeophya adamsi</i>) is a threatened species which has been collected previously in small to moderate sized creeks with gravel or sandy bottoms. The project approval areas are within the indicative distribution of Adams Emerald Dragonfly but there are no records within the area.</p> <p>The aquatic ecology specialist considers that there is limited potential for Metropolitan Coal Project impacts to threatened aquatic biota (i.e. fish, invertebrates) or macrophyte based on the threatened species listings to 2009. Given the rare nature of the Sydney Hawk Dragonfly and Adam’s Emerald Dragonfly their presence perhaps cannot be ruled out as records are only created through monitoring, but nonetheless, these species can be considered unlikely to occur.</p> <p>The macroinvertebrate monitoring methods are suitable for identifying these dragonfly species if present at the selected monitoring sites and they have not been observed in the history of Metropolitan Coal aquatic ecology monitoring. As identified above, monitoring is not undertaken in areas relevant to LWs 306-309 (or subsequent longwalls) as the conditions in the Woronora Reservoir full supply level are generally not suitable (i.e. too deep, with fluctuating water levels).</p> <p>Recommendations have been made in Table 7.1 to revise the TARP wording and assessment methods so that they are more relevant to identifying potential impacts to Sydney Hawk Dragonfly and Adams Emerald Dragonfly. Some exceedances of the performance criteria identified in the Audit Period (see 4.1.3) were issues that had limited potential consequences for threatened aquatic species.</p>

Relevant performance indicator/measure/issue	Summary of monitoring/assessment methods	Adequacy of monitoring/assessment methods to fulfil the project commitments and predictions
Licensed discharge	<p>Ongoing aquatic ecology monitoring in Camp Gully Creek is not required under the EPL 767, Project Conditions or Water/Biodiversity Management Plans.</p> <p>Water quality monitoring is undertaken at the water treatment plant clean water tap and upstream and downstream of the discharge point in Camp Gully Creek, in accordance with EPL 767.</p> <p>Data for upstream/downstream for pH, total suspended solids is compared to concentration limits identified in EPL 767 (Condition L2.4).</p>	A Water Discharge Impact Assessment was undertaken under EPL 767 Pollution Reduction Program U1 (EPA 2024). These assessments included water quality assessment (and comparison to ANZG water quality guidelines for aquatic ecosystem protection), macroinvertebrate monitoring and ecotoxicology testing.
Unlicensed discharge of water containing coal fines to Camp Gully Creek	Four rounds of aquatic ecology monitoring were undertaken by Bio-Analysis following the discharge incident between September 2022 and May 2023.	Impacts to macroinvertebrate communities from the discharge incident are likely to reduce over time (i.e. the most significant effects would be expected immediately following, or within months of the discharge incident and clean-up). Therefore, the aquatic ecology specialist considers the completed four rounds of monitoring to be sufficient, given the results have indicated no impacts.

7. Recommendations

7.1 Recommended actions for non-compliance

There were no non-compliances determined in relation to aquatic ecology. Monitoring was completed as per the conditions of approval and the Longwalls 311-316 BMP. Performance indicator exceedances were investigated as required by the TARP.

Recommendations have been made for altering the TARP and monitoring in Table 7.1.

7.2 Recommendations for improved environmental management and performance

Recommendations for improved environmental management and performance relating to aquatic ecology are summarised in Table 7.1.

Table 7.1 Recommendations for improved environmental management and performance relating to aquatic ecology

Item	Relevant performance measure/condition/prediction	Aquatic ecology specialist recommendations
Macroinvertebrate/macrophyte monitoring (subsidence impacts)	Biodiversity Management Plan Performance Indicator: <i>The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence.</i>	<p>Change to analysis/assessment method:</p> <p>While the monitoring program is considered adequate for the impacts being assessed in relation to LWs 20-27, and Bio-Analysis reports are thorough, some changes to the data analysis is recommended. As the sites in the LW20-27 monitoring program are now in the post-mining phase, assessment methods could be redefined and simplified, as there is a reduced likelihood of mining impacts being identified (pending prolonged dry period when changes to pool draining behaviour may be exaggerated).</p> <p>The PERMANOVA analysis testing differences in macroinvertebrate diversity/abundance/assemblage between groups is complex. Control Plots (i.e. box and whisker plots) showing range of results at each site (both control and impact) Before/After mining may be a simpler alternative in addition to the temporal plots presented in the Bio-Analysis reports. Some small changes to wording of the TARP levels would be required to remove reference to 'significance'.</p> <p>If statistical tests for significance are continued, it is recommended that the design be reconsidered to better articulate impacts from recent mining from historical mining.</p> <p>The monitoring reports have detailed notable changes to pool water levels and other evidence of subsidence impacts such as iron staining or bedrock fractures. However, these confirmed impacts are not clearly demonstrate in plots/tables and get lost in the analysis. The difference between observed impacts and pre-mining/post-mining 'treatments' should be explored for relevant sites. As all the sites in the LW20-27 monitoring program are now in the post-mining phase, subset analyses would also be of interest at sites where impacts from subsidence have been confirmed, to identify whether macroinvertebrate communities have recovered to pre-mining conditions, particularly at sites where bedrock fractures have been remediated and water levels have stabilised.</p>

Item	Relevant performance measure/condition/prediction	Aquatic ecology specialist recommendations
		<p>Similarly, assessments of potential impacts from extraction of LWs 301-311 (as opposed to historical impact from LWs 20-27 or earlier mining), should be more clearly articulated.</p> <p>Where there is a confirmed subsidence impact at a site (i.e. changes to water levels, water quality or iron staining have been confirmed through surface water assessments or similar) and investigations/remediation has been undertaken in a previous sampling event, consider whether these known issues should be identified again as an exceedance of the performance measure.</p> <p>Consider potential impacts from iron staining on periphyton communities.</p>
Revision of the LW 311-316 BMP TARP	<p>Performance measure: Negligible impact on Threatened Species, Populations or Ecological Communities</p>	<p>Currently, the performance measure for aquatic biota, as outlined in the LW 311-316 BMP is related to threatened species. However, exceedance of the TARP (even at level 3, where a long-term change to macrophyte / macroinvertebrate richness is identified due to mining influence) does not imply impacts to threatened species. There were no potential threatened aquatic macrophyte species of concern identified in relation to the Metropolitan Coal Project (Bio-Analysis 2008). For macroinvertebrates, there is a small chance of Sydney Hawk or Adam's Emerald Dragonfly occurring but there have been no records in the area. Therefore, it is misleading, in regards to the risk to threatened aquatic species, populations and communities, to have changes in macrophyte or macroinvertebrate community structure identified as exceedances of this performance measure. It is recommended that the performance indicator, that is linked this performance measure is revised to be more specific about identifying potential impacts to Sydney Hawk or Adam's Emerald Dragonfly. This process is already in place for existing monitoring locations relating to mining of LWs 20-27 (i.e. screening macroinvertebrate data for these species), as documented in the Bio-Analysis aquatic ecology monitoring reports. However, this process should be formalised through revision of the TARP.</p> <p>Assessments relating to threatened amphibians in the Audit Period have determined no significant impact would be expected to threatened frogs from observed changes in macroinvertebrate and macrophyte communities. Therefore, it is recommended to remove this as a required investigation when there is an exceedance of the Performance indicator relating to changes in macroinvertebrate and macrophyte assemblages.</p>
	<p>Performance indicator: The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence</p>	<p>Regardless of their conservation status, macroinvertebrate / macrophyte communities are important as necessary components of healthy aquatic ecosystems. Expectations of DPI Fisheries in regards to activities influencing watercourses include minimising impacts to what is termed "key fish habitat", in addition to avoiding impacts to threatened aquatic species, populations (DPI Fisheries 2013). Therefore, despite the above recommendation to revise the performance indicator related to the performance measure on threatened species, it is appropriate to retain the performance indicator and associated monitoring. A new performance measure could be identified that is not linked to threatened species, with revised TARP levels. It is recommended that a definition of "long-term" (e.g. four consecutive sampling events) be identified so that there is a clearer threshold for determination of an exceedance.</p> <p>It is recommended that the TARP wording be revised to consider performance criteria for impacts from mining recent (i.e. the longwalls that are the subject of the extraction plan), in addition to / as an alternative to impacts from historical mining, most of which have been identified previously as exceedances.</p>

Item	Relevant performance measure/condition/prediction	Aquatic ecology specialist recommendations
Baseline macroinvertebrate/macrophyte monitoring in watercourses relevant to future mining areas	Performance indicator: The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence	Where there is the opportunity to collect baseline macrophyte/macroinvertebrate data in watercourses associated with future mining area, this should be undertaken. In addition to capturing information on macroinvertebrate/macroinvertebrate communities under environmental conditions as relevant as possible to the time of mining, baseline macroinvertebrate monitoring is also important to identify the presence (although considered unlikely) of threatened Sydney Hawk or Adam's Emerald Dragonfly, prior to mining activities. In cases where aquatic ecology monitoring is considered to be impractical due to site conditions (e.g. in the Woronora Reservoir full supply level), this should be stated in the BMP and aquatic ecology monitoring reports. It is acknowledged that other relevant monitoring is undertaken that may be used as a surrogate for assessing potential impacts to aquatic biota, including monitoring of water quality and quantity (including WaterNSW monitoring in Woronora Reservoir) and riparian vegetation.

8. Summary of review

A review of the aquatic ecology monitoring program and from surveys in the Audit Period (1 January 2021 to 28 February 2024) was undertaken by an aquatic ecology specialist. The review identified that, in general, the monitoring program and survey effort was thorough and suitable for identifying potential subsidence impacts associated with LWs 20-27.

Aquatic ecology monitoring in the Woronora Reservoir full supply level is considered impractical due to the fluctuations in conditions with changing supply level and, therefore, monitoring isn't able to be conducted above longwalls LW 306-309 (i.e. longwalls extracted during the Audit Period). Monitoring in Waratah Rivulet, Eastern Tributary and associated tributaries (i.e. the monitoring program established for LWs 20-27) has been continued to identify impacts (although unlikely) to aquatic ecology in these upstream watercourses during mining of the LW 301-311 series. In addition, there are established water quality and quantity monitoring locations in these areas and procedures for determining potential impact from mining on the Woronora Reservoir which may be appropriate as surrogates for aquatic ecology monitoring. These monitoring programs are considered further in the surface water specialist report.

Recommendations have been made for changes to the assessment methodology and TARP given the reduced potential for impacts to watercourses following completion of extraction in LWs 20-27.

9. References

- Bio-Analysis (2024b) Autumn 2022 Longwalls 20-27 Aquatic Ecology Monitoring. Report prepared for Metropolitan Coal.
- Bio-Analysis (2024a) Spring 2022 Longwalls 20-27 Aquatic Ecology Monitoring. Report prepared for Metropolitan Coal.
- Bio-Analysis (2023) Autumn 2022 Longwalls 20-27 Aquatic Ecology Monitoring. Report prepared for Metropolitan Coal.
- Bio-Analysis (2022a) Autumn 2021 Longwalls 20-27 Aquatic Ecology Monitoring. Report prepared for Metropolitan Coal.
- Bio-Analysis (2022b) Spring 2021 Longwalls 20-27 Aquatic Ecology Monitoring. Report prepared for Metropolitan Coal.
- Bio-Analysis (2021) Spring 2020 Longwalls 20-27 Aquatic Ecology Monitoring. Report prepared for Metropolitan Coal.
- Bio-Analysis (2008) Metropolitan Coal Project Aquatic Ecology Assessment. Accessed from: **Microsoft Word - 00232753.doc**
- Bruce, A., Gowns, I. and Gehrke, P. 2001. Woronora River Macquarie Perch Survey, NSW Fisheries Office of Conservation, Cronulla, NSW, Australia. Accessed from **https://www.dpi.nsw.gov.au/data/assets/pdf_file/0009/545616/FFRS-32_Bruce-et-al-2001.pdf**
- Cenwest Environmental Services (2022) Metropolitan Coal: An assessment of subsidence impacts associated with Longwalls 20-27 and Longwalls 301-306, on Aquatic Ecology Monitoring Locations, ET2, ET4 and WT3; (control sites: OC-1, WR1, WR2) and likely impacts on Threatened Fauna. *Report prepared for Metropolitan Coal and attached as an appendix to the 2021 Annual Review Report.*
- DPI (2013) *Policy and guidelines for fish habitat conservation and management* (DPI Fisheries 2013). Accessed from **https://www.dpi.nsw.gov.au/data/assets/pdf_file/0009/468927/Policy-and-guidelines-for-fish-habitat.pdf**
- Ecoplaning (2023) Subsidence Impacts on Threatened Flora Species on Waratah Rivulet and the Eastern Tributary. Report prepared for Metropolitan Coal.
- DPI Fisheries (2016) Primefact 184: Sydney Hawk Dragonfly – *Austrocordulia leonardi*, Second edition. Accessed from: **https://www.dpi.nsw.gov.au/data/assets/pdf_file/0008/635570/sydney-hawk-dragonfly.pdf**
- DPI Fisheries (2013) Primefact 187: Adam's Emerald Dragonfly - *Archaeophya adamsi*, Third edition. Accessed from: **https://www.dpi.nsw.gov.au/data/assets/pdf_file/0003/635313/Adams-Emerald-Dragonfly-Archaeophya-adamsi.pdf**
- Environment Protection Agency (2025) Environment Protection Licence 767: METROPOLITAN COLLIERIES PTY. LTD. Version 22-Mar-2025. Accessed from: **<https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=323522&SYSUID=1&LICID=767>**
- Environment Protection Agency (2024) Environment Protection Licence 767: METROPOLITAN COLLIERIES PTY. LTD. Version 22-Mar-2025. Accessed from: **[767.pdf](#)**
- Metropolitan Coal (2024a) Metropolitan Coal 2023 Annual Review.
- Metropolitan Coal (2024b) Longwalls 311-316– Biodiversity Management Plan. Accessed from **[4-Appendix-C-LW-311-316-Extraction-Plan-Biodiversity-MP.pdf](#)**
- Metropolitan Coal (2023) Metropolitan Coal 2022 Annual Review.
- Metropolitan Coal (2022) Metropolitan Coal 2021 Annual Review.
- Metropolitan Coal (2018) Catchment Monitoring Program. Accessed from: **[Catchment-Monitoring-Program-\(Version-F\)-\(CMP-R01-F\).pdf](#)**

Appendices

Appendix A

Appointment of expert – Zoe Lagerroth

NSW Planning ref: MP08_0149-PA-110

Stephen Love
Environment & Community Superintendent
Metropolitan Collieries Pty Ltd
Metropolitan Coal Off Parkes Street
HELENSBURGH, NSW 2508
30/01/2025

Sent via the Major Projects Portal only

Subject: Metropolitan Coal - Auditor 2025

Dear Mr Love

I refer to your letter of 30 January 2025 seeking approval of Ms Zoe Lagerroth of GHD as an alternative aquatic ecology expert for the upcoming Independent Environmental Audit of Metropolitan Coal Project (the project), in accordance with Schedule 7, Condition 8 of project approval MP 08_0149, as modified (the approval).

Having considered the qualifications and experience of Ms Lagerroth, the Planning Secretary endorses the appointment of Ms Lagerroth to undertake aquatic ecology part of the audit in accordance with Schedule 7, Condition 8 of the approval. This approval is conditional on Ms Lagerroth being independent of the project.

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

The audit is to be conducted in accordance with AS/NZS ISO 19011 Australian/New Zealand Standard: Guidelines for quality and/or environmental management systems auditing and you may wish to consider the Audit Post Approval Requirements (Department 2020 or as updated). A copy of this guideline can be located at <http://planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/Integrated-Mining-Policy>.

The audit report is to include the following:

- consultation with the relevant agencies;
- a compliance table indicating the compliance status of each condition of approval and any relevant EPL;
- not use the term “partial compliance”;
- recommend actions in response to non-compliances;
- review the adequacy of plans and programs required under this consent; and

- identify opportunities for improved environmental management and performance.

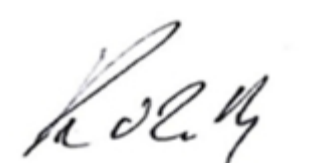
Within six weeks of completing of this audit, Metropolitan is to submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report and a timetable to implement the recommendations.

Prior to submitting the audit report to the Planning Secretary, it is recommended that Metropolitan review the report to ensure it complies with the relevant approval condition.

Failure to meet these requirements will require revision and resubmission of the Audit Report.

Should you have any enquiries in relation to this matter, please contact Georgia Dragicevic, Senior Compliance Officer, on (02) 4247 1852 or by email to Georgia.Dragicevic@planning.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read "K. O'Reilly".

Katrina O'Reilly
Team Leader - Compliance
Compliance

As nominee of the Planning Secretary

Appendix B

**Site photographs from inspection on
21/03/2025**



Photo B.1 **Camp Gully Creek, downstream of Metropolitan Coal. Photo taken 21 March 2025.**



Photo B.2 *Iron reducing bacteria in Waratah Rivulet - Potential evidence of subsidence influence. Photo taken 21 March 2025.*



Photo B.3 *Remediated bed fracture in Waratah Rivulet. Photo taken 21 March 2025.*



Photo B.4 Pool holding water (WRS4), following remediation of bed fractures. Photo taken 21 March 2025.



Photo B.5 Water flowing across causeway at remediated pool on Eastern Tributary. Photo taken 21 March 2025.

Appendix C

TARP responses from monitoring reports

The assessment against the performance criteria, as outlined in the Bio-Analysis biannual monitoring reports for the Audit Period are reproduced below.

Table C.1 **Assessment of environmental performance – spring 2020 (reproduced from Bio-Analysis 2021)**

Performance Measure	Performance Indicator	Monitoring Site(s) being Assessed	Parameters	Highest Significance Level Trigger Recorded		Comments	Subsidence Impact Performance Indicator Exceeded?	Action/Response
Monitoring of Aquatic Biota, Stream Monitoring								
Negligible impact on Threatened Species, Populations, or Ecological Communities ⁴	The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence	Two sampling sites (approximately 100 m in length) at the following locations: <ul style="list-style-type: none">Location WT3 on Waratah Rivulet and Locations ET1, ET3 and ET4 on the Eastern Tributary overlying Longwalls (LW) 20-27.Location WT4 on Waratah Rivulet adjacent to LW 20-27.Location WT5 on the Waratah Rivulet and Location ET2 on the Eastern Tributary, downstream of LW 20-27.Control Locations: WR1 on Woronora River; and OC on O'Hares Creek.	<ul style="list-style-type: none">Aquatic macroinvertebratesAquatic macrophytes	Level 1	Data analysis indicates no significant changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Locations WT4, WT5, ET1 and ET3.	No	Continue monitoring. Six monthly reporting.
				Level 2	Data analysis indicates significant (not long-term ³), changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location ET2: significant change in assemblage of macroinvertebrates detected in spring 2019 and subsequent surveys. Location ET4: significant change to assemblage of macroinvertebrates detected since spring 2019; decreased numbers of Atyidae in autumn 2016, spring 2018, spring 2019 and autumn 2020, but not spring 2020.	No	Consider recent stream feature mapping results and pool water level monitoring data. Consider status/progress of stream remediation activities. Six monthly reporting.
				Level 3	Data analysis indicates significant long-term ³ changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location WT3: altered diversity of macroinvertebrate taxa in spring 2016, autumn 2018 and subsequent surveys, including spring 2020. Location ET2: altered numbers of Atyidae in spring 2015, between autumn 2016 and autumn 2018, in autumn 2020 and in spring 2020; Location ET4: altered patterns of diversity of macroinvertebrate taxa since autumn 2018; altered macrophyte assemblage since autumn 2018.	Yes	Assessment against the performance measure triggered in spring 2020. Consider the need for management measures (i.e. stream remediation).

¹ Pre-mining data is as follows: sites WT3 and ET1 (spring 2008 to autumn 2010); site ET3 (spring 2009 to autumn 2010); site ET4 (spring 2009 to spring 2013); site ET2 (will be assessed for two periods: spring 2008 to autumn 2010 [i.e. pre-mining of Longwalls 20-22] and spring 2009 to spring 2013 [i.e. pre-mining of Longwalls 23-27]).

² Post-extraction data is represented as follows: sites WT3 and ET1 (from spring 2010 on); site ET3 (from spring 2010 on); site ET4 (from autumn 2014 on) site ET2 (will be assessed for two periods: spring 2010 on [Longwalls 20-22] and autumn 2014 on [Longwalls 23-27]).

³ Long-term changes to the macroinvertebrate and macrophyte assemblages are considered to be significant changes that are persistent (over time) and resulting from mining.

⁴ Threatened species, populations and ecological communities include those listed under the BC Act, EPBC Act or Fisheries Management Act at the time of Project Approval (i.e. the lists current as at 22 June 2009).

Table C.2 Assessment of environmental performance – autumn 2021 (reproduced from Bio-Analysis 2022a)

Performance Measure	Performance Indicator	Monitoring Site(s) being Assessed	Parameters	Highest Significance Level/Trigger Recorded		Comments	Subsidence Impact Performance Indicator Exceeded?	Action/Response
Monitoring of Aquatic Biota, Stream Monitoring								
Negligible impact on Threatened Species, Populations, or Ecological Communities ⁴	The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence	Two sampling sites (approximately 100 m in length) at the following locations: <ul style="list-style-type: none">Location WT3 on Waratah Rivulet and Locations ET1, ET3 and ET4 on the Eastern Tributary overlying Longwalls (LW) 20-27.Location WT4 on Waratah Rivulet adjacent to LW 20-27.Location WT5 on the Waratah Rivulet and Location ET2 on the Eastern Tributary, downstream of LW 20-27.Control Locations: WR1 on Woronora River, and OC on O'Hares Creek.	<ul style="list-style-type: none">Aquatic macroinvertebratesAquatic macrophytes	Level 1	Data analysis indicates no significant changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Locations WT4, WT5, ET1 and ET3.	No	Continue monitoring. Six monthly reporting.
				Level 2	Data analysis indicates significant (not long-term ³), changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location ET2: significant change in assemblage of macroinvertebrates detected during spring 2019 and subsequent surveys. Significant change to the assemblage of macrophytes during autumn 2021. Location ET4: significant change to assemblage of macroinvertebrates detected in spring 2019 and subsequent surveys; decreased numbers of <i>Atyidae</i> in autumn 2016, spring 2018, spring 2019 and autumn 2020, but not during spring 2020 or autumn 2021.	No	Consider recent stream features mapping results and pool water level monitoring data. Consider status/progress of stream remediation activities. Six monthly reporting.
				Level 3	Data analysis indicates significant long-term ³ changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location WT3: altered diversity of macroinvertebrate taxa in spring 2016, autumn 2018 and subsequent surveys, including autumn 2021. Location ET2: altered numbers of <i>Atyidae</i> in spring 2015, between autumn 2016 and autumn 2018, in autumn 2020, spring 2020 and autumn 2021; Location ET4: altered patterns of diversity of macroinvertebrate taxa since autumn 2018; altered macrophyte assemblage since autumn 2018.	Yes	Assessment against the performance measure triggered in autumn 2021. Conduct performance measure assessment and consider the need for management measures (i.e. stream remediation).

¹ Pre-mining data is as follows: sites WT3 and ET1 (spring 2008 to autumn 2010); site ET3 (spring 2009 to autumn 2010); site ET4 (spring 2009 to spring 2013); site ET2 (will be assessed for two periods: spring 2008 to autumn 2010 [i.e. pre-mining of Longwalls 20-22] and spring 2009 to spring 2013 [i.e. pre-mining of Longwalls 23-27]).

² Post-extraction data is represented as follows: sites WT3 and ET1 (from spring 2010 on); site ET3 (from spring 2010 on); site ET4 (from autumn 2014 on) site ET2 (will be assessed for two periods: spring 2010 on [Longwalls 20-22] and autumn 2014 on [Longwalls 23-27]).

³ Long-term changes to the macroinvertebrate and macrophyte assemblages are considered to be significant changes that are persistent (over time) and resulting from mining.

⁴ Threatened species, populations and ecological communities include those listed under the BC Act, EPBC Act or Fisheries Management Act at the time of Project Approval (i.e. the lists current as at 22 June 2009).

Table C.3 **Assessment of environmental performance – spring 2021 (reproduced from Bio-Analysis 2022b)**

Performance Measure	Performance Indicator	Monitoring Site(s) being Assessed	Parameters	Highest Significance Level/Trigger Recorded		Comments	Subsidence Impact Performance Indicator Exceeded?	Action/Response
Monitoring of Aquatic Biota, Stream Monitoring								
Negligible impact on Threatened Species, Populations, or Ecological Communities ⁴	The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence	Two sampling sites (approximately 100 m in length) at the following locations: <ul style="list-style-type: none">Location WT3 on Waratah Rivulet and Locations ET1, ET3 and ET4 on the Eastern Tributary overlying Longwalls (LW) 20-27.Location WT4 on Waratah Rivulet adjacent to LW 20-27.Location WT5 on the Waratah Rivulet and Location ET2 on the Eastern Tributary, downstream of LW 20-27.Control Locations: WR1 on Woronora River; and OC on O'Hares Creek.	<ul style="list-style-type: none">Aquatic macroinvertebratesAquatic macrophytes	Level 1	Data analysis indicates no significant changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Locations WT4 and WT5, ET1 and ET3.	No	Continue monitoring. Six monthly reporting.
				Level 2	Data analysis indicates significant (not long-term ³), changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location WT3: significant decline in mean numbers of Atyidae during spring 2021. Location ET2: significant change to the assemblage of macrophytes during autumn and spring 2021. Location ET4: significant change to assemblage of macroinvertebrates detected in spring 2019 and subsequent surveys; decreased numbers of Atyidae in autumn 2016, spring 2018, spring 2019 and autumn 2020, but not subsequently.	No	Consider recent stream features mapping results and pool water level monitoring data. Consider status/progress of stream remediation activities. Six monthly reporting.
				Level 3	Data analysis indicates significant long-term ³ changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location WT3: altered diversity of macroinvertebrate taxa in spring 2016, autumn 2018 and subsequent surveys, including spring 2021. Location ET2: significant change in assemblages of macroinvertebrates observed in spring 2019 and by subsequent surveys. Altered numbers of Atyidae in spring 2015, between autumn 2016 and autumn 2018, in autumn 2020 and subsequent surveys, including spring 2021. Location ET4: altered patterns of diversity of macroinvertebrate taxa since autumn 2018; altered macrophyte assemblage since autumn 2018.	Yes	Assessment against the performance measure triggered in autumn 2021. Conduct performance measure assessment and consider the need for management measures (i.e. stream remediation).

¹ Pre-mining data is as follows: sites WT3 and ET1 (spring 2008 to autumn 2010); site ET3 (spring 2009 to autumn 2010); site ET4 (spring 2009 to spring 2013); site ET2 (assessed for two periods: spring 2008 to autumn 2010 [i.e. pre-mining of Longwalls 20-22] and spring 2009 to spring 2013 [i.e. pre-mining of Longwalls 23-27]).

² Post-extraction data is represented as follows: sites WT3 and ET1 (from spring 2010 on); site ET3 (from spring 2010 on); site ET4 (from autumn 2014 on) site ET2 (assessed for two periods: spring 2010 on [Longwalls 20-22] and autumn 2014 on [Longwalls 23-27]).

³ Long-term changes to the macroinvertebrate and macrophyte assemblages are considered to be significant changes that are persistent (over time) and resulting from mining.

⁴ Threatened species, populations and ecological communities include those listed under the BC Act, EPBC Act or Fisheries Management Act at the time of Project Approval (i.e. the lists current as at 22 June 2009).

Table C.4 **Assessment of environmental performance – autumn 2022 (reproduced from Bio-Analysis 2023)**

Performance Measure	Performance Indicator	Monitoring Site(s) being Assessed	Parameters	Highest Significance Level/Trigger Recorded		Comments	Subsidence Impact Performance Indicator Exceeded?	Action/Response
Monitoring of Aquatic Biota, Stream Monitoring								
Negligible impact on Threatened Species, Populations, or Ecological Communities ⁴	The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence	Two sampling sites (approximately 100 m in length) at the following locations: <ul style="list-style-type: none">Location WT3 on Waratah Rivulet and Locations ET1, ET3 and ET4 on the Eastern Tributary overlying Longwalls (LW) 20-27.Location WT4 on Waratah Rivulet adjacent to LW 20-27.Location WT5 on the Waratah Rivulet and Location ET2 on the Eastern Tributary, downstream of LW 20-27.Control Locations: WR1 on Woronora River; and OC on O'Hares Creek.	<ul style="list-style-type: none">Aquatic macroinvertebratesAquatic macrophytes	Level 1	Data analysis indicates no significant changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Locations WT4 and WT5 and ET3.	No	Continue monitoring. Six monthly reporting.
				Level 2	Data analysis indicates significant (not long-term ³), changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location ET1: significant decline in mean numbers of Atyidae during autumn 2022. Location WT3: significant decline in mean numbers of Atyidae during spring 2021 and autumn 2022. Location ET2: significant change to the assemblage of macrophytes during autumn and spring 2021 and autumn 2022. Location ET4: significant change to assemblage of macroinvertebrates detected in spring 2019 and subsequent surveys; decreased numbers of Atyidae in autumn 2016, spring 2018, spring 2019 and autumn 2020, but not subsequently.	No	Consider recent stream features mapping results and pool water level monitoring data. Consider status/progress of stream remediation activities. Six monthly reporting.
				Level 3	Data analysis indicates significant long-term ³ changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location WT3: altered diversity of macroinvertebrate taxa in spring 2016, autumn 2018 and subsequent surveys, including autumn 2022. Location ET2: significant change in assemblages of macroinvertebrates observed in spring 2019 and by subsequent surveys. Altered numbers of Atyidae in spring 2015, between autumn 2016 and autumn 2018, between autumn 2020 and autumn 2022. Location ET4: altered patterns of diversity of macroinvertebrate taxa since autumn 2018; altered macrophyte assemblage since autumn 2018.	Yes	Assessment against the performance measure triggered in autumn 2021. Conduct performance measure assessment and consider the need for management measures (i.e. stream remediation).

¹ Pre-mining data is as follows: sites WT3 and ET1 (spring 2008 to autumn 2010); site ET3 (spring 2009 to autumn 2010); site ET4 (spring 2009 to spring 2013); site ET2 (assessed for two periods: spring 2008 to autumn 2010 [i.e. pre-mining of Longwalls 20-22] and spring 2009 to spring 2013 [i.e. pre-mining of Longwalls 23-27]).

² Post-extraction data is represented as follows: sites WT3 and ET1 (from spring 2010 on); site ET3 (from spring 2010 on); site ET4 (from autumn 2014 on) site ET2 (assessed for two periods: spring 2010 on [Longwalls 20-22] and autumn 2014 on [Longwalls 23-27]).

³ Long-term changes to the macroinvertebrate and macrophyte assemblages are considered to be significant changes that are persistent (over time) and resulting from mining.

⁴ Threatened species, populations and ecological communities include those listed under the BC Act, EPBC Act or Fisheries Management Act at the time of Project Approval (i.e. the lists current as at 22 June 2009).

Table C.5 **Assessment of environmental performance – spring 2022 (reproduced from Bio-Analysis 2024a)**

Performance Measure	Performance Indicator	Monitoring Site(s) being Assessed	Parameters	Highest Significance Level/Trigger Recorded		Comments	Subsidence Impact Performance Indicator Exceeded?	Action/Response
Monitoring of Aquatic Biota, Stream Monitoring								
Negligible impact on Threatened Species, Populations, or Ecological Communities ⁴	The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence	Two sampling sites (approximately 100 m in length) at the following locations: <ul style="list-style-type: none">Location WT3 on Waratah Rivulet and Locations ET1, ET3 and ET4 on the Eastern Tributary overlying Longwalls (LW) 20-27.Location WT4 on Waratah Rivulet adjacent to LW 20-27.Location WT5 on the Waratah Rivulet and Location ET2 on the Eastern Tributary, downstream of LW 20-27.Control Locations: WR1 on Woronora River; and OC on O'Hares Creek.	<ul style="list-style-type: none">Aquatic macroinvertebratesAquatic macrophytes	Level 1	Data analysis indicates no significant changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Locations WT4 and WT5 and ET3.	No	Continue monitoring. Six monthly reporting.
				Level 2	Data analysis indicates significant (not long-term ³), changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location ET1: significant decline in mean numbers of Atyidae during autumn and spring 2022. Location WT3: significant decline in mean numbers of Atyidae during spring 2021, autumn and spring 2022. Location ET2: significant change to the assemblage of macrophytes during autumn 2021 and subsequent surveys. Location ET4: decreased numbers of Atyidae in autumn 2016, spring 2018, spring 2019 and autumn 2020, but not subsequently.	No	Consider recent stream features mapping results and pool water level monitoring data. Consider status/progress of stream remediation activities. Six monthly reporting.
				Level 3				

Table C.6 **Assessment of environmental performance – spring 2022 continued (reproduced from Bio-Analysis 2024a)**

Performance Measure	Performance Indicator	Monitoring Site(s) being Assessed	Parameters	Highest Significance Level/Trigger Recorded	Comments	Subsidence Impact Performance Indicator Exceeded?	Action/Response
Monitoring of Aquatic Biota, Stream Monitoring							
Data analysis indicates significant long-term ³ changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.				Location WT3: altered diversity of macroinvertebrate taxa in spring 2016, autumn 2018 and subsequent surveys, including spring 2022.	Yes	Assessment against the performance measure triggered in autumn 2021.	Conduct performance measure assessment and consider the need for management measures (i.e. stream remediation).
				Location ET2: significant change in assemblages of macroinvertebrates observed in spring 2019 and by subsequent surveys. Altered numbers of Atyidae between spring 2015 and autumn 2018, between autumn 2020 and autumn 2022, but not during spring 2022.			
				Location ET4: significant change to assemblage of macroinvertebrates detected in spring 2019 and subsequent surveys; altered patterns of diversity of macroinvertebrate taxa since autumn 2018; altered macrophyte assemblage since autumn 2018.			

Table C.7 Assessment of environmental performance – autumn 2023 (reproduced from Bio-Analysis 2024b)

Performance Measure	Performance Indicator	Monitoring Site(s) being Assessed	Parameters	Highest Significance Level/Trigger Recorded		Comments	Subsidence Impact Performance Indicator Exceeded?	Action/Response
Monitoring of Aquatic Biota, Stream Monitoring								
Negligible impact on Threatened Species, Populations, or Ecological Communities ⁴	The aquatic macroinvertebrate and macrophyte assemblages in streams are not expected to experience long-term impacts as a result of mine subsidence	Two sampling sites (approximately 100 m in length) at the following locations: <ul style="list-style-type: none">Location WT3 on Waratah Rivulet and Locations ET1, ET3 and ET4 on the Eastern Tributary overlying Longwalls (LW) 20-27.Location WT4 on Waratah Rivulet adjacent to LW 20-27.Location WT5 on the Waratah Rivulet and Location ET2 on the Eastern Tributary, downstream of LW 20-27.Control Locations: WR1 on Woronora River; and OC on O'Hares Creek.	<ul style="list-style-type: none">Aquatic macroinvertebratesAquatic macrophytes	Level 1	Data analysis indicates no significant changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Locations WT4 and WT5 and ET3.	No	Continue monitoring. Six monthly reporting.
				Level 2	Data analysis indicates significant (not long-term ³), changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location ET1: significant decline in mean numbers of Atyidae during autumn and spring 2022 and autumn 2023. Location WT3: significant decline in mean numbers of Atyidae during spring 2021, autumn and spring 2022 and autumn 2023. Location ET2: significant change to the assemblage of macrophytes during autumn 2021 and subsequent surveys. Location ET4: decreased numbers of Atyidae in autumn 2016, spring 2018, spring 2019 and autumn 2020, but not subsequently.	No	Consider recent stream features mapping results and pool water level monitoring data. Consider status/progress of stream remediation activities. Six monthly reporting.
				Level 3	Data analysis indicates significant long-term ³ changes in relation to control places pre-mining ¹ compared to post-extraction ² occur in the aquatic macroinvertebrate and/or macrophyte indicators at Locations WT3, WT4 or WT5 on the Waratah Rivulet or Locations ET1, ET2, ET3 or ET4 on the Eastern Tributary during the mining of LW305-307.	Location WT3: altered diversity of macroinvertebrate taxa in spring 2016, autumn 2018 and subsequent surveys, including autumn 2023. Location ET2: significant change in assemblages of macroinvertebrates observed in spring 2019 and by subsequent surveys. Altered numbers of Atyidae between spring 2015 and autumn 2018, between autumn 2020 and autumn 2022, but not during spring 2022 or autumn 2023. Location ET4: significant change to assemblage of macroinvertebrates detected in spring 2019 and subsequent surveys; altered patterns of diversity of macroinvertebrate taxa since autumn 2018; altered macrophyte assemblage since autumn 2018.	Yes	Assessment against the performance measure triggered in autumn 2021. Conduct performance measure assessment and consider the need for management measures (i.e. stream remediation).

¹ Pre-mining data is as follows: sites WT3 and ET1 (spring 2008 to autumn 2010); site ET3 (spring 2009 to autumn 2010); site ET4 (spring 2009 to spring 2013); site ET2 (assessed for two periods: spring 2008 to autumn 2010 [i.e. pre-mining of Longwalls 20-22] and spring 2009 to spring 2013 [i.e. pre-mining of Longwalls 23-27]).

² Post-extraction data is represented as follows: sites WT3 and ET1 (from spring 2010 on); site ET3 (from spring 2010 on); site ET4 (from autumn 2014 on) site ET2 (assessed for two periods: spring 2010 on [Longwalls 20-22] and autumn 2014 on [Longwalls 23-27]).

³ Long-term changes to the macroinvertebrate and macrophyte assemblages are considered to be significant changes that are persistent (over time) and resulting from mining.

⁴ Threatened species, populations and ecological communities include those listed under the BC Act, EPBC Act or Fisheries Management Act at the time of Project Approval (i.e. the lists current as at 22 June 2009).



ghd.com

→ **The Power of Commitment**

Ditton Geotechnical Services Pty Ltd
80 Roslyn Avenue Charlestown NSW 2290
PO Box 5100 Kahibah NSW 2290



24 April 2025

Attention: Mr Ken Holmes
Principal Environmental Consultant
Barnett & May
PO Box 365 Belrose
NSW 2085

Report No. MET-001/1

Dear Ken,

Subject: Review of the 2021-2024 Triennial Independent Environmental Audit of the Metropolitan Mine, Helensburgh – Mine Subsidence Impact Management

As requested by Planning NSW, this letter provides a review of the mine subsidence impact management items discussed in the 2021-2023 Triennial Independent Environmental Audit of the Metropolitan Mine.

It is understood that the audit included the mining period from 1 January 2021 to 31 December 2023. The mine is currently operating under the Conditions of Consent (CoC) defined in the Metropolitan Coal Project Approval (08_0149 (Mod 3, dated 2 October 2013)).

The purpose of the review was to confirm that the outcomes of the audit or provide additional commentary if necessary. During the audit period, the mine was extracting longwalls 306 to 309 as described in the Approved Extraction Plans for LW305 to 307 and 308 to 310.

A Principal Geotechnical Engineer from Ditton Geotechnical Services (DgS) visited the site with other specialist environmental consultants on 21 March 2025. The Environment and Community Superintendent for the mine provided an overview of the mine's operations and environmental management during the audit period. A copy of the previously submitted Planning Approval Compliance Table was also provided.

The following sites were then inspected within the catchment of the Woronora Reservoir and previous mine subsidence affected areas:

- Upstream of Flat Rock Crossing from Pool G to Pool A on the Waratah Rivulet (WR) where Polyurethane (PUR) grout curtains had been installed to 10 m depth after LW1-18 impacts (see Photos 1 - 8)
- A similar grout curtain remediation site at Pool ETO on the Eastern Tributary (ET) to remediate impacts due to LW20 - 27 (see Photo 9)

- The dam wall and storage area of the Woronora Reservoir (see Photo 11)
- Several Surface water & Groundwater monitoring stations within the project area (see Photo 10)

It was noted during the inspections that the WR and ET had low water level flows with no obvious disruption to pools or rock bars evident. The catchment had recently experienced flooding with some bank erosion and vegetation impacts noted. The grout boreholes or previous rock bar cracks were not obvious with only a few areas of the watercourses still affected by iron staining and occasional loose sandstone boulders that had apparently been transported downstream during high flows. No methane gas bubbles were observed.

The items reviewed in the Compliance Table provided included the following assets and Performance Measures outlined in Table 1 from Schedule 3, Condition 1 of the Project Approval Conditions of Consent:

- Catchment Yield to Woronora Reservoir:
 - Negligible reduction to the quality or quantity of water resources reaching the Woronora Reservoir.
 - Negligible reduction in the water quality in the Woronora Reservoir.
 - Negligible leakage from the Woronora Reservoir.
- Waratah Rivulet between the full supply level of the Woronora Reservoir and the main gate of Longwall 23 (upstream of Pool P):
 - Negligible environmental consequences (that is, no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining, and minimal gas releases).
- Eastern Tributary between the full supply level of the Woronora Reservoir and the main gate of Longwall 26:
 - Negligible environmental consequences over at least 70% of the stream length (that is no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining and minimal gas release).
- Cliffs:
 - Less than 3% of the total length of cliffs (and associated overhangs) within the mining area experience mining induced rock fall.
- Aboriginal Heritage Sites:
 - Less than 10% of aboriginal heritage sites within the mining area are affected by subsidence impacts.
- Items of historical or heritage significance at the Garrawarra Centre:
 - Negligible damage (that is fine or hairline cracks that do not require repair), unless the owner of the item and the appropriate heritage authority agree otherwise in writing.
- Built Features:
 - Safe serviceable and repairable unless the owner agrees otherwise in writing.

- Specific Requirements for Further Modelling & Assessment:
 - If the subsidence effects and subsidence impacts of the project exceed the relevant predictions by more than 15% at any time after mining has progressed beyond the halfway mark of Longwall 21, or if the profile of vertical displacement does not reflect predictions, then the Proponent shall use appropriate numerical modelling to supplement the subsequent predictions of subsidence effects and subsidence impacts for the project to the satisfaction of the Director-General.

Note: The aim of the numerical modelling is to give a better insight into the mechanisms that may account for the differences between predicted and actual subsidence effects and impacts.

The amended sections of the Compliance Table are attached. In general, DgS agrees with the assessed levels of compliance and has provided additional commentary and references noted to further clarify the outcomes and sources of the assessment.

The performance indicators for most of items assessed demonstrate that the Mine is in compliance with the Performance Measures listed, except for the iron-staining impacts to Eastern Tributary. Based on the data collected to-date, it is apparent that the streamflow quantity and water quality have been steadily improving after remediation works along the tributary.

It is noted that the frequency of monitoring along the WR and ET has been increased in the LW311 to 316 Water Management Plan in response to the Independent Expert Advisory Panel for Mining on Water Quality Performance Measures in April 2023. A similar response has also been included in the Stream Remediation Plans.

No further actions to those already being proposed are considered necessary at this stage.

For and on behalf of

Ditton Geotechnical Services Pty Ltd



Steven Ditton
Principal Engineer and Director
BE(Civil/Hons) C.P.Eng(Civil), M.I.E.(Aust)
NPER 342140

Attachments:

Site Inspection Photos (21/03/25)

Updated Compliance Table (mine subsidence impact items only)

Site Inspection Photos (21/03/25)



Photo 1 – Pond G at Flat Rock Crossing on the Waratah Rivulet



Photo 2 – Downstream from Flat Rock Crossing on the Waratah Rivulet



Photo 3 – Grout Remediation Boreholes on Waratah Rivulet (WR Site 4)



Photo 4 – Pond F on Waratah Rivulet with Low Flow conditions



Photo 5 – Iron Staining in pond upstream from Flat Rock Crossing on the Waratah Rivulet



Photo 8 – Mature Iron Staining in Pond on Waratah Rivulet



Photo 6 – Pond upstream from Flat Rock Crossing on the Waratah Rivulet



Photo 9 – Grout remediated Pond ETO on the Eastern Tributary



Photo 7 - Pond upstream from Flat Rock Crossing on the Waratah Rivulet



Photo 10 – Deep Groundwater Monitoring Site



**Photo 11 – Woronora Reservoir Dam
Wall & Storage Area**

Planning Approval Compliance Table

Appendix A

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
SCHEDULE 2 ADMINISTRATIVE CONDITIONS								
Sch 1 Cond 1	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the Project.						
Sch 2 Cond 2	TERMS OF CONSENT	The Applicant shall carry out the development generally in accordance with the: (a) EA; (b) PPR; (c) EA (Mod 1; and (d) conditions of this consent.						
Sch 2 Cond 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 consent shall prevail to the extent of any inconsistency.						
Sch 2 Cond 4		The Proponent shall comply with any reasonable requirements of the Director-General arising from the Department's assessment of: <ul style="list-style-type: none"> any strategies, plans, programs, reviews, audits, or correspondence that are submitted in accordance with this approval; and the implementation of any actions or measures contained in these documents. 						
Sch 2 Cond 5	Mining Operations	The Proponent may undertake mining operations in the mining area for up to 23 years from the date of this approval.						
Sch 2 Cond 6	Coal Extraction	The Proponent shall not: a) extract more than 3.2 million tonnes of ROM coal from the mining area in a calendar year, or b) transport more than 2.8 million tonnes of product coal from the site in a calendar year.						
Sch 2 Cond 7	Coal Rejects	The Proponent shall not export any coal reject from the site after 2021 without the written approval of the Director-General.						
Sch 2 Cond 8		The Proponent shall not emplace coal reject on the surface of the site without the written approval of the Director-General. <i>Note: This condition applies to the Camp Gully Emplacement Area, as well/ as to the rest of the surface of the site. It does not apply to the proposed additional coal reject stockpile shown in Appendix 4.</i>						

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 2 Cond 9	STRUCTURAL ADEQUACY	The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structure, are constructed in accordance with: a) the relevant requirements of the BCA; and b) any additional requirements of the MSB in areas where subsidence effects are likely to occur.						
Sch 2 Cond 10	Demolition	The Applicant shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.						
Sch 2 Cond 11	Operation of Plant and Equipment	The Applicant shall ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.						
Sch 2 Cond 12	STAGED SUBMISSION OF STRATEGIES, PLANS OR PROGRAMS	With the approval of the Director-General, the Proponent may submit any strategies, plans or programs required by this approval on a progressive basis.						

PLANNING APPROVAL 08_0149									
Cond.	Short Title	Condition		Documents Reviewed	Interviews / Conversations	Inspection / Observations	Assessment	Compliance Finding	Recommendation
Sch 3 Cond 1	Performance Measures	The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 1 (below).							
	Table 1 Performance Measures	Asset	Measure	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Surface Water Review Metropolitan Coal Surface Water Review 1 January to 31 December 2023, prepared by ATC Williams. Water Quality Performance Measures for Metropolitan Coal Mine, prepared by the Independent Expert Advisory Panel for Mining, dated October 2023. <u>Metropolitan Coal LW305 -307 Water Management Plan (Mar 2020).</u> <u>Metropolitan Coal LW308 -310 Water Management Plan (Dec 2022).</u> <u>Metropolitan Coal LW311 -316 Water Management Plan (Nov 2024).</u> Six Monthly Groundwater Report 01 January to 30 June 2023, prepared by SLR Consultants.	<u>Environment and Community Superintendent – informed the specialist consultants on 21.03.25 of the performances of the Extraction Plans for LW305 – 307 & LW308 – 310.</u>	<u>Photographs 1 and 2 show Waratah Rivulet and an area of typical iron staining.</u> <u>Remediated sites on Waratah Rivulet (Ponds A, F) and Eastern Tributary (Pond ETO) were inspected on 21.03.25 during a period of low flow (after recent flooding). Minor Iron staining/mat floc, occasional disturbed sandstone boulders and grout repaired cracks were observed. Creek flows/ponding appeared to be ‘normal’.</u>	The 2021 and 2022 Annual Reviews reported that surface water flow was at Level 1 throughout each review period (i.e. ‘negligible’ impact on water quality). <u>Dissolved Al</u> uminum levels were at Level 3 during April 2021 and dissolved manganese were at Level 3 throughout the 2022 reporting period (i.e. exceeded the impact indicators). These exceedances were investigated by Associate Professor Barry Noller who concluded that the water quality data obtained is considered a ‘negligible’ impact on the waters of Woronora Reservoir. Dissolved manganese was at Level 3 from March to July 2023 and September to December 2023. A review of the monitoring data was undertaken by Associate Professor Barry Noller (<u>Queensland University</u>) who determined that while the subsidence impact performance indicator was exceeded, that the relevant performance measures were not exceeded, that is there was no significant reduction in water quality in the Woronora Reservoir over the audit period. <u>Water quality data from WaterNSW Woronora Reservoir monitoring site DW01 indicate that Total Iron & Aluminum Concentrations exceeded 20-year ARI baseline levels over 75% of the time in 2022 & 2023 (see further discussion below)</u> DPE sought the advice of the Independent Expert Advisory Panel for Mining on Water Quality Performance Measures for Metropolitan Coal Mine in April 2023. The Panel concluded: “The quality of the Woronora Reservoir has been poor during 2022-2023 (and during other periods historically) and has led to significant complications for water treatment and water supply. Although there are natural influences on water quality that might explain the observed variations in water quality, the Panel cannot rule out the possibility that the Metropolitan Mine has had a non-negligible adverse impact.” The Panel further concluded: “The assessments of the quality of water reaching the Woronora Reservoir presented by Peabody in response to level Level 3 triggers are not based on sufficient data and analysis and therefore do not provide sufficient justification and reasonable conclusions. The assessments do not adequately consider the potential significance of the impaired water quality for the WaterNSW Raw Water Supply Agreement and Water Quality Incident Management trigger levels”. The Panel subsequently made a series of recommendations to address the water quality monitoring issues. Based on the current Trigger Response Indicators, no significant impact has been identified, and therefore the Auditor s has have concluded that this performance measure has been met. However, the recommendations of the Panel should be implemented to improve the assessment of performance against the water quality indicators <u>in subsequent Water Management Plans for LW311-318. It is also noted that future longwalls will be moving further away from both streams and remediation of impacted sections are on-going. It is therefore anticipated that Water Quantity and Quality are likely to improve over the next 3 - 5 years.</u>	Complies	Recommendation for Improvement – implement all recommendations made by the Independent Expert Advisory Panel for Mining in their 2023 report <u>to be included in the LW311 to 318 Water Management Plans and Stream Remediation Plans.</u>
		Catchment yield to the Woronora Reservoir	Negligible reduction to the quality or quantity of water resources reaching the Woronora Reservoir. <u>Negligible reduction in the water quality of Woronora Reservoir</u> <u>No connective cracking between the surface and the mine.</u>						
		Woronora Reservoir	Negligible leakage from the Woronora Reservoir. Negligible reduction in the water quality of Woronora Reservoir <u>No connective cracking between the surface and</u>				The 2021, 2022 and 2023 Annual Reviews indicated that the Level 3 performance indicators were <u>not</u> exceeded for groundwater levels at <u>the five deep piezometer bores (PHGW2A, F6GGW4A, 9GGW2B, 9EGW2A, and PM02) in 2021 and 2022, and Level 3 Levels were triggered due to local groundwater depressions at the shallow piezometer b</u> bores T3 to T5 in 2021, 2022 and 2023 <u>(post LW305-308). However, hydraulic gradients were still maintained towards the Woronora Reservoir.</u>		

PLANNING APPROVAL 08_0149									
Cond.	Short Title	Condition		Documents Reviewed	Interviews / Conversations	Inspection / Observations	Assessment	Compliance Finding	Recommendation
			the mine.				An assessment against the performance measures was undertaken in their six-monthly report for the period 1 January to 30 June 2023 by SLR Consultants. SLR found that in 2020 “ <i>exceedances of the Level 3 trigger for the T3 performance indicator were a result of water levels within Woronora Reservoir increasing in response to rainfall events..... since this (time) the performance indicator has remained at Level 3. The increase in the Woronora Reservoir level in early 2022 has confirmed that the groundwater level at bore T3-R now also reflects the Woronora Reservoir level. Although an exceedance has occurred for the gradient between bore T3-R and the reservoir, there has not been a reversal of gradient to the Woronora Reservoir that would induce leakage from the reservoir (the performance measure) because the intervening bore T2 still shows a hydraulic gradient towards the reservoir</i> ”.	Complies	
Sch 3 Cond 1	Table 1 Performance Measures	Waratah Rivulet between the full supply level of the Woronora Reservoir and the main gate of Longwall 23 (upstream of Pool P).	Negligible environmental consequences (that is, no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining, and minimal gas releases).	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Surface Water Review Metropolitan Coal- Surface Water Review 1 January to 31- December 2023, prepared by ATC- Williams.			The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated negligible impacts on flow behavior in the Waratah Rivulet over the audit period.	Complies	
		Eastern Tributary between the full supply level of the Woronora Reservoir and the main gate of Longwall 26.	Negligible environmental consequences over at least 70% of the stream length (that is no diversion of flows, no change in the natural drainage behaviour of pools, minimal iron staining and minimal gas release.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Surface Water Review Metropolitan Coal Surface Water Review 1 January to 31- December 2023, prepared by ATC Williams.	Environment and Community Superintendent – the performance measure was exceeded on Eastern Tributary. Stream remediation works are ongoing and included PUR Grout Curtains to 10 m depth across well- Pools ETAH, AL, AM and AO. 1m deep grouting also completed at ETAQ & AR. Post-remediation flows are responding positively.		The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated ‘negligible’ impacts on flow behavior in the Eastern Tributary over the audit period, except for iron staining along the reach of the Eastern Tributary. Iron staining/flocculent is present at a number of stream features between the main gate of Longwall 26 and the full supply level of the Woronora Reservoir. Metropolitan has committed to monitoring the nature and extent of iron staining on the Eastern Tributary during the mining of Longwalls 305-3037. Metropolitan Coal to implement contingency measures (stream remediation measures) in accordance with the Project Approval.	Non-Compliance	Continue with the implementation of iron staining source investigation, remediation, and monitoring in accordance with the Approved Metropolitan Coal Stream Remediation Plan.
		Threatened species, populations, or ecological communities.	Negligible impact.					Complies	
		Swamps 76, 77 and 92.	Set through Condition 4 below					Complies	
Sch 3 Cond 1	Table 1 Performance Measures	Cliffs	Less than 3% of the total length of cliffs (and associated overhangs) within the mining area experience mining induced rock fall.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated negligible impacts cliffs over the audit period.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition		Documents Reviewed	Interviews / Conversations	Inspection / Observations	Assessment	Compliance Finding
		Aboriginal heritage sites	Less than 10% of aboriginal heritage sites within the mining area are affected by subsidence impacts.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Monitoring of Aboriginal Cultural Heritage Sites Longwall 305-307 Round 2 Metropolitan Colliery Wollongong City Council Local Government Area Prepared for Peabody Energy Australia – Metropolitan Colliery, prepared by Niche Environment and Heritage, dated 22 March 2023.	Environment and Community Superintendent - To date, two heritage sites have been affected by subsidence impacts as a result of cracking of sandstone that coincides with Aboriginal art, which represents less than 2% of sites in the mining area.		The 2021, 2022 and 2023 Annual Reviews and referenced specialists report indicated two indigenous heritage sites have been impacted by subsidence. Those sites represent less than 10% of the sites identified in the subsidence areas.	Complies
		Items of historical or heritage significance at the Garrawarra Centre.	Negligible damage (that is fine or hairline cracks that do not require repair), unless the owner of the item and the appropriate heritage authority agree otherwise in writing.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated no significant impacts on historical heritage sites or the Garrawarra Centre over the audit period.	Complies
		Built Features	Safe serviceable and repairable unless the owner agrees otherwise in writing.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review			The 2021, 2022 and 2023 Annual Reviews (and referenced specialists report) indicated no significant impacts on built features over the audit period.	Complies

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 3 Cond 2	Catchment Monitoring Program	The Proponent shall prepare and implement a comprehensive Catchment Monitoring Program for the project to the satisfaction of the Director- General. This program must: (a) be prepared by suitably qualified and experienced experts whose appointment has been endorsed by the Director-General;						
		(b) be prepared in consultation with NOW, SCA and OEH;						
		(c) be approved by the Director-General before the Proponent is allowed to carry out any second workings in the mining area; and						

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		(d) include: <ul style="list-style-type: none"> detailed baseline data of the existing surface and groundwater resources in the project area; program for the ongoing development and use of appropriate surface and groundwater models for the project; and a program to: <ul style="list-style-type: none"> monitor and assess any impacts of the project on the quantity and quality of surface and ground water resources in the project area, and in particular the catchment yield to the Woronora Reservoir; and validate and calibrate the surface and groundwater models. 						
Sch 3 Cond 3	Specific Requirements for Further Modelling & Assessment	If the subsidence effects and subsidence impacts of the project exceed the relevant predictions by more than 15% at any time after mining has progressed beyond the halfway mark of Longwall 21, or if the profile of vertical displacement does not reflect predictions, then the Proponent shall use appropriate numerical modelling to supplement the subsequent predictions of subsidence effects and subsidence impacts for the project to the satisfaction of the Director-General. <i>Note: The aim of the numerical modelling is to give a better insight into the mechanisms that may account for the differences between predicted and actual subsidence effects and impacts.</i>	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022). Metropolitan Coal LW311 -316 Extraction Plan (Nov 2024).			An analysis of the maximum -observed versus maximum -predicted maximum vertical subsidence, tilt and curvature was undertaken in 2023 by specialist consultants Mine Subsidence Engineering Consultants and presented in each Extraction Plan report for LW305-307, 308-310 & 311 - 316. The overall-measured subsidence effects of for the project area to-date did have not exceed ed predictions by more than 15%.	Complies	
Sch 3 Cond 4	Specific Requirements for Further Modelling & Assessment	The Proponent shall not undermine Swamps 76, 77 and 92 without the written approval of the Director-General. In seeking this approval, the Proponent shall submit the following information with the relevant Extraction Plan (see condition 6 below): a) a comprehensive environmental assessment of the: <ul style="list-style-type: none"> a. potential subsidence impacts and environmental consequences of the proposed Extraction Plan; b. potential risks of adverse environmental consequences; and c. options for managing these risks; 						
		b) a description of the proposed performance measures and indicators for these swamps; and						
		c) a description of the measures that would be implemented to manage the potential environmental consequences of the Extraction Plan on these swamps						

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		(to be included in the Biodiversity Management Plan - see condition 6(f) below) and comply with the proposed performance measures and indicators.						
Sch 3 Cond 5	First Workings	The Proponent shall not carry out first workings in the mining area that are not consistent with the approved mine plan without the written approval of the Director-General.	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022). Metropolitan Coal Extraction Plan 305-307, Revision LW-308-310 EP-R01-B, dated 22 November 2022-			Annual Reviews detail the mining works completed. First workings in the mining area, as documented in the Annual Reviews, are consistent with approved extraction plans.	Complies	
Sch 3 Cond 6	Extraction Plan	The Proponent shall prepare and implement an Extraction Plan for all second workings in the mining area to the satisfaction of the Director-General. This plan must: (a) be prepared by a team of suitably qualified and experienced experts whose appointment has been endorsed by the Director-General;	Letter from DPE (S O'Donoghue) to Metropolitan (J Degotardi) titled "Metropolitan Coal Project (PA 08-0149) Longwall 308-310 Approval of Experts", dated 1 September 2021. The letter endorses the team of experts responsible for preparing the Extraction Plan.	Environment and Community Superintendent—DPE approved LW308-310 on 12 Dec 2022		The current extraction plan was issued in November 2022- Correspondence was available to verify that the Extraction Plan authors were approved by DPIE.	Complies	
		b) be approved by the Director-General before the Proponent is allowed to carry out the second workings covered by the Extraction Plan;	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).		Mining commencement dates & Extraction Plan approval dates presented in Annual Reviews	The extraction plans were issued and approved prior to the commencement of second workings.	Complies	
		(c) include a detailed plan for the second workings, which has been prepared to the satisfaction of DRE, and provides for adaptive management (from Longwall 23 onwards);				Section 1.3 and Appendix G of the Extraction Plan details the second workings covered by the plan. The Resource Regulatory was consulted during the preparation of the current version of the Extraction Plan. Section 4.2 of the Extraction Plan describes the approach to adaptive management.	Complies	
		(d) include detailed plans of any associated surface construction works;				The current Extraction Plan (LW308-310) states that no additional surface works are planned.	Complies	
		(e) include the following to the satisfaction of DRE: <ul style="list-style-type: none"> a coal resource recovery plan that demonstrates effective recovery of the available resource; revised predictions of the conventional and non-conventional subsidence effects and subsidence impacts of the extraction plan, incorporating any relevant information that has been obtained since this approval; and a Subsidence Monitoring Program to: 				Appendix H of the Extraction Plan contains the resource recovery plan. Appendix I (Subsidence Predictions and Impact Assessments Report) of the Extraction Plan details the subsidence impacts of the proposed coal extraction. Section 3.7 of the Extraction Plan describes the subsidence monitoring program.	Complies	

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		<ul style="list-style-type: none"> ○ validate the subsidence predictions; and ○ analyse the relationship between the subsidence effects and subsidence impacts of the Extraction Plan and any ensuing environmental consequences; 						
Sch 3 Cond 6	Extraction Plan	(f) include a; <ul style="list-style-type: none"> • Water Management Plan, which has been prepared in consultation with OEH, SCA and NOW, to manage the environmental consequences of the Extraction Plan on watercourses (including the Woronora Reservoir), aquifers and catchment yield; • Biodiversity Management Plan, which has been prepared in consultation with OEH and DRE (Fisheries), to manage the potential environmental consequences of the Extraction Plan on aquatic and terrestrial flora and fauna, with a specific focus on swamps; • Land Management Plan, which has been prepared in consultation with SCA, to manage the potential environmental consequences of the Extraction Plan on cliffs, overhangs, steep slopes and land in general; • Heritage Management Plan, which has been prepared in consultation with OEH and the relevant Aboriginal groups, to manage the potential environmental consequences of the Extraction Plan on heritage sites or values; • Built Features Management Plan, which has been prepared in consultation with the owner of the relevant feature, to manage the potential environmental consequences of the Extraction Plan on any built features; and 	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310 Extraction Plan (Dec 2022).			Appendix A of the Extraction Plan contains the water management plan. Appendix C of the Extraction Plan contains the biodiversity management plan. Appendix B of the Extraction Plan contains the land management plan. Appendix D of the Extraction Plan contains the heritage management plan. Appendix E of the Extraction Plan contains the built features plan.	Complies	
		(g) include a Public Safety Management Plan, which has been prepared in consultation with DRE and the DSC (for any mining within the DSC notification area), to ensure public safety in the mining area.				Appendix F of the Extraction Plan contains the public safety plan.		
		In addition to the standard requirements for management plans (see condition 2 of schedule 7), the Proponent shall ensure that the management plans required under condition 6(f) above include:				Attachment 3 of the Extraction Plan describes the program to collect sufficient baseline data for future Extraction Plans.		
Sch 3 Cond 7	Extraction Plan	a) a program to collect sufficient baseline data for future Extraction Plans;	Metropolitan Coal LW305 -307 Extraction Plan (Mar 2020). Metropolitan Coal LW308 -310				Complies	
		b) a revised assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been				Appendices A to I of the Extraction Plan provides an assessment of the potential environmental consequences of		

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		obtained since this approval;	Extraction Plan (Dec 2022).			the Extraction Plan.		
Sch 3 Cond 7	Extraction Plan	c) a detailed description of the measures that would be implemented to remediate predicted impacts; and				Section 3 and Appendices A to F of the Extraction Plan provides detailed descriptions of measures that would be implemented to remediate predicted impacts.	Complies	
		d) a contingency plan that expressly provides for adaptive management.				Section 4.1 and Appendices A to F of the Extraction Plan provides contingency plans for adaptive management.	Complies	
Sch 3 Cond 8	Payment of Reasonable Costs	The Proponent shall pay all reasonable costs incurred by the Department to engage independent experts to review the adequacy of any aspect of the Extraction Plan.	Letter from DPE (L Clark) to Metropolitan Collieries (J Degotardi) titled "Receipt Cost Recoup IEAPM for 3 Projects", dated 12 March 2024.	Environment and Community Superintendent – DPE sought costs for review of the 308-310 EP by the Independent Expert Advisory Panel for Mining.		DPE has sought compensation for expert's costs which were paid by Metropolitan in March 2024.	Complies	
Sch 3 Cond 9	Research Program	The Proponent shall prepare and implement a Research Program for the project to the satisfaction of the Director-General and allocate \$320,000 towards the implementation of the program.	2018 Independent Environmental Audit			Development of the research program was verified in the 2017 EIA.	Complies	
		This program must:				Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
		(a) be prepared in consultation with NOW, SCA, OEH and DRE;				Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
		(b) be submitted to the Director-General for approval by the end of 2010;				Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
		c) be targeted at genuine research, as opposed to implementing the matters required by this approval; and				Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	
		(d) be directed at encouraging research into improving: <ul style="list-style-type: none"> the prediction of valley closure and up-sidence, and the resultant subsidence impacts; the assessment of the environmental consequences of subsidence impacts on natural features; the remediation of subsidence impacts on watercourses; the understanding of subsidence impacts and their environmental consequences on swamps; the conservation of the Eastern Ground Parrot on the Woronora Plateau; or the environmental management of underground mining operations in the Southern Coalfield. 				Compliance of the research program with this condition was verified in the 2017 EIA.	Complies	

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
Sch 3 Cond 10	Research Program	The Proponent shall obtain the Director-General's approval for the allocation of any funding under this program.						
Sch 3 Cond 11	Construction Management – Woronora Special Area	The Proponent shall prepare and implement a Construction Management Plan for all surface construction works (excluding remediation or rehabilitation works) in the Woronora Special Area to the satisfaction of the Director-General. This plan must be prepared in consultation with SCA, include detailed plans of the proposed construction works., and be approved by the Director-General before the Proponent is allowed to carry out the construction works.						
Sch 4 Cond 1	NOISE Noise Impact Assessment Criteria	By the end of 2014, the Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 2 at any residence on privately-owned land, or on more than 25% of any privately-owned land. Table 2: Day LA _{eq(15min)} 50 dB(A) Evening LA _{eq(15min)} 45 dB(A) Night LA _{eq(15min)} 45 dB(A) Night LA _{1(1min)} 50 dB(A)						
Sch 4 Cond 2	Noise Acquisition Criteria	If after 2014, the noise generated by the project exceeds the criteria in Table 3 at any residence on privately-owned land, or on more than 25% of any privately-owned land, then the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 5-7 of schedule 5. Table 3: Day LA _{eq(15min)} 55 dB(A) Evening LA _{eq(15min)} 50 dB(A) Night LA _{eq(15min)} 50 dB(A)						
Sch 4 Cond 3	Additional Noise Mitigation Criteria	It after 2014, the noise generated by the project exceeds the criteria in Table 4 at any residence on privately-owned land, then the Proponent shall, upon receiving a written request from the landowner, implement reasonable and feasible noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. if within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution. Table 4: Day LA _{eq(15min)} 35 dB(A) Evening LA _{eq(15min)} 48 dB(A)						

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		Night LA _{eq(15min)48} dB(A)						
Sch 4 Cond 4	Rail Noise	The Proponent shall only use locomotives that are approved to operate on the NSW rail network in accordance with noise limits 16.1 to 16.4 in RailCorp's EPL (No. 12208) and ARTC's EPL (No. 3142) or a Pollution Control Approval issued under the former Pollution Control Act 1970.						
Sch 4 Cond 5		The Proponent shall use its best endeavours to minimise night-time movements of rolling stock on the Metropolitan rail spur.						
Sch 4 Cond 6		In the event of any rail noise or vibration issues that may arise from the haulage of coal over the life of the Project, the Proponent shall liaise with the CCC and the rail service provider to facilitate resolution of these issues and implement additional noise reduction measures where appropriate.						
Sch 4 Cond 7	Blasting	The Proponent shall not undertake blasting operations at the surface facilities area without the written approval of the Director-General.						
Sch 4 Cond 8	Noise Management Plan	The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan must be prepared in consultation with OEH by a suitably qualified expert whose appointment has been approved by the Director-General and submitted to the Director-General for approval by the end of June 2010. It must also provide for real-time noise monitoring.						
Sch 4 Cond 9	Odour	The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.						
Sch 4 Cond 10	Greenhouse Gas Emissions	The Proponent shall implement all reasonable and feasible measures to minimise: 1. energy use on site; and 2. the scope 1, 2 and 3 greenhouse gas emissions produced on site, to the satisfaction of the Director-General.						
Sch 4 Cond 11	Air Quality Impact Assessment Criteria	The Proponent shall ensure that dust generated by the project does not cause additional exceedances of the air quality impact assessment criteria listed in Tables 5, 6, and 7 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.						
Sch 4 Cond 12	Land Acquisition Criteria	if the dust generated by the project exceeds the criteria in Tables 8, 9, and 10 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land, the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in						

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendation
		accordance with the procedures in conditions 5-7 of schedule 5.						
Sch 4 Cond 13		The Proponent shall prepare and implement an Air Quality & Greenhouse Gas Management plan for the project to the satisfaction of the Director- General. This plan must be prepared in consultation with OEH by a suitably qualified expert whose appointment has been approved by the Director- General and submitted to the Director-General for approval by the end of June 2010. It must also provide for real-time air quality monitoring.						

PLANNING APPROVAL 08_0149							
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Discussions	Assessment	Compliance Finding	Recommendation
Sch 4 Cond 14	Discharges	The Proponent shall ensure that all surface water discharges from the site comply with the discharge limits (both volume and quality) set for the project in any EPL.					

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 4 Cond 15	Surface Facilities Water Management Plan	The Proponent shall prepare and implement a Water Management Plan for the surface facilities area and two ventilation shaft sites to the satisfaction of the Director-General. This plan must be prepared in consultation with NOW and OEH by a suitably qualified expert whose appointment has been endorsed by the Director-General and submitted to the Director-General for approval by the end of June 2010. In addition to the standard requirements for management plans (see condition 2 of schedule 7).						
		The plan must: include a) a comprehensive water balance for the project; and						
		b) ensure that suitable measures are implemented to minimise water use, control erosion, prevent groundwater contamination, and comply with any surface water discharge limits.						
		<i>Note: The water balance in this plan must be suitably integrated with both the Catchment Monitoring Program and the Water Management Plans that form part of the Extraction Plan.</i>						
Sch 4 Cond 16	Meteorological Monitoring.	During the life of the project, the Proponent shall ensure that there is a suitable meteorological station in the vicinity of the surface facilities area that complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline.						
Sch 4 Cond 17	Transport Parkes Street Intersection	By the end of 2010, the Proponent shall: <ul style="list-style-type: none">undertake a road safety audit of the Parkes Street and Colliery Road intersection, in consultation with the RTA and WCC; and						
		<ul style="list-style-type: none">implement any recommendations of this audit, to the satisfaction of the Director-General.						
Sch 4 Cond 18	Road Maintenance Contributions	<ul style="list-style-type: none">From the end of 2009, the Proponent shall make a suitable annual contribution to WCC, WSC, and CC for the maintenance of local roads that are used as haulage routes by the project. If there is any dispute over the amount of the contribution, the matter must be referred to the Director-General for resolution.						
Sch 4 Cond 19	Road Transport Restrictions	The Proponent shall not: a) load coal or coal reject onto trucks, or transport it off site by road, outside the hours of 7am and 6pm Monday to Friday; b) transport more than 170,000 tonnes of						

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
		coal off site by road in a calendar year; c) transport any coal off site to the Port Kembla Coal Terminal by road; d) permit the departure of more than 25 trucks containing product coal for delivery to the Corrimal Coke works on any given day; or e) permit the departure of more than 30 trucks containing product coal for delivery to the Coalcliff Coke works on any given day.						
Sch 4 Cond 20	Road Transport Restrictions	During emergencies (such as the disruption of rail services) the Proponent may exceed the restrictions in condition 19 above with the written approval of the Director-General.						
Sch 4 Cond 21	Traffic Monitoring	The Proponent shall monitor the amount of coal and coal reject transported from the site by road and rail each year and report the results of this monitoring on its website every six months.						
Sch 4 Cond 22	Traffic Management	The Proponent shall prepare and implement a Traffic Management Plan for the project to the satisfaction of the Director-General.						
		This plan must be prepared in consultation with the RTA, WCC, local schools and the CCC, and submitted to the Director-General for approval by the end of February 2010.						
Sch 4 Cond 22	Traffic Management	The primary aim of this plan is to minimise the traffic impacts of the project on the residential areas and schools within Helensburgh.						
Sch 4 Cond 23	Visual	The Proponent shall minimise the visual impacts, and particularly the off-site lighting impacts, of the surface facilities area and two ventilation shaft sites to the satisfaction of the Director-General.						
Sch 4 Cond 24	Waste	The Proponent shall: minimise the waste (including coal reject) generated by the project; and						
		ensure that the waste generated by the project is appropriately stored, handled, and disposed of, to the satisfaction of the Director-General.						
Sch 4 Cond 25		The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Director-General. This plan must be submitted to the Director-General for approval by the end of June 2010.						
Sch 5 Cond 1	Notification of Landowners	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 in schedule 4, except where a negotiated agreement has been entered into in Relation to that impact,						

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
		then the Proponent shall, within 2 weeks of obtaining the monitoring results, notify the Executive Director Mineral Resources, 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.						
Sch 5 Cond 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.						
Sch 5 Cond 3	Independent Review	If a landowner considers the project to be exceeding the impact assessment criteria in schedule 4, then he/she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land. If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 2 months of the Director-General's decision; a) consult with the landowner to determine his/her concerns;						
		b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to: i. determine whether the project is complying with the relevant impact identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and ii. assessment criteria in schedule 4; and						
		c) give the Director-General and landowner a copy of the independent review.						
Sch 5 Cond 4	Independent Review	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 Executive Director Mineral Resources. If the independent review determines that the project is not complying with the relevant impact assessment criteria in						

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
		<p>Schedule 4, then the Proponent shall: implement 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>secure a written agreement with the landowner to allow exceedances of the relevant impact assessment criteria, to the satisfaction of the Executive Director Mineral Resources.</p> <p>However, if the further monitoring referred to under paragraph (a) above determines that the project is complying with the relevant impact assessment criteria, then the Proponent may discontinue the independent review with the approval of the Executive Director Mineral Resources.</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 Executive Director Mineral Resources.</p>						
Sch 5 Cond 5	Land Acquisition	<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: 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 landowners 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' in condition 3 of schedule 4 or condition 4(a) of this schedule;</p> <p>(b) the reasonable costs associated with: relocating within the Wollongong local government areas, or to any other local government area determined by the</p>						

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
		<p>Director-General; obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and</p> <p>(c) reasonable compensation for any disturbance caused by the land acquisition process.</p> <p>However, if following this period, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.</p>						

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 5 Cond 5	Land Acquisition	<p>Upon receiving such a request, the Director-General shall request the President of the NSW Division of the Australian Property institute (the API) to appoint a qualified independent valuer to:</p> <ul style="list-style-type: none"> 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. <p>Within 14 days of receiving the independent value/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 value/s determination. However, if either party disputes the independent value/s determination, then within 14 days of receiving the independent value/s report, they may refer the matter to the Director-General for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent value/s determination. Following consultation with the independent valuer and both parties, the Director-General shall determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above and the independent value/s report. Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Director-General's determination.</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 Director-General determines otherwise.</p>						
Sch 5 Cond 6	Land Acquisition	The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.						
Sch 5 Cond 7	Land Acquisition	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.						

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition		Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 6 Cond 1	Rehabilitation Objectives	The Proponent shall achieve the rehabilitation objectives in Table 11 to the satisfaction of the Executive Director Mineral Resources (below):							
		Surface Facilities Areas	Set through Condition 2 below						
		Waratah Rivulet, between the downstream edge of Flat Rock Swamp and the full supply level of the Woronora Reservoir. Eastern Tributary, between the main gate of Longwall 26 and the full supply level of the Woronora Reservoir.	Restore surface flow and pool holding capacity as soon as reasonably practicable	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review		An inspection of the catchment was undertaken during the audit on 21.03.2025 . Remediation works (former and current) were observed.	Mining subsidence has impacted the surface water features. Metropolitan is actively undertaking stream remediation works. A review of the annual reviews and interview site inspection confirmed that remediation works continued during the audit period.	Complies	
		Cliffs	Ensure that there is no safety hazard beyond that existing prior to mining.				No safety hazards associated with cliffs were identified in the specialist reports reviewed. No safety related incidents were reported during the audit period related to cliff instability.	Complies	
		Other Land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: comprised of local native plant species; with a landform consistent with the surrounding environment.				During the site inspection the Auditor viewed the surface works area (mine head, maintenance, storage and admin areas). Those areas are still in use and therefore restoration of those areas has not yet been triggered.	Complies	
		Built Features	Restore / Repair to pre-mining condition or equivalent.				No impacts on built features were reported during the audit period.	Complies	
		Community	Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment. Ensure public safety.				No public safety incidents were recorded during the audit period.	Complies	

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 6 Cond 2	Rehabilitation Strategy – Surface Facilities Area	By the end of October 2011, the Proponent shall prepare a Rehabilitation Strategy for the surface facilities area to the satisfaction of the Director- General. This strategy must: be prepared by a team suitably qualified and experienced experts whose appointment has been endorsed by the Director-General;						
		a) be prepared in consultation with relevant stakeholders, including WCC and the CCC;						
		b) investigate options for the future use of the area upon the completion of mining;						
		c) describe and justify the proposed rehabilitation strategy for the area; and						
		d) define the rehabilitation objectives for the area, as well as the proposed completion criteria for this rehabilitation.						
Sch 6 Cond 3	Progressive Rehabilitation	To the extent that mining operations permit, the Proponent shall carry out rehabilitation progressively, that is, as soon as reasonably practicable following the disturbance.						
Sch 6 Cond 4	Rehabilitation Management Plan	The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Executive Director Mineral Resources. This plan must be prepared in consultation with the relevant stakeholders and submitted to DRE for approval prior to carrying out any second workings in the mining area.						
Sch 6 Cond 5	Catchment improvement Works	The Proponent shall: a) pay SCA \$100,000 by the end of 2011 to carry out catchment improvement works within the Woronora catchment area; or						
		b) carry out catchment improvement works within this area that have an equivalent value to the satisfaction of SCA,						
Sch 6 Cond 6	Offsets	If the Proponent exceeds the performance measures in Table 1 of this approval, and either the contingency measures implemented by the Proponent have failed to remediate the impact; or the Director-General determines that it is not reasonable or feasible to remediate the impact, then the Proponent shall provide a suitable offset to compensate for the impact to the satisfaction of the Director-General. <i>Note: Any offsets required under this condition must be proportionate with the significance of the impact.</i>	Metropolitan Coal 2021 Annual Review Metropolitan Coal 2022 Annual Review Metropolitan Coal 2023 Annual Review	Environment and Community Superintendent – all impacts detected will be remediated. No off-set areas have been required.		No off-set areas have been required.	Not Triggered	

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 1	Environmental Management Strategy	The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director General. This strategy must: (a) be submitted to the Director General for approval within 3 months of the date of this approval, unless otherwise agreed by the Secretary;						
		(b) provide the strategic framework for the environmental management of the project						
		(c) identify the statutory approvals that apply to the project;						
		(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;						
		(e) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the project; • respond to any non-compliance; • respond to emergencies; and						
		(f) include: • copies of any strategies, plans and programs approved under the conditions of this approval; and • a clear plan depicting all the monitoring required to be carried out under the conditions of this approval.						
Sch 7 Cond 2	Management Plan Requirements	The Applicant shall ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include: (a) detailed baseline data;						
		(b) a description of: • the relevant statutory requirements (including any relevant approval, licence or lease conditions); • any relevant limits or performance measures/criteria; • the specific performance indicators that are proposed to be used to judge the performance of, or • guide the implementation of, the development 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;						

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
		(d) a program to monitor and report on the: <ul style="list-style-type: none"> impacts and environmental performance of the development; 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 development 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 						
		<ul style="list-style-type: none"> (h) a protocol for periodic review of the plan. 						
Sch 7 Cond 3	Annual Review	By the end of March each year, or other timing as may be agreed by the Secretary, the Applicant shall review the environmental performance of the development to the satisfaction of the Secretary. This review must: (a) describe the development that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;						
		(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against the: <ul style="list-style-type: none"> the relevant statutory requirements, limits or performance measures/criteria; the monitoring results of previous years; and the relevant predictions in the EIS;						
		(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;						
		(d) identify any trends in the monitoring data over the life of the development;						
		(e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and						
		(f) describe what measures will be implemented over the next year to improve the environmental performance of the development.						

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 4	Revision of Strategies, Plans and Programs	Within 3 months of: (a) the submission of an annual review under Condition 4 above;						
		(b) the submission of an incident report under Condition 7 below;						
		(c) the submission of an audit report under Condition 9 below; or						
		(d) any modification to the conditions of this consent, (unless the conditions require otherwise),						
Sch 5 Cond 5	Community Consultative Committee	The Proponent shall establish a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General. This CCC must be operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version) to the satisfaction of the Director- General.						

PLANNING APPROVAL 08_0149							
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 6	Incident Reporting	The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident					

PLANNING APPROVAL 08_0149

Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
Sch 7 Cond 7	Regular Reporting	The Applicant shall provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.						
Sch 7 Cond 9	Independent Environmental Audit	Prior to 31 December 2015, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must: (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;						
		(b) include consultation with the relevant agencies;						
		(c) assess the environmental performance of the development and assess whether it is complying with the requirements in this consent, and any other relevant approvals, relevant EPL/s and/or Mining Lease/s (including any assessment, plan or program required under these approvals);						
		(d) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and						
		(e) recommend measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under these approvals.						
		<i>Note: This audit team must be led by a suitably qualified auditor.</i>						
Sch 7 Cond 10		Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.						
Sch 7 Cond 11	Access To Information	From the end of 2009, the Proponent shall make the following information publicly available on its website: a copy of all current statutory approvals;						
		a copy of the current environmental management strategy and associated plans and programs;						
		a summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;						
		complaints register, which is to be updated on a monthly basis;						
		a copy of the minutes of CCC meetings;						

PLANNING APPROVAL 08_0149								
Cond.	Short Title	Condition	Documents Reviewed	Interviews / Conversations	Inspections / Observations	Assessment	Compliance Finding	Recommendations
		a copy of any Annual Reviews (over the last 5 years);						
		a copy of any independent Environmental Audit, and the proponent's response to the recommendations in any audit; and						
		any other matter required by the Director-General.						