

2022 INDEPENDENT ENVIRONMENTAL AUDIT

Mangoola Open Cut



PR152076

2

21 March 2023

REPORT

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Approval for issue

Ian Richardson



21 March 2023

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INDEPENDENT AUDIT REPORT DECLARATION FORM

Independent Audit Report Declaration Form

Project Name	Mangoola Coal Operations Pty Limited
Consent Number	SSD 8642 and PA06_0014
Description of Project	In accordance with PA 06_0014 Schedule 5, Conditions 7 and 8 as well as Part D, Condition 13 and 14 of SSD 8642, Mangoola is required to conduct an Independent Environment Compliance audit every three years as well as within one year of the commencement of operations (SSD 8642).
Project Address	Wybong NSW 2333
Proponent	Mangoola Coal Operations Pty Limited
Title of Audit	Independent Environmental Audit 2022 – Mangoola Open Cut
Date	21 March 2023

I declare 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. the Audit has been undertaken in accordance with relevant condition(s) of consent and the Independent Audit Compliance Requirements (Department 2019);
- ii. the findings of the Audit are reported truthfully, accurately and completely;
- iii. I have exercised due diligence and professional judgement in conducting the Audit;
- iv. I have acted professionally, objectively and in an unbiased manner;
- v. I am not related to any proponent, owner or operator of the project neither as an employer, business partner, employee, or by sharing a common employer, having a contractual arrangement outside the Audit, or by relationship as spouse, partner, sibling, parent, or child;
- vi. I do not have any pecuniary interest in the Audited project, including where there is a reasonable likelihood or expectation of financial gain or loss to me or spouse, partner, sibling, parent, or child;
- vii. neither I nor my employer have provided consultancy services for the Audited project that were subject to this Audit except as otherwise declared to the Department prior to the Audit; and
- viii. I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from payment for Auditing services) from any proponent, owner or operator of the project, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.

Notes:

- a. Under section 10.6 of the Environmental Planning and Assessment Act 1979 a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an Audit Report produced to the Minister in connection with an Audit if the person knows that the information is false or misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an Audit Report produced to the Minister in connection with an Audit if the person knows that the information is materially relevant to the monitoring or Audit. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000; and
- b. The Crimes Act 1900 contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both).

Name of Auditor	Ian Richardson
Signature	
Qualification	Bachelor of Environmental Science Exemplar Global Certified Lead Auditor – Environmental Management Systems (ISO 14001)
Company	RPS Australia East Pty Ltd
Company Address	RPS Newcastle – Unit 2A, 45 Fitzroy Street, Carrington NSW 2294

EXECUTIVE SUMMARY

RPS Australia East Pty Ltd (RPS) was engaged by Mangoola Coal Operations Pty Ltd (MCO) to conduct an Independent Environmental Audit (IEA) of the Mangoola Open Cut (Mangoola) located in the Hunter Valley, New South Wales.

The audit was conducted in accordance with PA 06_0014 Schedule 5, Conditions 7 and 8 as well as Part D, Condition 13 and 14 of SSD 8642, as issued by the Department of Planning and Environment (the Department) and RPS proposal dated 10 May 2022.

The previous IEA carried out at the site was conducted for the period of 6 October 2016 to 1 August 2019 for PA06_0014. Mangoola has received approval from DPE to combine the 1 and 3-yearly IEAs required for commencement in July 2022. The audit period to which this audit applies is inclusive of the period from 2 August 2019 to 22 July 2022 (as requested by DPE). This report presents the findings of the audit.

The IEA was undertaken in general accordance with:

- The Department's Post-approval requirements for State Significant Developments Independent Audit Guideline (Independent Audit Guideline, 2015).
- The Department's Post-approval requirements for State Significant Developments Independent Audit Guideline, May 2020 (Independent Audit Guideline, 2020).
- AS/NZS ISO 19011:2018 Guidelines for auditing management systems.
- RPS's proposal (dated 19 July 2021).

The RPS audit team was approved by the Department on 20 June 2022. A copy of the approval letter is located in **Appendix A**. A two (2) day site inspection was conducted at Mangoola on 5 and 22 July 2022.

The IEA identified a total of 14 non-compliances against PA06_0014, SSD8642, EPL12894, and reviewed leases during the audit period.

Table 1 Summary of Audit Findings

Approval	Total No. of Conditions	Compliant	Non-Compliant	Not Triggered
PA06_0014	97	71	6	20
SSD8642	176	101	2	73
EPL12894	96	76	4	16
ML1626	28	18	2	8
ML1747	11	5	0	6
ML1815	5	2	0	3
ML1817	6	2	0	4
Exploration Lease 5552	10	5	0	5
Assessment Lease 9	56	10	0	46

GLOSSARY OF TERMS

Abbreviation	Description
Aboriginal object / Aboriginal place	Has the same meaning as the definition of the term in section 5 of the NP&W Act
Annual Review	The review required by condition D11
Applicant / MCO	Mangoola Coal Operations Pty Limited, or any person carrying out any development under this consent
Approved disturbance area	The area identified as such on the Development Layout
ARI	Average Recurrence Interval
ARTC	Australian Rail Track Corporation
BCA	Building Code of Australia
BC Act	Biodiversity Conservation Act 2016
BCS	Biodiversity, Conservation and Science Directorate within the Department
BCT	NSW Biodiversity Conservation Trust
Biodiversity Offset Strategy	The in perpetuity/long-term conservation and management of the Applicant's offset sites described in the EIS and depicted conceptually in Appendix 6
Blast misfire	The failure of one or more holes in a blast pattern to initiate
CCC	Community Consultative Committee required by condition A20
CHPP	Coal handling and preparation plant
Conditions of this consent	Conditions contained in Schedule 2
Construction	All physical works to enable mining operations to be carried out, including demolition and removal of buildings or works, and erection of buildings and other infrastructure permitted by this consent
Council	Muswellbrook Shire Council
CPI	Consumer Price Index
Date of commencement	The date notified to the Department by the Applicant under condition A 13
Day	The period from 7.00 am to 6.00 pm on Monday to Saturday, and 8.00 am to 6.00 pm on Sundays and Public Holidays
Decommissioning	The deconstruction or demolition and removal of works installed as part of the development
Demolition	The deconstruction and removal of buildings, sheds and other structures on the site NSW Department of Planning, Industry and Environment
Department	NSW Department of Planning and Environment
Development	The development described in the documents listed in condition A2(c), as modified by the conditions of this consent
Development Layout	The plans in Appendix 2 of this consent
DPIE Crown Lands	Crown Lands Group within the Department
DPIE Water	Water Group within the Department
EEC	Endangered ecological community, as defined under the BC Act
EIS	The Environmental Impact Statement titled Mangoola Coal Continued Operations Project, prepared by Umwelt (Australia) Pty Limited, dated July 2019, submitted with the application for consent for the development, including the Applicant's response to submissions, dated 18 December 2019, and additional information provided by the Applicant on 14 February 2020, 17 March 2020, 1 April 2020, 19 June 2020 and 27 July 2020 in support of the application.
Environment	Includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings
EPA	NSW Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation EPBC Act	Environmental Planning and Assessment Regulation 2000

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Abbreviation	Description
EPL	Commonwealth Environment Protection and Biodiversity Conservation Act 1999 Environment Protection Licence under the POEO Act
Evening	The period from 6 pm to 10 pm
Feasible	Means what is possible and practical in the circumstances
Fisheries NSW	Fisheries Branch of the Primary Industries Group within the Department
GDE	Groundwater Dependent Ecosystem
Heavy vehicle	A vehicle that has a combined Gross Vehicle Mass or Aggregate Trailer Mass of more than 4.5 tonnes
Heritage NSW	Heritage NSW within Department of Premier and Cabinet
Heritage item	An Aboriginal object, an Aboriginal place, or a place, building, work, relic, moveable object, tree or precinct of heritage significance, that is listed under any of the following: - the State Heritage Register under the Heritage Act 1977; - a state agency heritage and conservation register under section 170 of the Heritage Act 1977; - a Local Environmental Plan under the EP&A Act; - the World Heritage List; - the National Heritage List or Commonwealth Heritage List under the EPBC Act; or - anything identified as a heritage item under the conditions of this consent
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance
Laden trains	Trains transporting mining products or materials to or from the site
Land	Has the same meaning as the definition of the term in section 1.4 the EP&A Act, except for where the term is used in the noise and air quality conditions in PART B of this consent where it is defined to mean the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Mangoola Coal Project	Mangoola Coal Project approved under PA 06_0014, as modified
Material harm	Is harm to the environment that: - involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or - results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment) This definition excludes "harm" that is authorised under either this consent or any other statutory approval
MEG	Regional NSW - Mining, Exploration and Geoscience
Mine-Owned Land	Land owned by a mining, petroleum or extractive industry company (or its subsidiary or related party)
Mine closure	Decommissioning and final rehabilitation of the site following the cessation of mining operations
Mine water	Water that accumulates within, or drains from, active mining and infrastructure areas and any other areas where runoff may have come into contact with carbonaceous or saline material
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development
Mining operations	The carrying out of mining, including the extraction, processing, stockpiling and transportation of coal on the site and the associated removal, storage and/or emplacement of vegetation, topsoil, overburden, tailings and reject material
Minister	NSW Minister for Planning and Public Spaces, or delegate
Minor	Not very large, important or serious

Abbreviation	Description
Mitigation	Activities associated with reducing the impacts of the development
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays
Noise sensitive areas	Areas where mining operations are being carried out that have potential to lead to increased noise at privately-owned residences, such as elevated areas or areas near the boundary of the site
Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent
'Non-road' mobile diesel equipment	Mobile equipment used in mining operations that is fitted with a diesel engine with a capacity >30 litres and that is self-propelled or transportable and primarily designed for off-road use
NP&WAct	National Parks and Wildlife Act 1974
NRAR	NSW Natural Resources Access Regulator
Over-dimensional	Over-mass, over-size or over-length vehicles
PA	Planning agreement within the meaning of the term in section 7.4 of the EP&A Act
Planning Secretary	Planning Secretary under the EP&A Act, or nominee
POEO Act	Protection of the Environment Operations Act 1997
Privately-owned land	Land that is not owned by a public agency or a mining, petroleum or extractive industry company (or its subsidiary or related party)
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.
Reasonable	Means applying judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Registered Aboriginal Parties	As described in the National Parks and Wildlife Regulation 2009
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
Residence	Existing or approved dwelling at the date of grant of this consent
Resources Regulator	NSW Resources Regulator
RFS	NSW Rural Fire Service
ROM	Run-of-mine
Site	The land defined in Appendix 1
Thomas Mitchell Drive Contributions Study	The Contributions Study prepared for the Department by GHD and titled, "Thomas Mitchell Drive Contributions Study, May 2015" as amended by the supplementary report dated August 2018 (or its latest version as amended from time to time)
TfNSW	Transport for NSW

1 INTRODUCTION

RPS Australia East Pty Ltd (RPS) was engaged by Mangoola Coal Operations Pty Ltd (MCO) to conduct an Independent Environmental Audit (IEA) of the Mangoola Open Cut (Mangoola) located in the Hunter Valley, New South Wales.

Mangoola operates under two (2) development consents; Project Approval (PA) 06_0014 (as modified) and Development Consent SSD8642. PA06_0014 is in the process of being relinquished and is still in force.

The audit was conducted in accordance with PA 06_0014 Schedule 5, Conditions 7 and 8 as well as Part D, Condition 13 and 14 of SSD 8642, as issued by the Department of Planning and Environment (the Department) and RPS proposal dated 10 May 2022.

The previous IEA carried out at the site was conducted for the period of 6 October 2016 to 1 August 2019 for PA06_0014. Mangoola has received approval from DPE to combine the 1 and 3-yearly IEAs required for commencement in July 2022. The audit period to which this audit applies is inclusive of the period from 2 August 2019 to 22 July 2022 (as requested by DPE). This report presents the findings of the audit.

1.1 Background of the project

Mangoola Open Cut (Mangoola) is owned and operated by Mangoola Coal Operations Pty Ltd which is a Glencore managed operation. Mangoola is located near Wybong, New South Wales (NSW), approximately 20 kilometres (km) west of Muswellbrook and approximately 10 km north of Denman in the Muswellbrook Local Government Area (LGA). A locality plan is presented in **Figure 1**.

1.1.1 PA 06_0014

Project Approval 06_0014 (PA 06_0014) was granted in June 2007 for the construction of an open cut coal mine and associated infrastructure in the Wybong area. The mine, then owned by Centennial Coal and known as the Anvil Hill Project, was approved to extract up to 10.5 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal. Since April 2014, Mangoola has been approved to extract up to 13.5 Mtpa ROM coal under PA06_0014. The Site also operates a Coal Handling and Preparation Plant (CHPP) and Train Loading Facility. Eight (8) modifications to PA06_0014 have been approved, with no new modification occurring during the audit period. A summary of the modifications is outlined in **Table 2** below.

Table 2 Mangoola PA 06_0014 and Modifications

Approval	Title	Date Granted	Expiry
PA06_0014	Original Approval	7 June 2007	20 November 2029
Modification 1	Change to Road Access and Water Supply	22 July 2008	20 November 2029
Modification 2	Relocate Water Supply Pipeline	23 June 2009	20 November 2029
Modification 3	Relocate Mine Infrastructure Area	4 November 2009	20 November 2029
Modification 4	Modify Approved Mine Plan	22 June 2012	20 November 2029
Modification 5	Night-time Works	23 February 2010	20 November 2029
Modification 6	Extraction Rate Increase	28 April 2014	20 November 2029
Modification 7	Removal of Schedule 3, Condition 3 – Traffic Noise Criteria	22 August 2016	20 November 2029
Modification 8	Update of Project Layout Plan	14 June 2017	20 November 2029

1.1.2 SSD 8642

On 26 April 2021, the NSW Independent Planning Commission (IPC) approved with conditions the Development Application for the Mangoola Coal Continued Operations (MCCO) Project under Part 4 of the Environmental Planning and Assessment Act 1979.

The State Significant Development (SSD) 8642 approval provides for the continuation of open cut mining immediately north of the existing mine at Mangoola Coal Operations. This will enable Glencore to extract a

further 52 million tonnes of coal through to the end of 2030. Mangoola commenced the development and construction of the MCCO under SSD8642 on 6 December 2021.

1.1.3 Mining and Exploration Leases

Mangoola held six (6) active leases during the audit period.

Table 3 Mangoola Leases

Title	Date Granted	Expiry
ML1626	20 November 2008	20 November 2029
ML1747	24 August 2016	5 December 2037
ML1815	29 September 2021	29 September 2042
ML1817	27 October 2021	27 October 2042
Exploration Lease 5552	8 May 2006	7 November 2025
Assessment Lease 9	8 November 2004	7 November 2019 (renewal lodged 1 November 2019)

1.1.4 Environment Protection Licence

Mangoola operates under Environment Protection Licence (EPL) 12894, with an anniversary date of 7 July. Monitoring results are reported to the EPA as part of the Mangoola EPL Annual Return and monitoring data is available on the Mangoola website. One variation of the EPL was sought and approved for the integration of the MCCO.

1.2 Operations During the Audit Period

Open cut mining continued at Mangoola during the reporting period. Truck and shovel mining methods are used to handle overburden and coal, following pre-strip and drilling and blasting activities. Product coal is loaded and transported to market via the rail loop connected to the Muswellbrook – Ulan railway. The mine operates 24 hours a day, seven days a week, and currently employs 378 full time equivalent employees (with approval for 450 employees). The general site layout is presented in **Figure 2**.

1.2.1 Exploration

There were no exploration activities undertaken during the audit period.

1.2.2 Land Preparation

Land clearing was undertaken in accordance with the Mangoola Environmental Management System (EMS) and occurred under PA06_0014 and as part of the MCCO Project. Areas were assessed prior to clearing to minimise potential ecological, water management, sediment and erosion and cultural heritage impacts in accordance with the pre-clearing requirements.

1.2.3 Mining

Open cut mining operations continued during the reporting period, under PA06_0014. Mining operations during the reporting period continued in the Main Pit and South Pit. No mining occurred under SSD8642 during the audit period. No gravel crushing operations occurred on site during the audit period. The production summary for the audit period is presented in **Table 4** below.

Table 4 **Production Summary (PA06_0014)**

Material	Approved Limit (PA 06_0014)	2019 Reporting Period (Actual)	2020 Reporting Period (Actual)	2021 Reporting Period (Actual)	2022 Reporting Period (Forecast)
Waste Rock/ Overburden (BCM)	No limit	37,832,133	34,405,258	27,816,881	38,753,815
ROM Coal (t)	13,500,000	12,920,522	9,373,538	8,028,889	10,733,095
Coarse reject (t)	No limit	1,250,014	981,760	995,970	2,389,682
Fine reject (Tailings) (t)	No limit	1,391,110	958,751	881,949	
Saleable product (t)	No limit	10,163,802	7,003,610	6,441,666	8,383,413

1.2.4 Construction

Construction works for the MCCO project commenced on 6 December 2021. This included the upgrade of three existing gates and the construction of two new access points. In addition, roadworks and traffic control measures were implemented on Wybong Road. Significant ground disturbance works have occurred within the MCCO project including water diversion structures, sediment structures, and approved infrastructure. There were no construction works during 2019 and 2020.



Figure 1 Mangoola Regional Context

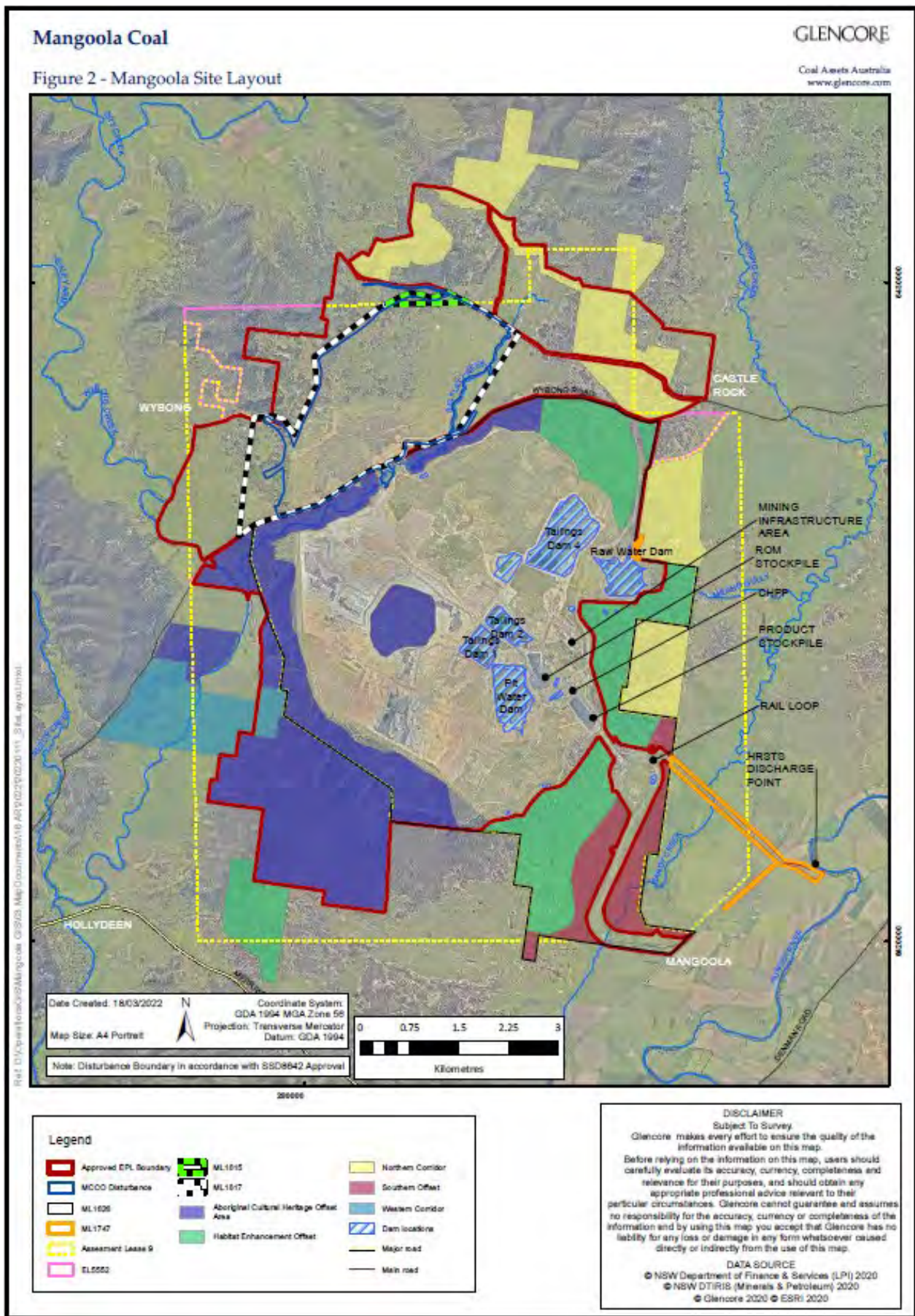


Figure 2 Mangoola Site Layout

1.3 Audit Team

The RPS 2022 IEA team, inclusive of the required technical specialists, included personnel outlined in Table 5 below. The audit team, inclusive of specialists, was approved by the Department to conduct the audit. Refer to the letter from the Department provided in **Appendix A**.

Table 5 2022 Mangoola IEA Team

Personnel	Audit Team Role
Ian Richardson	Lead Auditor / Air Quality Specialist – RPS Group
Sam Mitchell	Back up Lead Auditor – RPS Group
Shelomi Doyle	Biodiversity – RPS Group
Clayton Richards	Rehabilitation Specialist – Minesoils
Dale Redwood	Noise and Vibration – Muller Acoustic Consulting
Justin Bell	Groundwater Specialist – JBS&G
Dean Jarvis	Surface Water and Sediment / Erosion – Northrop

1.4 Audit Scope

RPS undertook the IEA in accordance with:

- The Department's Post-approval requirements for State Significant Developments Independent Audit Guideline, October 2015 (Independent Audit Guideline, 2015).
- The Department's Post-approval requirements for State Significant Developments Independent Audit Guideline, May 2020 (Independent Audit Guideline, 2020).
- AS/NZS ISO 19011:2018 Guidelines for auditing management systems.

1.4.1 PA 06_0014

The requirement for the IEA is set out in Schedule 5, Condition 7 and 8 of Project Approval 06_0014, which requires the following scope of works be carried out:

AUDITING

Schedule 5, Condition 7

Within 2 years of this approval, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:

- be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Secretary;
- include consultation with the relevant agencies;
- assess the environmental performance of the project, and its effects on the surrounding environment and whether it is complying with the requirements in this approval, and any other relevant approvals, relevant EPL/s and/or Mining Lease (including any assessment, plan or program required under these approvals);
- review the adequacy of any approved strategy/plan/program required under this approval; and, if necessary,
- recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and
- be conducted and reported to the satisfaction of the Secretary.

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

Schedule 5, Condition 8

Within 12 weeks of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary with a response to any recommendations contained in the audit report.

1.4.2 SSD 8642

The requirement for the IEA is set out in Part D, Condition 13 and 14 of SSD 8642, which requires the following scope of works be carried out:

Independent Environmental Audit

Part D, Condition 13

Within one year of commencement of development under this consent, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. The audit must:

- a. be led by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Planning Secretary;
- b. be conducted by a suitably qualified, experienced and independent team of experts (including any expert in field/s specified by the Planning Secretary) whose appointment has been endorsed by the Planning Secretary;
- c. be carried out in consultation with the relevant agencies and the CCC;
- d. assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals);
- e. review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent;
- f. recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and
- g. be conducted and reported to the satisfaction of the Planning Secretary.

Part D, Condition 14

Within three months of commencing an Independent Environmental Audit, or other timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

2 AUDIT METHODOLOGY

2.1 Task 1 Pre-audit Activities

2.1.1 Pre-Audit Meeting and Documentation Requests

RPS undertook initial discussions with MCO to organise the audit, including the provision of documentation through requests for information (RFI) and provided an Audit Agenda for the site visit and timing.

Review of documentation provided by MCO and their representatives and preparation of compliance assessment checklists that included a list of conditions of key regulatory approvals to be assessed for compliance.

2.1.2 Approval and Regulator Consultation

Following DPE approval of the RPS Audit Team, RPS consulted via email with relevant regulators with respect to the audit scope in accordance with the DPE *Independent Audit Post Approval Requirements, 2015 and 2020 Guidelines*.

Relevant comments and requests from these regulators were included in the Audit Report and investigated as part of the audit as required.

2.2 Task 2 Site Inspection and Interviews

The Audit Team conducted the audit site visit over two (2) days on 5 and 22 July 2022, comprising of:

- Document reviews.
- Interviews with relevant personnel.
- Site inspection.

Opening and closing meetings were held to ensure open communication with MCO and provide preliminary Audit findings. The audit was conducted as per the Audit Agenda, which was prepared and sent to MCO on 1 July 2022, prior to the site visit.

The site inspection was originally planned to occur over two (2) consecutive days on 5 and 6 July 2022. Due to the unprecedented rain events and subsequent flooding RPS was unable to attend site on 6 July 2022 and subsequently rescheduled for 22 July 2022.

2.2.1 Opening Meeting

An opening meeting was held upon commencement of the audit at the site. The purpose of this meeting was to confirm the objectives of the audit, the scope of the audit, the resources required and methodology to be applied.

2.2.2 Site Inspection and Interviews

The Lead Auditor, Auditors Assistant, and specialist (Air Quality, Groundwater, and Noise/Vibration) undertook a site inspection, which involved physical validations and collection of a photographic record. The auditor's observations used to supplement information gathered during the review of documents and records.

The site inspection was originally going to occur over two (2) consecutive days on 5 and 6 July 2022. Due to the unprecedented rain events and subsequent flooding RPS was unable to attend site on 6 July 2022 and subsequently rescheduled for 22 July 2022.

During the site inspection, interviews were conducted with MCO staff to verify compliance with the consents and associated documents.

2.2.3 Close-out Meeting

At the completion of the audit site visit, a brief close-out meeting was held with relevant MCO personnel. The purpose of the close-out meeting was to provide and receive feedback on the audit process and present the summary of preliminary findings, recommendations, and any post-audit actions. It should be noted that additional findings based on a detailed document reviews as part of the audit process were required following the completion of the site inspection. As such, the summary of preliminary findings detailed in the closeout meeting did not cover all findings associated with the audit.

2.3 Task 3 Draft IEA Report

During the site visit, and as required following the site visit, the audit team conducted a review of the key documentation provided. Each requirement within the audit compliance tables were reviewed and evidence gathered to support an assessment of compliance. Whilst personal communication does provide valuable input into this process it was not relied upon as verification of compliance.

An assessment of environmental performance was undertaken and reported in the audit report where issues were identified. A review of the Environmental Management Strategy and Environmental Monitoring Program were undertaken, and a summary provided in the audit report.

A single consolidated report was prepared (this report), with separate audit tables appended to address each of the approval instruments.

2.4 Task 4 Finalise IEA Report

Following receipt of consolidated comments from MCO, RPS updated and finalised the IEA Report and reissued for MCO to submit to the Department via the Major Project website.

2.5 Audit Team Approval

The Department reviewed the nominations and information provided in accordance with the requirements of the consents and the Department's Post-approval requirements for State Significant Developments Independent Audit Guideline, October 2015 (IEA Guideline 2015) and was satisfied that the RPS audit team was suitably qualified and experienced.

RPS was directed by Department to undertake the audit in accordance with the IEA Guideline 2015 utilising the compliance indicators noted in the Department's Post-approval requirements for State Significant Developments Independent Audit Guideline, May 2020 (Independent Audit Guideline, 2020).

The audit team was approved by the Department on 20 June 2022. A copy of the approval letter is located in **Appendix A**.

The Department requests that a copy of the IEA report be submitted to the Major Projects Portal, together with a response to any auditor recommendations (RAR), within three (3) months of commencing the audit, or as otherwise agreed by the Secretary.

2.6 Scope Development

The IEA was undertaken in general accordance with:

- The Department's Post-approval requirements for State Significant Developments Independent Audit Guideline (Independent Audit Guideline, 2015).
- The Department's Post-approval requirements for State Significant Developments Independent Audit Guideline, May 2020 (Independent Audit Guideline, 2020).
- AS/NZS ISO 19011:2018 Guidelines for auditing management systems.
- RPS's proposal (dated 10 May 2022).

2.7 Consultation

Schedule 5, Condition 7 of PA06_0014 and Part D, Condition 13(c) of SSD8642 requires the IEA to include consultation with the CCC and relevant agencies. A summary of the consultation undertaken is provided in **Table 6** of the regulatory agencies which were sent requests for comment on 20 June 2022 as well as the status of any responses received.

Table 6 Regulator Response Summary

Regulatory Agency	Response Received	Date Received
NSW Department of Planning and Environment	Yes – no comments requiring specific assessment	20 June 2022
NSW Department of Regional NSW, Mining, Exploration and Geoscience	No	-
NSW Department of Planning and Environment, Biodiversity Conservation Division	No	-
NSW Department of Planning and Environment, Water Division	No	-
NSW Environment Protection Authority	Yes – no comments requiring specific assessment	-
NSW Resources Regulator	Yes	24 June 2022
Muswellbrook Shire Council	Yes	1 July 2022
Community Consultative Committee	Yes – no comment	-

A summary of comments received from the regulatory agencies as well as responses to regulator consultation is provided in **Appendix C**.

2.8 Site Inspection

A two (2) day site inspection was conducted at Mangoola on 5 and 22 July 2022. During both site inspections the weather conditions were generally overcast with significant rain events occurring prior to each inspection. Daytime temperatures ranged from approx. 8°C to 18°C over the two (2) days. Wind conditions were moderate during the inspection days. Minimal dust production was noted due to the prevailing weather conditions.

Photographs from the audit site inspection supporting audit findings are provided in **Appendix D**. Areas inspected during the audit included, but were not limited to, the following:

- MCCO Project Area
- Active mining area
- Tailings Dam 1
- Tailings Dam 2
- Tailings Dam 4
- Raw Water Dam
- Anvil Creek Storage Dam
- South Pit South Sediment Dam
- South Pit North Sediment Dam
- Big Flat Creek Clean Water Diversion
- Sand Creek Farm Dam
- Rehabilitation and translocation areas

- Eastern Offset Area
- Southern Offset Area
- CHPP
- Workshops
- Bioremediation cells
- Vehicle Washdown Bays

The following staff were present for site inspections, meetings or interviews during the audit:

- Sam Palmer – E & C Manager
- Jason Martin - MCCO Approvals Manager
- Luke Vaughan – Mangoola Maintenance Manager
- Jacob Hondertmark – Operations Manager
- Damien Ryba – E & C Coordinator
- Mitchell Green – E & C Coordinator
- Robyn Ellis – E & C Officer
- Chris March CHPP Manager
- Patrick Boyton – Production Manager

2.8.1 Opening and Closing Meetings

In accordance with ISO 19011:2018 Guidelines for auditing management systems an opening and closing meeting was held during the Site inspection. Details of attendees at both meetings are included in the sign on sheets included in **Appendix F**.

2.9 Compliance Status

The compliance status was determined using the relevant descriptors in accordance with the Independent Audit Post Approval Requirements (the Department, May 2020) provided in **Table 7** below.

Table 7 Compliance status descriptors

Status	Description
Compliant	The auditor has collected sufficient verifiable evidence to demonstrate that all elements of the requirement have been complied with within the scope of the audit.
Non-compliant	The auditor has determined that one or more specific elements of the conditions or requirements have not been complied with within the scope of the audit.
Not triggered	A requirement has an activation or timing trigger that has not been met during the temporal scope of the audit being undertaken (may be a retrospective or future requirement), therefore an assessment of compliance is not relevant.

Previous audit descriptors of partial compliance, partial non-compliance, not verified or administrative non-compliance or other similar terms must not be used in accordance with the above requirements.

As part of the Audit evaluation, the auditor may make observations, including identifying any opportunities for improvement in relation to any compliance requirement or any other aspect of the project. Any observations or notes are in addition to the compliance status descriptor assigned to each compliance requirement, limited to the descriptors listed in **Table 7**.

2.10 Evidence Validation

The audit team undertook verification activities to confirm the reliability of audit evidence. This included interviews, data checking, the examination of records, and site inspections. Records were provided in electronic and/or hard copy by site personnel and additional documents were reviewed whilst on site.

Some aspects of the audit process may have relied on information such as judgements and assumptions where external supporting evidence was unavailable or limited. Where this information was considered, its validity was confirmed to the extent possible prior to use by the auditors and is noted in appropriate areas of the audit checklists.

The majority of information was assessed off-site prior to the site inspection. The site inspections concentrated on assessment of the effectiveness of environmental management and adequacy of performance. The extent of audit activities was limited to the time available for the audit site inspections and interviews over two (2) days.

2.11 Technical Specialists Input

The Department requested on 20 April 2022 that the IEA team include technical specialists in the following fields:

- Rehabilitation – landform.
- Air Quality.
- Noise and Vibration.
- Surface and Groundwater.
- Erosion and sediment control.
- Biodiversity.

The technical specialists provided technical advice to the IEA Lead Auditor during the audit site inspection and reporting periods. Specific findings from the technical specialists have been incorporated into the Audit Checklists and recommendations where applicable.

3 ENVIRONMENTAL MANAGEMENT

A detailed implementation review was conducted against each management plan condition in PA06_0014 and SSD8642; and can be found in the Project Approval audit checklists in **Appendix B**. The approved strategies, plans or programs required under PA06_0014 and SSD8642 including a brief summary of the implementation review conducted against each plan are summarised in **Table 8**. This section satisfies the IEA requirement to review the adequacy of any approved strategies, plans or programs required under Schedule 5, Condition 7(d) of PA06_0014 and Part D, Condition 13(e) of SSD8642.

MCO completed a detailed review and comparison of the management plan requirements in SSD8642 with those management plans that the existing operation already had in place and approved under Project Approval (PA) 06_0014.

Following the review MCO developed an approach to ensure that construction activities required to be completed as part of the MCO Project were covered by an appropriate suite of management plans. This approach included a combination of relying on some existing management plans (where relevant) as they were currently approved, making a series of relatively minor updates to some existing plans (for example to reference changes in criteria relevant to the Recommended Conditions and revised mapping), and completing some full updates of the plans as required by specific SSD8642 conditions.

MCO was issued with a letter from DPE on 16 July 2021 indicating that they had reviewed the approach to updating the management plans and confirmed that they were satisfied the staged approach is appropriate and would ensure compliance with relevant conditions of consent. It was noted that the following management plans under SSD8642 were not triggered to be implemented during the audit period:

- Visual Impact Management Plan – Schedule 2, Part B, Condition 75
- Bushfire Management Plan – Schedule 2, Part B, Condition 82
- Rehabilitation Strategy – Schedule 2, Part B, Condition 87
- Social Impact Management Plan – Schedule 2, Part B, Condition 107

It is noted that the above management plans will be required prior to the commencement of mining north of Wybong Road under SSD8642.

Table 8 Management Plan Adequacy Review

Document	Findings from Review
Aboriginal Cultural Heritage Management Plan	Document Number: MANOC-1772150304-6102 Version: 11.0 Effective: 29/09/2021 The ACHMP was prepared by suitably qualified and experienced person Ben Churcher whose appointment was endorsed by the Planning Secretary on 20/05/2021. The ACHMP was subsequently approved by Stephen O'Donoghue as nominee of the Planning Secretary on 29/09/2021 following consultation with Heritage NSW and Registered Aboriginal Parties. As part of the MCO project management plan approach assessment it was determined that a full plan update was required to facilitate construction under SSD8642. The ACHMP was found to satisfy the relevant requirements of Condition B68 of SSD 8642 and sets out the procedures for the care and salvage of Aboriginal objects on Mangoola owned land within the approved Disturbance Area and adjoining Aboriginal and ecological conservation areas. During the site inspection, review of managed sites, and GDPs it was noted that MCO is satisfactorily implementing the ACHMP.
Conservation Management Strategy	Document Number: MANOC-1772150304-3567 Version: 9 Effective: 09/08/2021 As part of the MCO project management plan approach assessment it was determined that a partial plan update was required to facilitate construction with a new Historic Heritage Management Plan to be prepared prior to the commencement of mining north of Wybong Road under SSD8642.

Document	Findings from Review
	The revised CMP was submitted to the Department with acknowledgement of receipt and no comment provided. An official approval letter was not submitted due to the CMS not requiring approval under SSD8642. The version 8 was approved by Matthew Sprott as nominee to the Secretary on 16 November 2020 under PA06_0014. During the site inspection and following review of incidents and activities during the audit period it was noted that MCO is satisfactorily implementing the current CMP.
Air Quality Management Plan	Document Number: MANOC-1772150304-4624 Version: 16 Effective: 16/11/2021 The revised AQMP was approved on 20 September 2021 by Jessie Evans as nominee of the Secretary. As part of the MCCO project management plan approach assessment it was determined that a partial plan update was required to facilitate construction with a new Air Quality and Greenhouse Gas Management Plan will be prepared prior to the commencement of mining north of Wybong Road under SSD8642. Mangoola are currently working under the revised Air Quality Management Plan to include minor administrative updates to facilitate commencement of construction linked to SSD8642 and has been implemented during construction. Implementation of the AQMP will be staged to account for the transition from approved operations under PA 06_0014 (Stage 1) to SSD 8642 through the development and construction phase of the MCCO Project (Stage 2). As part of the minor amendments the air quality criteria (Table 2-5) as applicable for SSD 8642 and updated monitoring locations Figure 3 to include relocated monitoring locations were added. During the site inspection and following review of the quarterly air monitoring reports it was noted that MCO is satisfactorily implementing the AQMP.
Energy Saving Action Plan	Document Number: MANOC-1276546935-5 Version: 8 Effective: 30/11/2019 The ESAP was approved on 8 February 2020 by Matthew Sprott as nominee of the Secretary. Annual Reviews for the audit period outline the greenhouse gas emissions monitoring results and abatement measures for each year. The three-yearly energy audit was conducted in 2019 as required by the ESAP and energy efficiency improvement opportunities were investigated as a result. In 2020/2021, the total emissions produced by Mangoola were 135,015 t CO₂-e which represents a ~22% decrease from 2019/2020 (173,405 t CO₂-e). No reportable incidents regarding greenhouse gas and energy occurred during the reporting period. Review of annual greenhouse gas reporting indicated that MCO are generally implementing the ESAP. Greenhouse Gas will be incorporated in the Air Quality and Greenhouse Gas Management plan in 2022 as required by SSD 8642 prior to the commencement of mining north of Wybong Road under SSD8642.
Biodiversity Offset Management Plan	Document Number: MANOC-1772150304-3505 Version: 12 Effective: 15/11/2018 Approved by Jessie Evans, Director, as nominee of the Secretary on 5 November 2018. As part of the MCCO project management plan approach assessment it was determined that there was no update required to facilitate construction with a new Biodiversity Management Plan to be prepared prior to the commencement of mining north of Wybong Road under SSD8642. The Biodiversity Offset Management Plan was found to satisfy the relevant requirements of the current consents and has been prepared by suitably qualified and experienced person in consultation with OEH and submitted to the Planning Secretary for approval. Review of the available information indicated that the conservation and BOMP objectives are generally being met. During the site inspection and following review of the biodiversity monitoring reports it was noted that MCO is satisfactorily implementing the BOMP.

Document	Findings from Review
Translocation Management Plan	Translocation Management Plan Document Number: MANOC-1772150304-2867 Version: 3.0 Effective: 5/11/2018 A summary of the implementation of the mitigation and management measures outlined in the Translocation Management Plan are outlined in Section 6.6 and 8.5 of the annual review during the audit period. It was noted in the 2021 AR that based on 11 years of monitoring, Eastcoast Flora Survey, recommend a revised monitoring program for the terrestrial orchids, which continues annual monitoring of selected recipient plots (those in mine rehabilitation, controls, and some Prasophyllum-dominated plots in offsets), introduces cyclical post-fire monitoring of most other plots for two consecutive years after burns, and discontinues all monitoring of other poorly performed plots (Translocation # 1, and all tuber translocations) (Bell, 2021).
Blast Management Plan	Document Number: MANOC-1772150304-4601 Version: 18 Effective: 6/10/2020 Approved by Matthew Sprott as nominee of the Secretary on 6 October 2020. The Blast Management Plan was found to satisfy the relevant requirements of the Schedule 3, Condition 17 of PA 06_0014 and was submitted to the Planning Secretary for approval. As part of the MCCO project management plan approach assessment it was determined that a full or partial plan update is not required until prior to the commencement of mining north of Wybong Road under SSD8642. MCO's utilisation of blast monitors, blast cameras and 6-monthly LiDAR surveys to monitor the effects of blasting on sensitive sites including all rock shelters was revived during the site inspection. System designed to ensure changes to structures identified at the earliest time. During the site inspection, review of blasting data, and complaints register it was determined that MCO are satisfactorily implementing the Blast Management Plan.
Rehabilitation Management Plan	Document Number: MANOC-1276546935-5 Version: 1 Effective: 29/11/2021 This Rehabilitation Management Plan (RMP) has been prepared in accordance with the NSW Resources Regulator Form and Way - Rehabilitation Management Plan for Large Mines (July 2021). The RMP has been developed to satisfy the requirements of Condition B91 of SSD 8642 and ML1815 and ML1817. A separate Mining Operations Plan (Mangoola Coal Mine Operations Plan, January 2021 – December 2021) has also been prepared in accordance with relevant conditions associated with the existing ML1626 and ML1747. The MOP will prevail as the governing document for ML1626 and ML1747 rehabilitation requirements until the expiry of the transitional period on 2 July 2022, at which point the MOP was superseded by this RMP and supporting Annual Rehabilitation Report and Forward Program (ARRFP). The majority of the audit period was covered by the existing MOP for ML1626 and ML1747 with minimal rehabilitation activities undertaken within ML1815 and ML1817. MCO was observed to be generally implementing the RMP during the audit period.
Mangoola Coal Mine Operations Plan January 2021 – December 2021	Document Number: MANOC-1772150304-6271 Version: 1.0 Effective: 24/03/2021 The Resources Regulator granted an extension to the current approved MOP, under delegation from the Minister for Regional NSW, until 2 July 2022 being the commencement date for the new Mining Amendment (Standard Conditions of Mining Leases - Rehabilitation) Regulation 2021. Overall, the rehabilitation is on track and the site is being progressively rehabilitated in accordance with MOP and final land use targets. MCO was observed to be implementing their rehabilitation program during the site inspection. Recent changes to MOP plans and categorising of rehabilitation status are all well documented and evidence of Department approval was sighted.

Document	Findings from Review
	The maintenance of rehabilitation is excellent with adequate budget covering weed spraying, early intervention of erosion rills, thinning of dense vegetation and intensive graded bank inspection program and follow-up maintenance. It was concluded that MCO is satisfactorily implementing the Mangoola Coal Mine Operations Plan January 2021 – December 2021.
Traffic Management Plan	Version: 1 Effective: 22/11/2021 The TMP was approved by Stephen O'Donoghue as nominee to the Secretary on 22/11/2021. In accordance with Condition B104(a) of SSD 8642, the TMP was prepared by Mark Lucas, a Senior Transport Planner of GHD, who was endorsed by the Planning Secretary as a suitably qualified and experienced person. As required by condition B104(b) of SSD 8642 the TMP was prepared in consultation with Transport for NSW (TfNSW) and Muswellbrook Shire Council (MSC) as the road authority for the local road network. Review of the general site induction, complaints register, and communication between relevant parties indicated that MCO are generally implementing the TMP to reduce impacts to the surrounding road networks. During the site inspection traffic management controls were noted to be implemented for works on/near Wybong and Wybong Post Office Roads.
Environmental Management Strategy	Document Number: MANOC-1772150304-4652 Version: 10 Effective: 21/08/2020 Approved by Matthew Sprott Director Resource Assessments as nominee of the Planning Secretary on 21/08/2020. As part of the MCCO project management plan approach assessment it was determined that a partial plan update was required to facilitate construction with a new EMS will be prepared prior to the commencement of mining north of Wybong Road under SSD8642. The EMS was found to satisfy the relevant requirements of the current consents and has been prepared by suitably qualified and experienced person and was submitted to the Planning Secretary for approval. The EMS provides a range of procedures that are implemented to manage communication, complaints, incidents, and monitoring. Review of the communication, complaints, incidents registers found that MCO was implementing these procedures. The EMS references the various management plans for specific details for plans, programs, and monitoring requirements. During the site inspection and following review of associated management plans it was noted that MCO is satisfactorily implementing the EMS.
Noise Management Plan	Document Number: MANOC-1772150304-4345 Version: 23 Effective: 22/11/2021 Approved by Stephen O'Donoghue as nominee of the Secretary on 22 November 2021 and with EPA approval on 20 June 2019. The NMP was prepared by Katie Teyhan endorsed by DPE as suitably qualified on 20 May 2021. The NMP was identified as requiring a full update prior to construction of the MCCO Project. The NMP was found to satisfy the relevant requirements of the consents and has been prepared by suitably qualified and experienced person in consultation with the EPA and was submitted to the Planning Secretary for approval. During site visit, discussed proactive noise management measures including daily forecast of expected weather conditions (wind speed, wind direction and inversion conditions) and risk of noise enhancing conditions (viewed example of daily report). Details provided regarding the dissemination of forecast information to operations staff and discussion at daily operations meeting to inform modifications to planned mining operations. Viewed and/or discussed noise control measures including acoustic cladding and enclosure of CHPP and conveyors, annual sound power testing and maintenance of low noise rollers for conveyors, siting of infrastructure to maximise natural landforms for shielding, noise suppression of mobile equipment, and change management system. Discussed and viewed procedure for initial and ongoing training including 'Site Familiarisation', which includes roles and responsibilities for

Document	Findings from Review
	noise management. Satisfied that MCO has, and continues, to implement effective noise management measures as per the EIS Statement of Commitments provided in the NMP. No noise criterion exceedances were recorded during the audit period. Noted that there has been a decreasing trend in noise complaints during the audit period, with a significant decrease (>50%) in complaints during 2021, compared with 2020.
Pollution Incident Response Management Plan	Document Number: MANOC-1772150304-1830 Version: 23 Effective: 06/01/2022 The Pollution Incident Response Management Plan (PIRMP) clarifies what the notification and reporting obligations are in response to a pollution incident. The PIRMP was prepared and implemented in accordance with Section 153A of the Protection of the Environment Operations Act 1997 (POEO Act). During the site inspection and following review of incident reports during the audit period it was noted that MCO has been required to and has satisfactorily implemented the PIRMP on a number of events.
Water Management Plan	Document Number: MANOC-1772150304-6221 Version: 13 Effective: 03/12/2021 Approved by Stephen O'Donoghue as nominee of the Secretary on 3 December 2021. As part of the MCO project management plan approach assessment it was determined that a partial plan update was required to facilitate construction with a new WMP prepared prior to the commencement of mining north of Wybong Road under SSD8642. MCO are currently working under the revised WMP to include minor administrative updates to facilitate commencement of construction linked to SSD8642 and has been implemented during construction. The WMP was prepared in consultation with EPA and DPI Water by suitably qualified expert whose appointment was approved by the Secretary. The WMP has been found to address the relevant surface water and groundwater conditions detailed in the consents and has been implemented accordingly, as reported in the MCO Annual Review Reports available for the audit period. Following review of available monitoring data, inspection of construction and operation water management temporary and permanent infrastructure MCO are generally implementing the WMP as approved.

4 ENVIRONMENTAL PERFORMANCE

This section assesses the requirement of Schedule 5, Condition 7(c) of PA06_0014 and Part D, Condition 13(d) of SSD8642 to assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals). RPS based the assessment of the environmental performance of the site on the following:

- Section 3_ provides an assessment of the effectiveness and adequacy of the environmental management plans and programs required under the approvals.
- An assessment of compliance with the conditions of PA06_0014, SSD8642, EPL12894, and authorised leases. The findings of this assessment are provided in the compliance checklists presented in **Appendix B** with the identified non-compliances and associated recommendations summarised in the Audit Findings in Section 6.
- Section 4.1 provides a review of compliance management practices in place at MCO.
- Section 4.2 provides a review of incidents reported during the audit period.
- Section 4.3 provides a review of complaints received during the audit period.
- Section 4.4 provides a review of performance against EIS predictions.

No regulatory agency notices, orders, penalty notices or prosecutions were issued during the audit period.

4.1 Compliance Management

4.1.1 Compliance Monitoring

Glencore Coal Assets Australia (GCAA) utilise CMO Compliance Management Software (CMO) as a management tool across all of its sites. The CMO Compliance Management database system is used to store and track compliance with development consents, leases, licences, and other approvals and their associated conditions. CMO is updated regularly as triggered by actions or the addition of new or modified approvals. CMO is also utilised to assign and complete inspections and to track complaints, actions arising from internal or external consultation practices or actions following an audit.

During the audit site inspection, MCO demonstrated its use of CMO to the auditors. The CMO database included the requirements of the Project Approval, Development Consent, EPL, Mining Leases, Sewage Treatment Plant approvals and the key commitments / requirements for each management plan. The MCO Environment and Community (E&C) department used CMO to access evidence to demonstrate compliance with specific conditions of consent.

4.1.2 Internal Assurance

GCAA implements an internal audit program which is conducted in accordance with the Glencore corporate procedure for internal and external auditing. The audit program involves internal compliance audits conducted every three years prior to an IEA. The internal compliance audit assesses compliance against the site's Project Approval conditions and associated approval conditions which have been entered into CMO. MCO is required to enter evidence into CMO against each relevant condition to assist with the compliance review process.

4.1.3 Monthly Inspections

The MCO E&C department conducts monthly environmental inspections of the site. The monthly inspections are conducted to:

- Identify any potential non-conformances or environmental incidents that have not been previously identified/reported;
- Maintain a visual presence around the site to promote environmental awareness to mine personnel and contractors; and

- Maintain site familiarity by ensuring E&C personnel are aware of any physical changes to operations or processes at the site.

The monthly environmental inspections include a description of general environmental conditions as well as checks of specific areas. The inspections include identified actions, an action category, due date and status and include photos and attachments where relevant. Depending on the category of the action, it may be entered into CMO and tracked.

The auditors sighted examples of completed inspections conducted by the MCO E&C department. Inspections were observed to be undertaken monthly. The reports were considered to be sufficiently detailed and well completed with appropriate actions identified for issues raised.

4.1.4 Ground Disturbance Permit (GDP) Process

MCO implements a work permit system in accordance with the GCAA Work Authorisation and Permit Management procedure. In the event that ground disturbance is identified during the Work Authorisation process a Ground Disturbance Permit (GDP) is required to be completed. The GDP is a risk management tool designed to ensure the proposed works have the required environmental approval and that the person undertaking the works has appropriately managed risks to minimise impacts on the environment and community. The GDP provides a checklist of environmental aspects that must be completed by the employee / contractor initiating the work and internally approved by the MCO E&C department prior to the commencement of any work.

4.2 Incidents

Environmental incidents are recorded in CMO, the compliance management tool used by GCAA (discussed further in Section 6.1.1) and determines the appropriate corrective or preventative action using the Incident Cause Analysis Method (ICAM) where required.

An incident is defined by the project approvals PA06_0014, SSD8642, and EPL12894 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 this approval.

The auditors reviewed the site's incident database, external consultant's investigation reports as well as results presented in the Annual Reviews during the audit period. Multiple reportable incidents occurred during the audit period which required reporting under Schedule 5, Condition 4 of PA06_0014 and Part D, Condition 9 of SSD8642.

4.2.1 2019 Incidents

Air Quality - PM₁₀ 24-hour average

The 24-hour average PM₁₀ exceeded the consent criterion of 50 µg/m³ on multiple days at the monitors surrounding the mine. As per PA06_0014, the Department were notified of the exceedances and internal investigations commenced. Most of the events were classified as extraordinary events by DPE. Those that were not classified as extraordinary events were also notified to DPE, and letters were sent to neighbouring private landowners and tenants as per PA06_0014. The Department notified Mangoola that they were satisfied that reasonable and feasible measures were undertaken on the days of exceedance.

4.2.2 2020 Incidents

Air Quality - PM₁₀ 24-hour average

The 24-hour average PM₁₀ exceeded the consent criterion of 50 µg/m³ on multiple days at the monitors surrounding the mine. As per PA06_0014, the Department were notified of the exceedances and internal investigations commenced. Most of the events were classified as extraordinary events by DPE. Those that were not classified as extraordinary events were also notified to DPE, and letters were sent to neighbouring private landowners and tenants as per PA06_0014. An exceedance was recorded on 2 December 2020 that was not classified as an extraordinary event. Following notification, the Department was satisfied that

reasonable and feasible dust control measures were implemented in accordance with the approved AQMP, and no further action was required at the time.

Category 4B blast fume event

On 10 January 2020, shot #1150 MPW Strip 14 low vibration powerline blast was blasted. The blast fumed beyond expectation, and all fume and dust dissipated onsite. The blast fume was rated at level 4 and subsequently reported as per the Blast Fume Management Plan.

DPIE were notified and an investigation report was provided under Schedule 5, Condition 4 of PA 06_0014. Correspondence received from DPIE on 12 February 2020 indicate they were satisfied with the fume rankings and investigation outcomes. As a result, no further actions were required.

Surface Water Discharge – Sandy Creek Farm Dam 1

On Monday the 17 February 2020, Mangoola experienced a 5-10% AEP storm event. Due to the runoff exceeding the pumping and freeboard of the dams, water was discharged from site. The PIRMP was enacted in accordance with Section 147 of the POEO Act and the incident was reported to EPA and DPE in accordance with applicable statutory requirements.

Exceedance of Overpressure Criteria at BM07

Blast #1200 was fired at 12.21pm on 4 March 2020 in Main Pit West and an overpressure reading of 120.9dB was recorded at Blast Monitor 07 (BM07/ EPL Monitoring point 21). This reading is above the 120dB impact assessment criteria outlined in Schedule 3, Condition 10 of PA 06_0014 and EPL 12894, Condition L4.2.

Notifications were made to both DPIE and the EPA following the blast with the follow up incident investigation reports required under Schedule 5, Condition 4 of PA 06_0014 and Condition R2.2 of EPL 12894 submitted to the relevant departments on 11 March 2020.

A formal warning letter was received from DPIE on 24 March 2020, while to date no formal response from the EPA has been received.

Loss of continuous monitoring data at monitoring point D7-DC

On review of the monitor results on 18 March 2020, a fault (Zero Calibration Error) was identified on the monitor from 17 March 2020. The Contractor attended the monitor but was unable to repair the unit resulting in it being taken offsite for repair. A replacement monitor was installed however four (4) days of monitoring results was lost.

This failure to continuously monitor at this monitoring point was reported in the Annual Return as required under Condition R1 of EPL12894.

4.2.3 2021 Incidents

Air Quality - PM₁₀ 24-hour average

D01-DC exceeded the 50 µg/m³ 24h PM₁₀ criteria (50.1 µg/m³) on 30 October 2021.

DPIE were notified of the exceedance and an internal investigation commenced. The control measures and corrective actions listed in the AQMP were implemented and a report was provided to DPIE within seven days. DPIE reviewed the information presented in the report and was satisfied Mangoola Coal undertook reasonable and feasible mitigation measures to minimise dust emissions from the site on this day.

Failure to Monitor (D8)

The monitoring unit malfunctioned at EPL Monitoring Point 20 (D8) 20/02/2021. This was a non-compliance in accordance with Sampling Method – Special Method 1. Field maintenance was undertaken on the E-Sampler at the earliest time (19 March 2020) to attempt to repair, however the unit could not be fixed in the field and was taken offsite for repairs. A replacement unit was installed, however the stabilising period resulted in a loss of four three days data. This was reported in the EPL 12894 Annual Return in 2021.

Failure to Monitor Weather Continuously

Failure to continuously monitor weather at Monitoring Point 5 and Monitoring Point 18 on various dates during 2021. Monthly data validation checks have been implemented, along with changes to contactor arrangements. The non-compliance was reporting the EPL Annual Return, dated 12 August 2021.

Failure to Monitor Blast

On 1 October 2021 blast monitor at BM07 failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.

Discharge of Saline Water – November 2021

On 26 November 2021, water was discharged from Sandy Creek Farm Dam 2, a saline seepage management dam, into Sandy Creek via an unnamed drainage line. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall.

Failure to Monitor after discharge event (SW01 and SW02)

Mangoola failed to monitor at SW01 and SW02 following the 26 November discharge event. These sites were unable to be monitored due to safety concerns around access.

Discharge of Saline Water – December 2021

On 8 December 2021, water was discharged from Sandy Creek Farm Dam 2, a saline seepage management dam, into Sandy Creek via an unnamed drainage line. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall.

4.2.4 2022 Incidents

MCCO - Dirty Water Discharge

Following a period of high rainfall, a site inspection of the MCCO Project Area was conducted. During this inspection sediment laden water was observed leaving the MCCO Project Area from 1) the Wybong Road Bypass Sediment Dam via the spillway 2) a low-lying area approximately 200m east of Gate H and 3) Sediment Dam 2 via the spillway. The EPA was notified under EPL12894 - Discharge of sediment laden water and notification in accordance with the Mangoola Pollution Incident Response Management Plan.

4.3 Complaints

Complaints are managed in accordance with GCAA-625378177-10296 – 10.05 Complaints Management. This protocol provides a process to ensure that complaints received by GCAA and its operations are properly documented and handled in accordance with licence requirements and company policy. MCO operates a free Environment and Community Enquiry Hotline which operates 24 hours per day, 7 days per week. The number is 1800 014 339. In addition to this hotline, potentially impacted stakeholders also have the contact details of the MCO Environment and Community Manager.

Table 9 Summary of complaints by issue during the audit period

Complaint Type	2019*	2020	2021	2022*
Noise	49	122	58	22
Dust	4	2	0	0
Lighting	1	2	0	1
Blasting	4	6	2	4
Traffic	1	1	1	0
Other	1	0	1	1
Totals	60	133	62	28

*Complaints received during the audit period 2 August 2019 and 22 July 2022.

A total of 283 complaints were received during the audit period. Each of these complaints followed MCO Community Complaint Procedure and the response is available in the complaints register on the MCO website. Complaints have generally trended down during the audit period.

The system for response and management of complaints is robust, and well documented through the complaints management protocol and online complaints register and is supported by accessibility to the Environment and Community Hotline, and direct availability of the MCO Environment & Community Manager.

4.4 Key Commitments and EIS Predictions

Review of environmental performance with respect to environmental commitments and predictions from the EIS are regularly reviewed and incorporated into the approved management plans for the project. Further to this, comparison with predictions is included in the Annual Environmental Review reports as required under the consents.

4.4.1 Air Quality

The PA 06_0014 MOD 6 Environmental Assessment (EA) Air Quality Impact Assessment (Todoroski Air Sciences, 2013) predicted dust emissions for the project in years 2, 5, and 10. As MOD 6 was approved in 2014, air quality results during the audit period were compared to the Year 5 predictions and reported in the most recent annual report. All results were below predicted levels, with the exception of one depositional dust monitor (DG18) and two TEOM locations (D04-DC, D05-DC).

During the audit period, air quality monitoring results indicated a downward trend from drought and bushfire impacted results in 2019 to consistently lower results through 2020 to 2022.

4.4.2 Greenhouse Gas Emissions

PA 06_0014 MOD 6 Environmental Assessment (EA) Air Quality Impact Assessment (Todoroski Air Sciences, 2013) predicted greenhouse gas emissions for years 1, 2-9, and 10 of the project. As MOD 6 was approved in 2014, 2021 can be considered Year 8 of the modified operations.

Total emissions reported during the audit period were 173,405t CO₂-e for 2019/20 and 135,015t CO₂-e 2020/21. For this period this is significantly less than the 200,320 t CO₂-e predicted in the EA for Years 2-9 for Scope 1 (Direct) and 2 (Indirect) emissions. No reportable incidents regarding greenhouse gas and energy occurred during the reporting period.

4.4.3 Noise

The MOD 6 Noise and Vibration Assessment (EMM 2013) predicted the 10% LA_{eq}(15minute) and LA_{max} operational noise levels at private receptors in Years 2, 5 and 10. As MOD 6 was approved in 2014, a comparison of noise data was compared to the Year 5 predictions and reported in the most recent annual report. The MCCO Noise and Vibration Assessment (Global Acoustic 2019) predicted the 10% LA_{eq}(15minute) and LA_{max} operational noise levels at private receptors in Years 1, 3, 5 and 8. As MCCO was approved in 2021, a comparison of 2021 noise data against the Year 1 data was made in the most recent annual report.

Noise levels recorded at Mangoola are compared against the Year 5 noise predictions presented in the 2013 Noise and Vibration Assessment (EMM 2013) and the PA 06_0014 LA_{eq}(15minute) criteria in the most recent annual report. On five monitoring occasions (where meteorological conditions met consent condition parameters for noise limits to apply), results were recorded above the Year 5 LA_{eq}(15minute) predictions however, these levels were well below criteria. The remaining results were lower than the predicted levels where noise limits were applicable due to suitable meteorological conditions. Six monitoring locations recorded at least one result above the Year 5 LA_{max} predictions, with one result above predicted levels at NM6, NM13 and NM15, two results above predicted levels at NM10 and NM14, and four results above predicted levels at NM8. All other measured LA_{max} noise levels were below the predicted levels.

Noise levels for the MCCO project are compared against the Year 1 noise predictions presented in the MCCO Noise Impact Assessment (Global Acoustics 2019) and the relevant SSD 8642 criteria. No results were recorded above the Year 1 LA_{eq}(15minute) or LA_{max} predictions, and were below the SSD 8642 LA₁ criteria.

Trends over the audit period have shown a decline in exceedances of the PA 06_0014, SSD 8642 and EPL 12984 criteria, with no exceedances reported during the audit period.

4.4.4 Blasting and Vibration

The PA 06_0014 MOD 6 EA included a Noise and Vibration Assessment (EMM 2013) which assessed the impacts of blasting. This assessment determined the limiting factors to the blast design with respect to the relevant blast criteria. The MOD 6 Noise and Vibration Assessment (EMM 2013) determined that blast overpressure and vibration could be managed to be within PA06_0014 criteria at all times. With the exception of the incident noted in Section 4.2.2 there were no exceedances of the blast overpressure criteria and no exceedances of vibration criteria.

Ground vibration monitoring results have remained generally consistent since monitoring commenced, with no increasing trends developing in the data. All blast vibration monitoring results at private residences have been below the PA 06_0014 criteria since monitoring commenced. All results have been below the 10mm/s criteria, and while some results have exceeded the 5mm/s criteria between 2010 and 2020, these were within the allowable 5% frequency.

4.4.5 Surface Water Monitoring

The PA 06_0014 MOD 6 EA included a Surface Water Assessment (WRM Water & Environment 2013) which predicted water usage for the project in years 2, 5, and 10, for a high water demand scenario and a low water demand scenario. The high water demand scenario was based on 13.5 Mtpa of ROM coal washed through the CHPP, and the low water demand scenario was based on 8.0 Mtpa of ROM coal washed through the CHPP and 5.5 Mtpa of ROM coal processed as bypass coal (i.e. unwashed).

As MOD 6 was approved in 2014, 2021 constitutes Year 5 of the modified operations, therefore, the water usage data is compared against the Year 5 high water demand scenario predictions in the most recent annual report during the audit period. Only the 2021 haul road dust suppression usage (511ML) was greater than predictions (480ML) made in the 2013 Surface Water Assessment. The CHPP water use and pipeline water (Hunter River) usage were both below the water demand predictions.

Long term trend analysis of surface water monitoring results at Mangoola is included in annual reports to identify any trends in the monitoring data over the life of the project.

The results reported in the most recent annual report during the audit period indicate the following:

- The pH of surface water monitoring locations has generally remained relatively stable since mining operations commenced in 2010.
- EC has generally remained stable from 2010-21 with the exception of monitoring locations SW01, SW02, SW03, and SW07, which have been periodically elevated. SW02 and SW03 are located upstream of the Mangoola Mining Lease boundary, and therefore the elevated salinity cannot be attributed to operations at Mangoola;
- SW07, and SW01, while located within the Mangoola Mining Lease boundary, are downstream of SW03 and SW02 respectively. Monitoring locations SW01, SW02, SW03, and SW07 were dry for most of 2017-19 due to drought conditions. An increase in rain during 2020 and 2021 allowed most sites to be sampled during this period.
- TSS and TDS have also generally remained stable from 2010-21, with a few elevated readings, however no discernible trends. At the sites with sufficient water for consistent sampling, results have shown an increase in TDS which occurred between 2017-19 due to the drought's impact on flow conditions. This trend declined due to increased rainfall from 2020 for the remainder of the audit period.

Specific findings with respect to compliance against approval conditions and specific discharge events are included in the audit checklists in Appendix B.

4.4.6 Groundwater Management

Comparison of groundwater management results and long-term trend analysis is included in the most recent annual report for the project. Groundwater modelling for the original EA was undertaken by Mackie Environmental Research (MER) in 2006. Since then, the progressive three yearly updates to the numerical groundwater model completed by MER in 2010 and 2013, and AGE in 2016. The numerical groundwater model was further updated and recalibrated in 2018 as part of the EIS for the MCCO Project. The latest

three yearly update to the groundwater model during this audit period was completed by AGE in 2019 (AGE 2019b). The predictions from this model were calibrated with 2018/2019 water level monitoring data to validate the model calibration. The observed monitoring bore water level data was compared to the modelled water level data from the 2019 model predictions. Despite slight divergences between the observed and modelled datasets, the majority of the hydrographs showed similar trends in the 2021 reporting period.

The observed groundwater level trends can be generally categorised into stable or declining groundwater levels. The greatest groundwater level drawdown was measured on the western boundary of the mine, which is consistent with the model simulations and with the mining activities progressing below the groundwater table in this area. The effects of drawdown are most prominent in greater depths, decreasing with distance, both vertically and laterally, from the mining area. Groundwater levels in shallow bores screened within the alluvium of Wybong Creek began declining in 2016, suggesting climate rather than mining influences on groundwater levels in this area.

Engeny (2021) completed quarterly reviews of groundwater take associated with groundwater ingress into Main Pit using a spoil seepage model and pit water balance to track compliance with the licence conditions to take under Water Licence WAL41560 (Converted in 2021 – previously 20BL172598). Engeny concluded that the groundwater inflow volumes estimated by AGE were typically in accordance with the groundwater inflows from quarterly reviews (28.3 ML per quarter and 56.5 ML for YTD). Subsequently, Engeny adopted a groundwater inflow estimate of 113 ML/year for the 2021 period, based on the AGE numerical groundwater model in the water balance report.

The most current annual report during the audit period provides the following summary of long-term trends identified for each monitoring dataset:

- Groundwater levels from monitoring bores generally show fluctuations reflecting climatic conditions and rainfall particularly in the shallow strata. Groundwater levels in deeper Permian strata fluctuate less with rainfall and have recorded declining levels since 2014 when mining of the coal seams progressed below the water table. This has resulted in groundwater levels declining in the order of 30 metres at some sites (GW14,MP2-A, MP12-A, MP12-C, MP13-B and MP14-B);
- The majority of the GW monitoring bores have relatively stable long-term EC with the exception of GW02,GW10-P2, GW14 and GW15. Several of the BFC and MP bores located northwest of the mine along Big Flat Creek show fluctuations and increasing trends in EC for several years (BFC02A, MP2-A, MP2-B, MP3-A, MP4-C and MP9A). The bores experiencing increases in EC are also exhibiting declines in water levels/water pressure due to below average rainfall over successive years which have led to proportionally more saline water being drawn in from geological formation with inherent higher saline conditions than formations with fresher conditions (AGE 2022). Consequently, groundwater in bores affected by the mobilisation of more saline groundwater have shown increasing EC levels since 2014; and
- The pH of groundwater has generally recorded only limited fluctuations with most monitoring sites having no discernible trends. Generally, pH records depicted neutral conditions with no acidic conditions recorded from any boreholes.

Specific findings with respect to compliance against approval conditions are included in the audit checklists in Appendix B.

4.5 Community Consultation Committee

MCO has a range of communication methods in place which enables it to share information with the local community. These methods include:

- The Community Consultative Committee (CCC).
- Direct engagement with nearby landholders.
- The Mangoola Coal Public Website (<https://www.glencore.com.au/operations-and-projects/coal/current-operations/mangoola-open-cut>).
- Distribution of Community Newsletters.

MCO utilise the established Community Consultative Committee (CCC) which meets quarterly to satisfy the requirements of Schedule 5, Condition C10 of PA06_0014 and Part A, Condition 20 of SSD8642

REPORT

Approval was granted by DPE on 9 September 2021 to combine the CCC with the existing Mangoola Coal Project prior to construction on 6 December 2021. The combination of the CCCs provided a consolidated CCC for the MCCO.

5 STATUS OF 2019 IEA RECOMMENDATIONS

The IEA conducted a reviewed against the recommendations made in the 2019 IEA conducted by Hansen Bailey Pty Ltd. The findings from this review have been provided in **Appendix E**.

6 AUDIT FINDINGS

6.1 Identified Non-Compliances and Recommendations

6.1.1 PA06_0014

Non-Compliances identified against PA06_0014 have been summarised in **Table 10** below. Further audit commentary and evidence is provided against each condition in the PA06_0014 Audit Checklist provided in **Appendix B**.

Table 10 Non-compliances against PA06_0014

Condition Ref	Requirement	Independent Audit Finding	Recommendation																				
S2 C2A	The proponent must carry out the project in accordance with the conditions of this approval.	The following non-conformances were recorded during the audit period: - S3 C10 – Blast Criteria - S3 C15 – Operating Conditions - S3 C17 – Blast Management Plan - S3 C19 – Impact Assessment Criteria - S3 C27 – Water Pollution	No recommendation required.																				
S3 C10	Blasting Criteria The proponent must ensure that blasting on site does not cause exceedances of the criteria in Table 4. <i>Table 4: Blasting criteria</i> <table> <tr> <th>Location</th><th>Airblast overpressure (dB(L in Peak))</th><th>Ground vibration (mm/s)</th><th>Allowable exceedance</th></tr> <tr> <td>Residence on privately owned land</td><td>120</td><td>10</td><td>0%</td></tr> <tr> <td></td><td>115</td><td>5</td><td>5% of the total number of blasts over a period of 12 months</td></tr> <tr> <td>500kV transmission line pylons – tension towers</td><td></td><td>50</td><td>0%</td></tr> <tr> <td>500kV transmission line pylons – suspension towers</td><td></td><td>100</td><td>0%</td></tr> </table> However, these criteria do not apply if the Proponent has a written agreement with the relevant owner to exceed these criteria, and has advised the Department in writing of the terms of this agreement.	Location	Airblast overpressure (dB(L in Peak))	Ground vibration (mm/s)	Allowable exceedance	Residence on privately owned land	120	10	0%		115	5	5% of the total number of blasts over a period of 12 months	500kV transmission line pylons – tension towers		50	0%	500kV transmission line pylons – suspension towers		100	0%	Blasting – Blasting Criteria On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPIE and EPA were notified. Notifications were made to both DPIE and the EPA following the blast with the follow up incident investigation reports required under Schedule 5, Condition 4 of PA 06_0014 and Condition R2.2 of EPL 12984 submitted to the relevant departments on 11 March 2020. A formal warning letter was received from DPIE on 24 March 2020, while	Review of actions following incidents determined that mitigation measures developed are sufficient. No further recommendations required. Continue to ensure that Mangoola does not contribute to air quality impacts during extraordinary weather events.
Location	Airblast overpressure (dB(L in Peak))	Ground vibration (mm/s)	Allowable exceedance																				
Residence on privately owned land	120	10	0%																				
	115	5	5% of the total number of blasts over a period of 12 months																				
500kV transmission line pylons – tension towers		50	0%																				
500kV transmission line pylons – suspension towers		100	0%																				

REPORT

Condition Ref	Requirement	Independent Audit Finding	Recommendation
		to date no formal response from the EPA has been received. There was a recorded exceedance of the vibration limit on a suspension pylon footing. This was reported directly to the asset owner as per the agreement with the infrastructure owner and follow-up non-destructive testing was carried out, with no damage confirmed. Agreement has been updated to a level of 150mm/s effective from 17 September 2020. Correspondence for the approval of vibration limits is provided in Appendix A of the Blast management Plan. On 1 October 2021 blast monitor BM07 failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.	
S3 C15	Operating Conditions The Proponent must: - implement best practice to manage potential blasting impacts associated with the project to: - protect the safety of people and livestock in the surrounding area; - protect public or private infrastructure/property in the surrounding area from any damage; and - minimise the dust and fume emissions of any blasting; - ensure that blasting on the site does not damage Aboriginal rock shelter sites, Anvil Rock and “The Book” rock formations; - operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site, to the satisfaction of the Secretary.	Section 3 of the Blast Management Plan (MANOC-1772150304-4601) provides blast management controls to ensure safety of people and livestock and prevent impacts to property and public infrastructure. On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPIE and EPA were notified. Overpressure exceedance attributed to blast design (sighted CMO report 20200304155.2). Noted that no further exceedances recorded at BM07.	Continue to implement the Blast Management Plan to minimise the dust and fume emissions of any blasting.

REPORT

Condition Ref	Requirement	Independent Audit Finding	Recommendation
		Exceedance of the vibration limit on a suspension pylon footing noted. This was reported directly to the asset owner as per the agreement with the infrastructure owner and follow-up non-destructive testing was carried out, with no damage confirmed. Agreement has been updated to a level of 150mm/s effective from 17 September 2020. Blasting – Operating Conditions On 10 January 2020, a category 4B fume occurred, however this did not leave the site boundary and dissipated on-site. This was reported to DPIE. Correspondence received from DPIE on 12 February 2020 indicate they were satisfied with the fume rankings and investigation outcomes. Section 4.3 and Section 4.4.4 of the BMP detail the rock structure and rock shelter monitoring program and the blast impact evaluation procedure for rock formations and Aboriginal rock shelters. Structural condition monitoring is undertaken using a network of blast cameras, 6-monthly LiDAR surveys and measurements using digital tape extensometers (per comms). Mangoola operates a Community Response Line and Blasting Hotline (24 hours), with the number listed on their website and published in the Mangoola 'Community Newsletter'. Additionally, Mangoola has an established register for local landowners/occupiers to whom notification of scheduled blasts is provided (Section 5.2 of BMP). Operational blast controls considered to be appropriate given the general	

REPORT

Condition Ref	Requirement	Independent Audit Finding	Recommendation
S3 C17	Blast Management Plan The Proponent must prepare a Blast Management Plan for the project to the satisfaction of the Secretary. This plan must: - describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this approval; - propose and justify any alternative ground vibration limits for public infrastructure on the vicinity of the site (if relevant); and - include a monitoring program for evaluating and reporting on compliance with the blasting criteria and operating conditions of this approval. The Proponent must implement the approved management plan as approved from time to time by the Secretary.	compliance with the blasting limits during the audit period. Mangoola has a current Blast Management Plan (MANOC-1772150304-4601 version 18) effective as of 6/10/2020 (letter from DPIE provided in Appendix A of BMP). Section 3 of BMP describes measures to ensure compliance with the blast criteria and operating conditions of PA06_0014. Section 4.4.3 of BMP details agreement with TransGrid for alternative ground vibration limits (agreement provided in Appendix A of BMP). Section 4 of BMP provides blast monitoring methodology to confirm compliance with the approval, Section 4.4 of BMP provides blast impact evaluation, and Section 5.5 of BMP provides incident and exceedance reporting procedure. On 1 October 2021 blast monitor BM07 failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.
S3 C19	Impact Assessment Criteria The Proponent must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not cause exceedances of the criteria listed in Tables 5, 6 and 7 at any residence on privately-owned land (excluding the dust affected properties listing in Table 1).	Multiple exceedances of the Air Quality - PM10 24-hour average during the audit period. The 24-hour average PM10 exceeded the consent criterion of 50 µg/m³ on multiple days at the monitors surrounding the mine. As per PA06_0014, the Department were notified of the exceedances and internal investigations commenced. Most of the events were classified as	Review of the incidents and DPE correspondence indicates that no further recommendations are required.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation																							
	Table 5: Long term impact assessment criteria for particulate matter <table><tr><th>Pollutant</th><th>Averaging period</th><th>^aCriterion</th></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>≤ 90 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td>≤ 30 µg/m³</td></tr></table> Table 6: Short term impact assessment criterion for particulate matter <table><tr><th>Pollutant</th><th>Averaging period</th><th>^aCriterion</th></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td>≤ 50 µg/m³</td></tr></table> Table 7: Long term impact assessment criteria for deposited dust <table><tr><th>Pollutant</th><th>Averaging period</th><th>Maximum increase in deposited dust level</th><th>Maximum total deposited dust level</th></tr><tr><td>^aDeposited dust</td><td>Annual</td><td>≤ 2 g/m²/month</td><td>≤ 4 g/m²/month</td></tr></table> Notes to Tables 5-7: a. Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources); b. Incremental impact (i.e. incremental increase in concentrations due to the development on its own); c. Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS.NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method; and d. Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.	Pollutant	Averaging period	^a Criterion	Total suspended particulate (TSP) matter	Annual	≤ 90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	≤ 30 µg/m ³	Pollutant	Averaging period	^a Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	≤ 50 µg/m ³	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	^a Deposited dust	Annual	≤ 2 g/m ² /month	≤ 4 g/m ² /month	extraordinary events by DPE. Those that were not classified as extraordinary events were also notified to DPE, and letters were sent to neighbouring private landowners and tenants as per PA06_0014. The Department notified Mangoola that they were satisfied that reasonable and feasible measures were undertaken on the days of exceedance.	
Pollutant	Averaging period	^a Criterion																								
Total suspended particulate (TSP) matter	Annual	≤ 90 µg/m ³																								
Particulate matter < 10 µm (PM ₁₀)	Annual	≤ 30 µg/m ³																								
Pollutant	Averaging period	^a Criterion																								
Particulate matter < 10 µm (PM ₁₀)	24 hour	≤ 50 µg/m ³																								
Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level																							
^a Deposited dust	Annual	≤ 2 g/m ² /month	≤ 4 g/m ² /month																							
S3 C27	Water Pollution Unless an EPL or the EPA authorises otherwise, the Proponent must comply with Section 120 of the POEO Act and the <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>.	Sandy Creek Farm Dams - Saline Water Discharges - 17/02/2020, 26/11/2021, and 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall. It is understood no further action was required by the regulatory authorities. The de-watering management system of the two dams was cited	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for areas considered to be high risk prior to predicted excessive rainfall events. Investigate the option of automating the pumps located on the Sandy Creek Farm Dams. Site location and feasibility constraints may prevent this, but the benefit would be to reduce the risk of having an uncontrolled discharge which could potentially cause pollution.																							

REPORT

Condition Ref	Requirement	Independent Audit Finding	Recommendation
		during the audit site inspection. Both dam's had diesel pumps installed and on standby with automated water level gauges installed. The pumps however rely on manual operation. It is understood that the dams cannot be made larger as they are situated in the biodiversity area.	

6.1.2 SSD8642

Non-Compliances identified against SSD8642 have been summarised in **Table 11** below. Further audit commentary and evidence is provided against each condition in the SSD8642 Audit Checklist provided in **Appendix B**.

Table 11 Non-compliances against SSD8642

Condition Ref	Requirement	Independent Audit Finding	Recommendation
A2	The development may only be carried out: - in compliance with the conditions of this consent; - in accordance with all written directions of the Planning Secretary; - generally in accordance with the EIS; and generally in accordance with the Development Layout in Appendix 2.	The following non-compliances against the conditions of this consent were identified during the audit period: B46 Sandy Creek Farm Dams - Saline Water Discharges MCCO - Dirty Water Discharge	No recommendation required.
B46	Water Discharges The Applicant must ensure that all surface discharges from the site comply with: discharge limits (both volume and quality) set for the development in any EPL; or relevant provisions of the POEO Act and <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i> .	Sandy Creek Farm Dams - Saline Water Discharges - 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall. It is understood no further action was required by the regulatory authorities. The de-watering management system of the two dams was cited during the audit site inspection. Both dam's had diesel pumps installed and on standby with automated water level gauges installed. MCCO - Dirty Water Discharge Following a period of high rainfall, a site inspection of the MCCO Project Area was conducted. During this inspection sediment laden water was observed leaving the MCCO Project Area from 1) the Wybong Road Bypass	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for areas considered to be high risk prior to predicted excessive rainfall events. Undertake routine inspections of ESC structures by qualified and experienced personnel. Act promptly to any maintenance tasks required to ensure design capacities are maintained.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
		Sediment Dam via the spillway 2) a low-lying area approximately 200m east of Gate H and 3) Sediment Dam 2 via the spillway. The EPA was notified under EPL12894 - Discharge of sediment laden water and notification in accordance with the Mangoola Pollution Incident Response Management Plan. On 4th July 2022, following a period of heavy rainfall, it was reported that sediment-laden water was leaving site from Dam SD2 from the MCCO project area and onto the Wybong Road Bypass which ultimately reports to Big Flat Creek. DPIE and EPA were notified in accordance with applicable statutory requirements and the incident was managed in accordance with the SWGRP. An investigation was completed where it was found that there was a total of 79mm received in the 48hrs leading up to the event which exceeds the dam's design capacity which is based on Managing Urban Stormwater (the Blue Book). Prior to the event on the 1st July, a survey of the dam indicated that the dam had sufficient freeboard to capture the design event (27.7mm) During the audit inspection, sediment build up was evident in some diversion drainage culverts which were reducing their capacity within the MCCO project area.	

6.1.3 EPL12894

Non-Compliances identified against EPL12894 have been summarised in **Table 12** below. Further audit commentary and evidence is provided against each condition in the EPL12894 Audit Checklist provided in **Appendix B**.

Table 12 Non-compliances against EPL12894

Condition Ref	Requirement	Independent Audit Finding	Recommendation								
L4.2	The airblast overpressure level from blasting operations in or on the premises must not exceed: 120 dB (Lin Peak) at any time; at either monitoring point 16, 21 or 32 in Condition P1.4.	Blast #1200 was fired at 12.21pm in Main Pit West and an overpressure reading of 120.9dB was recorded at Blast Monitor 07 (BM07/ EPL Monitoring point 21). This reading is above the 120bB impact assessment criteria outlined in Schedule 3, Condition 10 of PA 06_0014 and EPL 12894, Condition L4.2. Notifications were made to both DPE and the EPA following the blast with the follow up incident investigation reports required under Schedule 5, Condition 4 of PA 06_0014 and Condition R2.2 of EPL 12984 submitted to the relevant departments on 11 March 2020. A formal warning letter was received from DPE on 24 March 2020.	Review of actions following incident determined that mitigation measures developed are sufficient. No further recommendations required.								
M2.2	Air Monitoring Requirements POINT 19,20 <table border="1"> <thead> <tr> <th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr> </thead> <tbody> <tr> <td>PM10</td><td>micrograms per cubic metre</td><td>Continuous</td><td>Special Method 1</td></tr> </tbody> </table> Note: Special Method 1 requires the Licensee to undertake the monitoring of PM10 concentration in strict accordance with the manufacturer's operating manual supplied with the continuous monitoring equipment and titled "E-Sampler-9800 Particulate Monitor Operation Manual Revision K", or any updated version as published by the manufacturer.	Pollutant	Units of measure	Frequency	Sampling Method	PM10	micrograms per cubic metre	Continuous	Special Method 1	Between 20-23 February 2021, the monitoring unit malfunctioned at Monitoring Point 20 (D8-DC), as outlined in Table 4.3 of the approved AQMP. This was a non-compliance in accordance with Sampling Method – Special Method 1. Field maintenance was undertaken on the E-Sampler at the earliest time to attempt to repair, however the unit could not be fixed in the field and was taken offsite for repairs. A replacement unit was installed, however the stabilising period resulted in a loss of three days data. This was reported in the EPL 12894 Annual Return in 2021.	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.
Pollutant	Units of measure	Frequency	Sampling Method								
PM10	micrograms per cubic metre	Continuous	Special Method 1								

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Condition Ref	Requirement	Independent Audit Finding	Recommendation																																													
M4.1	For each monitoring point specified in the table below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns: Point 5; and Point 18 <table><tr><th>Parameter</th><th>Units of Measure</th><th>Frequency</th><th>Averaging Period</th><th>Sampling Method</th></tr><tr><td>Rainfall</td><td>mm</td><td>Continuous</td><td>1 hour</td><td>AM-4</td></tr><tr><td>Wind speed @ 10 metres</td><td>m/s</td><td>Continuous</td><td>15 minutes</td><td>AM-2 & AM-4</td></tr><tr><td>Wind direction @ 10 metres</td><td>0</td><td>Continuous</td><td>15 minutes</td><td>AM-2 & AM-4</td></tr><tr><td>Temperature @ 2 metres</td><td>0C</td><td>Continuous</td><td>15 minutes</td><td>AM-4</td></tr><tr><td>Temperature @ 10 metres</td><td>0C</td><td>Continuous</td><td>15 minutes</td><td>AM-4</td></tr><tr><td>Sigma theta @ 10 metres</td><td>0</td><td>Continuous</td><td>15 minutes</td><td>AM-2 & AM-4</td></tr><tr><td>Solar radiation</td><td>W/m2</td><td>Continuous</td><td>15 minutes</td><td>AM-4</td></tr><tr><td>Additional requirements - siting - measurement</td><td></td><td></td><td></td><td>AM-2 & AM-4 AM-2 & AM-4</td></tr></table>	Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method	Rainfall	mm	Continuous	1 hour	AM-4	Wind speed @ 10 metres	m/s	Continuous	15 minutes	AM-2 & AM-4	Wind direction @ 10 metres	0	Continuous	15 minutes	AM-2 & AM-4	Temperature @ 2 metres	0C	Continuous	15 minutes	AM-4	Temperature @ 10 metres	0C	Continuous	15 minutes	AM-4	Sigma theta @ 10 metres	0	Continuous	15 minutes	AM-2 & AM-4	Solar radiation	W/m2	Continuous	15 minutes	AM-4	Additional requirements - siting - measurement				AM-2 & AM-4 AM-2 & AM-4	Failure to monitor continuously monitor weather at Monitoring Point 5 and Monitoring Point 18: Monitoring Point 5: • Rainfall: 16 x 15 min averaging (av) periods; • Temperature (2m): 2 x 15 min av periods; and • Solar Radiation: 18 x 15 minute av periods. Monitoring Point 18: • Rainfall: 345 x 15 min av periods; • Wind speed: 299 x 15 min av periods; • Wind direction: 299 x 15 min av periods; • Temperature (2m): 343 x 15 min av periods; • Temperature (10m) 299 x 15 min av periods; • Sigma theta: 299 x 15 min av periods; and • Solar radiation: 341 x 15 min av periods. Monthly data validation checks have been implemented, along with changes to contactor arrangements. The non-compliance was reporting the EPL Annual Return, dated 12 August 2021	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.
Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method																																												
Rainfall	mm	Continuous	1 hour	AM-4																																												
Wind speed @ 10 metres	m/s	Continuous	15 minutes	AM-2 & AM-4																																												
Wind direction @ 10 metres	0	Continuous	15 minutes	AM-2 & AM-4																																												
Temperature @ 2 metres	0C	Continuous	15 minutes	AM-4																																												
Temperature @ 10 metres	0C	Continuous	15 minutes	AM-4																																												
Sigma theta @ 10 metres	0	Continuous	15 minutes	AM-2 & AM-4																																												
Solar radiation	W/m2	Continuous	15 minutes	AM-4																																												
Additional requirements - siting - measurement				AM-2 & AM-4 AM-2 & AM-4																																												
M7.1	To determine compliance with conditions L4.1, L4.2, L4.3 and L4.4: a) Airblast overpressure and ground vibration levels must be measured and electronically recorded for monitoring points 16, 21 and 32 for the parameters specified in Column 1 of the table below; and b) The licensee must use the units of measure, sampling method, and sample at the frequency specified opposite in the other columns.	On 1 October 2021 Blast monitor at BM07 (Point 21) failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.																																													

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Condition Ref	Requirement	Independent Audit Finding		Recommendation												
	<table><tr><th>Parameter</th><th>Units of Measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Airblast Overpressure</td><td>Decibels (Linear Peak)</td><td>All Blasts</td><td>Australian Standard AS 2187.2-2006</td></tr><tr><td>Ground Vibration Peak Particle Velocity</td><td>millimetres/second</td><td>All Blasts</td><td>Australian Standard AS 2187.2-2006</td></tr></table>	Parameter	Units of Measure	Frequency	Sampling Method	Airblast Overpressure	Decibels (Linear Peak)	All Blasts	Australian Standard AS 2187.2-2006	Ground Vibration Peak Particle Velocity	millimetres/second	All Blasts	Australian Standard AS 2187.2-2006			
Parameter	Units of Measure	Frequency	Sampling Method													
Airblast Overpressure	Decibels (Linear Peak)	All Blasts	Australian Standard AS 2187.2-2006													
Ground Vibration Peak Particle Velocity	millimetres/second	All Blasts	Australian Standard AS 2187.2-2006													

6.1.4 Mining and Exploration Leases

Non-Compliances identified against specific Mining and Exploration Leases have been summarised in **Table 10 13** below. Further audit commentary and evidence is provided against each condition in the specific Mining and Exploration Lease Audit Checklists provided in **Appendix B**.

Table 13 Non-compliances against EPL12894

Lease	Condition Ref	Requirement	Independent Audit Finding	Recommendation
ML1626	15	1. <u>Ground Vibration</u> The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the lease area does not exceed 10 mm/second and does not exceed 5 mm/second in more than 5% of the total number of blasts over a period of 12 months at any dwelling or occupied premises as the case may be, unless determined otherwise by the Department of Environment and Climate Change. 2. <u>Blast Overpressure</u> The lease holder must ensure that the blast overpressure noise level generated by any blasting within the lease area does not exceed 120 dB (linear) and does not exceed 115 dB (linear) in more than 5% of the total number of blasts over a period of 12 months, at any dwelling or occupied premises, as the case may be, unless determined otherwise by the Department of Environment and Climate Change.	On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPE and EPA were notified.	Continue to implement the Blast Management Plan to minimise the dust and fume emissions of any blasting.
ML1626	18	Prevention of Soil Erosion and Pollution Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, waterbody or groundwaters. The lease holder must observe and perform any instructions given by the Director-General in this regard.	Sandy Creek Farm Dams - Saline Water Discharges - 17/02/2020, 26/11/2021, and 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall. Discharge results show that there was no environmental harm caused based on the chemistry of the water discharged when compared to the receiving environment. The PIRMP was enacted	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for areas considered to be high risk prior to predicted excessive rainfall events.

6.2 Summary of Audit Recommendations

Table 14 below outlines the general recommendations identified during the audit. The recommendations detailed below are based around continuous improvement opportunities identified during the audit and do not all represent immediate non-compliance issues.

Table 14 Summary of Recommendations

Condition Ref	Requirement	Independent Audit Finding	Recommendation																				
S2 C2A	The proponent must carry out the project in accordance with the conditions of this approval.	The following non-conformances were recorded during the audit period: - S3 C10 – Blast Criteria - S3 C15 – Operating Conditions - S3 C17 – Blast Management Plan - S3 C19 – Impact Assessment Criteria - S3 C27 – Water Pollution	No recommendation required.																				
S3 C10	Blasting Criteria The proponent must ensure that blasting on site does not cause exceedances of the criteria in Table 4. <i>Table 4: Blasting criteria</i> <table> <tr> <th>Location</th><th>Airblast overpressure (dB(Lin PeaA))</th><th>Ground vibration (mm/s)</th><th>Allowable exceedance</th></tr> <tr> <td>Residence on privately owned land</td><td>120</td><td>10</td><td>0%</td></tr> <tr> <td></td><td>115</td><td>5</td><td>5% of the total number of blasts over a period of 12 months</td></tr> <tr> <td>500kV transmission line pylons – tension towers</td><td></td><td>50</td><td>0%</td></tr> <tr> <td>500kV transmission line pylons – suspension towers</td><td></td><td>100</td><td>0%</td></tr> </table> However, these criteria do not apply if the Proponent has a written agreement with the relevant owner to exceed these criteria, and has advised the Department in writing of the terms of this agreement.	Location	Airblast overpressure (dB(Lin PeaA))	Ground vibration (mm/s)	Allowable exceedance	Residence on privately owned land	120	10	0%		115	5	5% of the total number of blasts over a period of 12 months	500kV transmission line pylons – tension towers		50	0%	500kV transmission line pylons – suspension towers		100	0%	Blasting – Blasting Criteria On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPIE and EPA were notified. Notifications were made to both DPIE and the EPA following the blast with the follow up incident investigation reports required under Schedule 5, Condition 4 of PA 06_0014 and Condition R2.2 of EPL 12984 submitted to the relevant departments on 11 March 2020. A formal warning letter was received from DPIE on 24 March 2020, while to date no formal response from the EPA has been received. There was a recorded exceedance of the vibration limit on a suspension pylon footing. This was reported directly to the asset owner as per the agreement with the infrastructure owner and follow-up non-destructive testing was carried out, with no damage confirmed. Agreement	Review of actions following incidents determined that mitigation measures developed are sufficient. No further recommendations required. Continue to ensure that Mangoola does not contribute to air quality impacts during extraordinary weather events.
Location	Airblast overpressure (dB(Lin PeaA))	Ground vibration (mm/s)	Allowable exceedance																				
Residence on privately owned land	120	10	0%																				
	115	5	5% of the total number of blasts over a period of 12 months																				
500kV transmission line pylons – tension towers		50	0%																				
500kV transmission line pylons – suspension towers		100	0%																				

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
		has been updated to a level of 150mm/s effective from 17 September 2020. Correspondence for the approval of vibration limits is provided in Appendix A of the Blast management Plan. On 1 October 2021 blast monitor BM07 failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.	
S3 C15	Operating Conditions The Proponent must: - implement best practice to manage potential blasting impacts associated with the project to: - protect the safety of people and livestock in the surrounding area; - protect public or private infrastructure/property in the surrounding area from any damage; and - minimise the dust and fume emissions of any blasting; - ensure that blasting on the site does not damage Aboriginal rock shelter sites, Anvil Rock and “The Book” rock formations; - operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site, to the satisfaction of the Secretary.	Section 3 of the Blast Management Plan (MANOC-1772150304-4601) provides blast management controls to ensure safety of people and livestock and prevent impacts to property and public infrastructure. On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPIE and EPA were notified. Overpressure exceedance attributed to blast design (sighted CMO report 20200304155.2). Noted that no further exceedances recorded at BM07. Exceedance of the vibration limit on a suspension pylon footing noted. This was reported directly to the asset owner as per the agreement with the infrastructure owner and follow-up non-destructive testing was carried out, with no damage confirmed. Agreement has been updated to a level of 150mm/s effective from 17 September 2020. Blasting – Operating Conditions On 10 January 2020, a category 4B fume occurred, however this did not leave the site boundary and dissipated on-site. This was reported to DPIE. Correspondence	Continue to implement the Blast Management Plan to minimise the dust and fume emissions of any blasting.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
		received from DPIE on 12 February 2020 indicate they were satisfied with the fume rankings and investigation outcomes. Section 4.3 and Section 4.4.4 of the BMP detail the rock structure and rock shelter monitoring program and the blast impact evaluation procedure for rock formations and Aboriginal rock shelters. Structural condition monitoring is undertaken using a network of blast cameras, 6-monthly LiDAR surveys and measurements using digital tape extensometers (per comms). Mangoola operates a Community Response Line and Blasting Hotline (24 hours), with the number listed on their website and published in the Mangoola 'Community Newsletter'. Additionally, Mangoola has an established register for local landowners/occupiers to whom notification of scheduled blasts is provided (Section 5.2 of BMP). Operational blast controls considered to be appropriate given the general compliance with the blasting limits during the audit period.	
S3 C17	Blast Management Plan The Proponent must prepare a Blast Management Plan for the project to the satisfaction of the Secretary. This plan must: - describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this approval; - propose and justify any alternative ground vibration limits for public infrastructure on the vicinity of the site (if relevant); and - include a monitoring program for evaluating and reporting on compliance with the blasting criteria and operating conditions of this approval. The Proponent must implement the approved management plan as approved from time to time by the Secretary.	Mangoola has a current Blast Management Plan (MANOC-1772150304-4601 version 18) effective as of 6/10/2020 (letter from DPIE provided in Appendix A of BMP). Section 3 of BMP describes measures to ensure compliance with the blast criteria and operating conditions of PA06_0014. Section 4.4.3 of BMP details agreement with TransGrid for alternative ground vibration limits (agreement provided in Appendix A of BMP). Section 4 of BMP provides blast monitoring methodology to confirm compliance with the approval, Section 4.4 of BMP provides blast impact evaluation,	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
		and Section 5.5 of BMP provides incident and exceedance reporting procedure. On 1 October 2021 blast monitor BM07 failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.	
S3 C18	Odour The Proponent must ensure that no offensive odours, as defined under the POEO Act, are emitted from the site.	A blast odour complaint was received on 12 June 2020 at 12:42PM. Complaint received via Hotline. Complainant stated they smelt the blast. Two blasts were fired in Main Pit West (MPW) in quick succession. The Mangoola E&C Officer reviewed the meteorological conditions at the time of the blast, as well as the daily dust summary. The video footage was reviewed at the time of the blast by the Environment and Community Manager (ECM) and both blasts dissipated within the pit, not leaving the site boundary. The ECM called the complainant back at 18:45 to discuss the complaint, the complainant stated that sometime after the blast they were able to smell something similar to a diesel truck. The ECM explained that a blast usually smells like gun powder and the complainant also mentioned that no dust was visible from the blast. The pre-blast permit identified the blast as being low risk for fume generation and all pre-blast assessments indicated that the conditions were suitable for blasting. Review of the incident suggests that the odour was not blast fume.	Consider including a link to the NSW Health - Mine blast fume and you factsheet https://www.health.nsw.gov.au/environment/factsheets/Pages/mine-blast-fumes.aspx in the Community Newsletter to better educate the community on what constitutes blast fume.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation																							
S3 C19	Impact Assessment Criteria The Proponent must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not cause exceedances of the criteria listed in Tables 5, 6 and 7 at any residence on privately-owned land (excluding the dust affected properties listing in Table 1). <i>Table 5: Long term impact assessment criteria for particulate matter</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>*Criterion</th></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>≈ 90 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM10)</td><td>Annual</td><td>≈ 30 µg/m³</td></tr></table> <i>Table 6: Short term impact assessment criterion for particulate matter</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>*Criterion</th></tr><tr><td>Particulate matter < 10 µm (PM10)</td><td>24-hour</td><td>≈ 50 µg/m³</td></tr></table> <i>Table 7: Long term impact assessment criteria for deposited dust</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>Maximum increase in deposited dust level</th><th>Maximum total deposited dust level</th></tr><tr><td>*Deposited dust</td><td>Annual</td><td>≈ 2 g/m²/month</td><td>≈ 4 g/m²/month</td></tr></table> <i>Notes to Tables 5-7:</i> <i>Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources);</i> <i>Incremental impact (i.e. incremental increase in concentrations due to the development on its own);</i> <i>Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS.NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method; and</i> <i>Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.</i>	Pollutant	Averaging period	*Criterion	Total suspended particulate (TSP) matter	Annual	≈ 90 µg/m³	Particulate matter < 10 µm (PM10)	Annual	≈ 30 µg/m³	Pollutant	Averaging period	*Criterion	Particulate matter < 10 µm (PM10)	24-hour	≈ 50 µg/m³	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	*Deposited dust	Annual	≈ 2 g/m²/month	≈ 4 g/m²/month	Multiple exceedances of the Air Quality - PM10 24-hour average during the audit period. The 24-hour average PM10 exceeded the consent criterion of 50 µg/m³ on multiple days at the monitors surrounding the mine. As per PA06_0014, the Department were notified of the exceedances and internal investigations commenced. Most of the events were classified as extraordinary events by DPE. Those that were not classified as extraordinary events were also notified to DPE, and letters were sent to neighbouring private landowners and tenants as per PA06_0014. The Department notified Mangoola that they were satisfied that reasonable and feasible measures were undertaken on the days of exceedance.	Review of the incidents and DPE correspondence indicates that no further recommendations are required.
Pollutant	Averaging period	*Criterion																								
Total suspended particulate (TSP) matter	Annual	≈ 90 µg/m³																								
Particulate matter < 10 µm (PM10)	Annual	≈ 30 µg/m³																								
Pollutant	Averaging period	*Criterion																								
Particulate matter < 10 µm (PM10)	24-hour	≈ 50 µg/m³																								
Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level																							
*Deposited dust	Annual	≈ 2 g/m²/month	≈ 4 g/m²/month																							
S3 C27	Water Pollution Unless an EPL or the EPA authorises otherwise, the Proponent must comply with Section 120 of the POEO Act and the <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>.	Sandy Creek Farm Dams - Saline Water Discharges - 17/02/2020, 26/11/2021, and 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for areas considered to be high risk prior to predicted excessive rainfall events. Investigate the option of automating the pumps located on the Sandy Creek Farm Dams. Site location and feasibility constraints may prevent this.																							

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
		ha clean water catchment caused by excessive rainfall. It is understood no further action was required by the regulatory authorities. The de-watering management system of the two dams was sighted during the audit site inspection. Both dam's had diesel pumps installed and on standby with automated water level gauges installed. The pumps however rely on manual operation. It is understood that the dams cannot be made larger as they are situated in the biodiversity area.	but the benefit would be to reduce the risk of having an uncontrolled discharge which could potentially cause pollution.
S3 C27A	Water Pollution The Proponent must implement all reasonable and feasible measure on the site to minimise the need to discharge saline water to the Hunter River under the Hunter River Salinity Trading Scheme.	Mangoola implements measures to manage surplus saline water by reusing it for coal washing and dust suppression. Discharges to the Hunter River are not required under average climate conditions, only under period of prolonged wet weather. HRSTS discharges were required following prolonged wet weather events during the audit period: • 1 – 6 April 2022 • 4 – 23 July 2022 The saline water management system is outlined in the WMP (2021) and summarised in Section 3.2. A number of water storages and if required, active pits, are currently used to store saline water on site and prevent the need to discharge under the HRSTS under normal climatic conditions. WMP (2021) states runoff within saline water management system used for dust suppression. Pit Water Dam used for storage of saline water (process water).	It would be good to present in the AEMR the dam levels over time, as a line trace, together with the Residual Mass (Rainfall) or Cumulative Departure from Mean Rainfall (CRD) curve. In order to minimise the amount of saline water make onsite during wet climatic periods, the water quality of surface runoff from well-established and stable areas of rehabilitation should be regularly monitored and incorporated as part of the mines surface water quality monitoring program. If trends in water quality over time indicate that the runoff is of suitable quality for off-site discharge without polluting, MCO is encouraged to liaise with the relevant departments to allow this water to flow offsite. This will prevent the needing for this clean water to be pumped back into the saline water system and released through the HRSTS. This will not only be a major benefit to downstream watercourse ecosystem/s but limit operational costs. As the rehabilitated catchments are becoming larger as the mine life evolves, both environmental

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
S3 C28	Site Water Management Plan	Pit Water Dam supplemented by Raw Water Dam (which receives Hunter River Water (pumped under licence)). Raw Water Dam has a saline seepage interception system. As well, Raw Water Dam maintained with freeboard to act as secondary storage during periods of high rainfall. The 2021 Operation Water Management Plan (internal document) cited, included a 5-year modelling/forecast to address water inventory and associated risk and to help guide management decisions. Evidence was cited of an internal TARP that guides when discharges to the Hunter Water would be required based on site storage levels. It is noted that all runoff from rehabilitated catchments onsite are currently captured or transferred back into the saline management system. Whilst this currently assists with mine water security during dry and normal climatic periods, during the wet climatic period which we are currently in, it has contributed to the requirement for emergency release of mine water from site through the HRSTS. This has a negative impact on the watercourses immediately downstream of the rehabilitation area and leads to increased operational costs. A review of recent water quality samples taken from runoff from the South Pit Rehabilitation area are encouraging for off-site release. It was noted that the receiving dams inspected in the South Pit Area had bare and eroded internal batters and would need modification and stabilisation to assist in maintained good water quality within the structures from the rehabilitation areas.	and financial benefits will become increasing larger during wet climatic periods. As outlined under Condition B50 of the SSD8642 approval, the water

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
	The Proponent must prepare and a Site Water Management Plan for the project to the satisfaction of the Secretary. This plan must: - be prepared in consultation with EPA and DPI Water by suitably qualified expert/s whose appointment/s have been approved by the Secretary; and - include: - a Site Water Balance; - an Erosion and Sediment Control Plan; - a Surface Water Monitoring Plan; - a Ground Water Monitoring Program; and - a Surface and Ground Water Response Plan. The Proponent must implement the approved management plan as approved from time to time by the Secretary.	Version: 13 Effective: 03/12/2021 Approved by Stephen O'Donoghue as nominee of the Secretary on 3 December 2021. Evidence was provided that the WMP was prepared in consultation with EPA and DPI Water by a suitably qualified expert Stephen Downes whose appointment was approved by the Secretary on 2/09/2021. The WMP contains the following: - Site Water Balance – Section 5 - Erosion and Sediment Control Plan – Appendix C - Surface Water Monitoring Plan – Appendix D - Ground Water Monitoring Program – Appendix E - Surface and Ground Water Response Plan – Appendix F	management plan should be updated to include the management requirements now that MCO is allowed to release water to the Hunter River under EPL12894 and HRSTS.
S3 C30	Erosion and Sediment Control The Erosion and Sediment Control Plan must: - be consistent with the requirements of the Department of Housing's Managing Urban Stormwater: Soils and Construction manual; - identify activities that could cause soil erosion and generate sediment; - describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters; - describe the location, function, and capacity of erosion and sediment control structures; and describe what measures would be implemented to maintain the structures over time.	Erosion and Sediment Control Plan Number: MANOC-1772150304-6266 Version: 8 Effective: 10/03/2021 Approved by Matthew Sprott as nominee to the Secretary on 10 March 2021. Standard erosion and sediment control techniques are utilised in accordance with the requirements of Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volumes 2A, 2C, 2D and 2E (DECC 2008) (the Blue Book). The Plan sets out the overarching framework and guidelines for how task specific ESCPs are to be developed under Mangoola's Ground Disturbance Permit (GDP) system which is described in Section 3.2 of the ESCP.	Bunded fuel fill up point had a build-up of sediment and material present within the bund that may impact operation of the bund during a spill event (5/7/22). Potential to increase workshop inspection frequencies are increased during wet weather events.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
		Activities that could cause soil erosion and generate sediment are identified in Section 2.2 of the ESCP. Measures to minimise soil erosion and the potential for the transport of sediment to downstream waters are described in Section 3.3 of the ESCP. The location, function, and capacity of erosion and sediment control structures is outlined in Section 3.4 of the ESCP. Inspection and maintenance measures that are implemented to maintain the erosion and sediment control structures over time are outlined in Section 4 of the ESCP. The location of the key ESC dams are contained within the Mangoola Pollution Incident Response Management Plan (PIRMP) Figure 2.4 as referred to in the ESCP Section 3.4 Given the ever-changing location of most ESC structures, outside of the semi-permanent and permanent dams shown in the PIRMP, the task specific ESCPs prepared under the GDP process shows the location of the structures. Two examples of task specific ESCPs where cited during the audit associated with the MCCO project.	
S3 C31	Surface Water Monitoring The Surface Water Management and Monitoring Plan must include: - detailed baseline data on surface water flows and quality in creeks and other waterbodies that could potentially be affected by the project; - surface water and stream health impact assessment criteria; - a program to monitor surface water flows, quality and impacts on water users (upstream and downstream of the project in Anvil Creek, Sandy Creek, Big Flat Creek and Wybong Creek); - a program to assess stream health conditions in Anvil Creek, Sandy Creek, Big Flat Creek and Wybong Creek;	Surface Water Monitoring Plan Number: MANOC-1772150304-6264 Version: 9 Effective: 10/03/2021 Approved by Matthew Sprott as nominee to the Secretary on 10 March 2021. Section 2 outlines the detailed baseline data on surface water flows and quality in creeks and other waterbodies that could potentially be affected by the project.	Administration update required - In the next update of the SWMP, refer to the correct section of the WMP for Reporting and Monitoring. The SWMP Section 5 currently incorrectly refers to Section 9 of the WMP rather than the required Section 10. As outlined under Condition B50 of the SSD8642 approval, the water management plan should be updated to include the management requirements now that MCO is allowed

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
	e. a program to monitor channel stability in Anvil Creek, Sandy Creek and Big Flat Creek; f. reporting procedures for the results of the monitoring program; g. a program to monitor, and a strategy to minimise, any saline water discharges to the Hunter River under the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002; h. a Saline Dispersion Study for discharges to the Hunter River prepared and implemented to the satisfaction of the EPA; and i. a program to notify all downstream landowners within 2 kilometres of the discharge point prior to discharging saline water to the Hunter River. <i>Note: Conditions (g) – (i) only apply once the EPL for the project has been amended to allow discharges into the Hunter River.</i>	Impact assessment criteria contained in Section 2.2 for surface water and Section 3.5 for stream health. A program to monitor surface water flows, quality and impacts on water users is outlined in Section 3.3. Section 3.4 provides a program to monitor channel stability in Sandy Creek, and Big Flat Creek. It is noted that Anvil Creek has been mined through as per MCO's project approval and therefor monitoring programs along this creek no longer exist. Reporting procedures for the results of the monitoring programs are described in Section 5. The reporting includes publishing the surface water quality monitoring on the MCO website and within the Annual Reviews. A program to monitor, and a strategy to minimise, any saline water discharges to the Hunter River under the Protection of the Environment Operations is contained in Section 9 of the WMP. A saline dispersion investigation report was carried out by CBased Environmental during the release of water from the HRSTS point on the 5th March 2022. This was provided to the EPA in a letter dated 29 March 2022. The records and map reflecting the notifications provided to the downstream landowners within 2km of the discharge point was cited during the audit.	to release water to the Hunter River under EPL12894 and HRSTS.
S3 C32	Groundwater Monitoring The Groundwater Monitoring Program must include: a. detailed baseline data, based on sound statistical analysis, to benchmark the pre-mining natural variation in groundwater levels, yield and quality (including privately owned groundwater bores within the predicted drawdown impact zone identified in the EA);	Groundwater Monitoring Program Version: 5 Effective: 22/12/2014 The GWMP was updated in 2017 and submitted for comment to the EPA, Natural Resources Access Regulator (NRAR) and DPIE. Consultation is	Recommend that a comparison to predictions / intended drawdown is included in the Annual Reviews, without making the report 'voluminous'. Also, if possible, Interpreted contours.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
	b. groundwater impact assessment criteria (including for monitoring bores and privately owned bores); c. a program for accurately delineating the boundary of the Big Flat Creek alluvial aquifer in any areas intersected by mining, including plans for isolation of the mining pit from the alluvium at least 6 months before mining within 150 metres of the alluvium; d. a program to monitor: - o impacts on the groundwater supply of potentially affected landowners; - o impacts on the Big Flat Creek and Wybong Creek alluvial aquifers; - o impacts on groundwater dependent ecosystems and riparian vegetation; - o the volume of ground water seeping into the open cut mine workings; - o regional ground water levels and quality in the alluvial, coal seam, and overburden/interburden aquifers; and - o the groundwater pressure response in the surrounding coal measures; e. procedures for the verification of the groundwater model, and reporting procedures for the results of the monitoring program and model verification.	ongoing. This later version of the GWMP has not yet been approved. Detailed baseline data contained in Section 2. Groundwater impact assessment criteria contained in Section 5. A program for accurately delineating the boundary of the Big Flat Creek alluvial aquifer in any areas intersected by mining, including plans for isolation of the mining pit from the alluvium at least 6 months before mining within 150 metres of the alluvium is described in Section 2.1 and Section 6. A monitoring program is described in Section 3. Section 5 provides a procedure for the verification of the groundwater model. Section 5 of the WMP outlines the reporting procedures for the results of the monitoring program and model verification.	
S3 C33	Surface and Ground Water Response Plan The Surface and Ground Water Response Plan must include: a. a protocol for the investigation, notification and mitigation of any exceedances of the surface water, stream health and groundwater impact assessment criteria; b. measures to mitigate and/or compensate potentially affected landowners with privately owned groundwater bores within the predicted drawdown impact zone identified in the EA, including provision of alternative supply of water to the affected landowner that is equivalent to the loss attributed to the project; c. measures to mitigate and/or compensate potentially affected landowners for the loss of surface water flows in Sandy Creek, Big Flat Creek and Wybong Creek downstream of the project; d. measures to minimise, prevent or offset groundwater leakage from the Big Flat Creek alluvial aquifer; e. measures to mitigate any direct hydraulic connection between the backfilled open cuts and the Big Flat Creek alluvium if the potential for adverse impacts is detected;	Surface Water and Groundwater Response Plan Number: MANOC-1772150304-6223 Version: 8 Effective: 29/01/2021 Approved by Matthew Sprott as nominee to the Secretary on 29 January 2021. The SWGWRP was found to generally include adequate protocols that outline the responses required in the event that operations result in potential adverse impacts to the surrounding surface water and/or groundwater environment in accordance with the condition. The investigation, notification and mitigation measures for surface water and stream health are outlined in Figure 2.1 and Figure 2.2 respectively.	Investigate a method to determine if the mining operations have potentially affected landowners for the loss of surface water in Sandy Creek, Big Flat Creek or Wybong Creek downstream of the project. Then outline measures to mitigate and/or compensate those landowners affected and include in the Plan.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation										
	f. a contingency plan for isolating the Big Flat Creek alluvium from Anvil Creek alluvium and mining areas in the event that it is required; and g. the procedures that would be followed if any unforeseen impacts are detected during the project.	The SWGRP does not contain measures to mitigate and/or compensate potentially affected landowners for the loss of surface water plans in Sandy Creek, Big Flat Creek or Wybong Creek downstream of the project. It is noted that the 2021 Annual Review Section 7.6.2.1 stated that exceedances are only reported to DPIE when three consecutive elevated results are recorded. It was acknowledged by MCO staff that this was incorrect terminology used and that the site complies with the SWGWRP.											
S3 C34	Biodiversity Offset Strategy The Proponent must implement the Biodiversity Offset Strategy as outlined in Table 11, and as generally described in the EA (and shown conceptually in Appendix 5). <i>Table 11: Biodiversity Offset Strategy</i> <table><tr><th>Area</th><th>Minimum Size</th></tr><tr><td>Existing vegetated (treed) areas</td><td>1,586 ha</td></tr><tr><td>Treed areas to be established</td><td>1,104 ha</td></tr><tr><td>Grassland areas</td><td>330 ha</td></tr><tr><td>Total</td><td>3,020 ha</td></tr></table> <i>Notes:</i> a. The offset areas are in addition to, and outside, the rehabilitated areas of the project disturbance area. b. The quantum of existing and revegetated treed areas may be varied within reason, subject to meeting the total minimum offset area.	Area	Minimum Size	Existing vegetated (treed) areas	1,586 ha	Treed areas to be established	1,104 ha	Grassland areas	330 ha	Total	3,020 ha	Biodiversity Offset Management Plan and Strategy Document Number: MANOC-1772150304-3505 Version: 12 Effective: 05/11/2018 Approved by Jessie Evans as nominee for the Secretary on 5 November 2018. Review of available monitoring reports and annual reviews for the audit period indicates that MCO are implementing the Biodiversity Offset Strategy as outlined in Table 11 through the BOMP following the provisions of Section 4.0. The conceptual target areas were generally achieved for each vegetation community and management strategies that need to be implemented to establish an additional 1,104 hectares of treed (vegetated) areas for Years 9-11 during the audit period. Areas viewed during the site inspection were generally trending to compliance and were confirmed through review of available documentation.	Continued weed and pest control recommended. Recommendation to modify seeding/planting ratios as recommended by 2021 Ecological monitoring report (Umwelt 2022). Nest boxes may be more successful if located higher up in trees (3m is usually sufficient). This may be easier now that the trees have grown taller. Some translocated Cymbidium orchids were installed closer to the ground than originally due to logistics of salvage. Simple fencing may protect these from herbivore browsing. Fireweed (<i>Senecio madagascariensis</i>) is a Weed of National Significance that was observed in the offset areas. It is difficult to control, but targeted efforts during autumn and winter before the peak flowering and seeding occurs in spring could reduce numbers significantly.
Area	Minimum Size												
Existing vegetated (treed) areas	1,586 ha												
Treed areas to be established	1,104 ha												
Grassland areas	330 ha												
Total	3,020 ha												

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
S3 C54	Visual Amenity The Proponent must: c. implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project; and d. ensure that all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version</i>, to the satisfaction of the Secretary.	A lighting audit was conducted in September 2013 to the satisfaction of the Director General. Review of the complaints register, OCE inspections, and inspection of visual bunds indicated that MCO are generally implementing controls to minimise the visual impacts of the operation. MCO were noted to be taking all reasonable steps to minimise the visual and off-site lighting impacts of the development during the audit period. Noted that new fixed LED lighting was installed at the CHPP during the audit period and was linked to a compliant on 24/08/2020. MCO implements the Lighting Plant Procedure to ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal. No new buildings have been constructed during the audit period.	The Mangoola “Equipment Procurement Process” forms should be amended to include the requirement that all new lighting is compliant with AS4282. Additionally following the installation of new lighting an offsite inspection should be completed and recorded Undertake an updated external lighting audit to ensure compliance with AS4282 (INT) 2019 - Control of Obtrusive Effects of Outdoor Lighting.
S3 C57	The Proponent must: a. monitor the amount of waste generated by the project; b. implement reasonable and feasible measures to minimise waste generated by the project; c. ensure irrigation of treated wastewater is undertaken in accordance with EPA’s Environmental Guideline for the Utilisation of Treated Effluent; d. manage on-site sewage treatment and disposal in accordance with the requirements of Council; and e. report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.	Evidence of waste generation monitoring is contained in the Annual Reviews for the audit period. Waste production has generally declined in the audit period between 2019 and 2021. Waste contractor spreadsheets were also viewed during the site inspection which records mixed waste, recycling, effluent, oil, scrap metal, oil filters. Treated wastewater is only used for reused on site for CHPP operation and dust suppression and is not used for irrigation on site. MSC issued an approval to operate an on-site sewage management system on 13/09/2021 valid until 29/07/2026. Review of monitoring reports indicates that Mangoola managing on-site sewage	Water was noted within the minor volume contaminated soil waste bin – suggest an improved sealed storage bin system is implemented and lids are closed at all times.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
S5 C3	Management Plan Requirements The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include: a. detailed baseline data (where available); b. a description of: - o the relevant statutory requirements (including any relevant approval, licence or lease conditions); - o any relevant limits or performance measures/criteria; - o the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; c. a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; d. a program to monitor and report on the: - o impacts and environmental performance of the project; - o effectiveness of any management measures (see c above); e. a program to investigate and implement ways to improve the environmental performance of the project over time; f. a protocol for managing and reporting any: - o incidents; - o complaints' - o non-compliances with statutory requirements; and - o exceedances of the impact assessment criteria and/or performance criteria; and a protocol for periodic review of the plan.	treatment and disposal in accordance with the requirements of Council. Review of the applicable management plans under the EMS and approval indicated that they have been prepared in general accordance with the applicable relevant guidelines and included the information outlined in this condition. It is noted that following the approval of SSD8642 and commencement of development/constructions the management plan conditions of SSD8642 prevail to the extent of any inconsistency, ambiguity, or conflict between those of PA06_0014.	Ensure all management plans are updated in accordance with the approved MCCO Project Management Plan Approach.
A2	The development may only be carried out: g. in compliance with the conditions of this consent; h. in accordance with all written directions of the Planning Secretary; i. generally in accordance with the EIS; and generally in accordance with the Development Layout in Appendix 2.	The following non-compliances against the conditions of this consent were identified during the audit period: • B46 Sandy Creek Farm Dams - Saline Water Discharge. MCCO - Dirty Water Discharge	No recommendation required.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
A31	The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.	All employees, contractors (and their sub-contractors) are required, at a minimum, to complete the Mangoola Site Familiarisation Induction that outlines the environmental requirements for undertaking work at Mangoola.	Update Mangoola Site Familiarisation Induction to include reference to SSD8642.
B46	Water Discharges The Applicant must ensure that all surface discharges from the site comply with: - discharge limits (both volume and quality) set for the development in any EPL; or - relevant provisions of the POEO Act and <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>.	Sandy Creek Farm Dams - Saline Water Discharges - 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall. It is understood no further action was required by the regulatory authorities. The de-watering management system of the two dams was sighted during the audit site inspection. Both dam's had diesel pumps installed and on standby with automated water level gauges installed. MCCO - Dirty Water Discharge Following a period of high rainfall, a site inspection of the MCCO Project Area was conducted. During this inspection sediment laden water was observed leaving the MCCO Project Area from 1) the Wybong Road Bypass Sediment Dam via the spillway 2) a low-lying area approximately 200m east of Gate H and 3) Sediment Dam 2 via the spillway. The EPA was notified under EPL12894 - Discharge of sediment laden water and notification in accordance with the Mangoola Pollution Incident Response Management Plan. On 4th July 2022, following a period of heavy rainfall, it was reported that	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for areas considered to be high risk prior to predicted excessive rainfall events. Undertake routine inspections of ESC structures by qualified and experienced personnel. Act promptly to any maintenance tasks required to ensure design capacities are maintained.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
		sediment-laden water was leaving site from Dam SD2 from the MCCO project area and onto the Wylong Road Bypass which ultimately reports to Big Flat Creek. DPIE and EPA were notified in accordance with applicable statutory requirements and the incident was managed in accordance with the SWGRP. An investigation was completed where it was found that there was a total of 79mm received in the 48hrs leading up to the event which exceeds the dam's design capacity which is based on Managing Urban Stormwater (the Blue Book). Prior to the event on the 1st July, a survey of the dam indicated that the dam had sufficient freeboard to capture the design event (27.7mm) During the audit inspection, sediment build up was evident in some diversion drainage culverts which were reducing their capacity within the MCCO project area.	
B47	Water Discharges The Applicant must implement all reasonable and feasible measures on the site to minimise the need to discharge saline water to the Hunter River under the Hunter River Salinity Trading Scheme.	Mangoola implements measures to manage surplus saline water by reusing it for coal washing and dust suppression. Discharges to the Hunter River are not required under average climate conditions, only under period of prolonged wet weather. HRSTS discharges were required following prolonged wet weather events during the audit period: • 1 – 6 April 2022 • 4 – 23 July 2022 The saline water management system is outlined in the WMP (2021) and summarised in Section 3.2. A number of water storages and if required, active pits, are currently used to store saline water on site and prevent the need to discharge	In order to minimise the amount of saline water make onsite during wet climatic periods, the water quality of surface runoff from well-established and stable areas of rehabilitation should be regularly monitored and incorporated as part of the mines surface water quality monitoring program. If trends in water quality over time indicate that the runoff is of suitable quality for off-site discharge without polluting, MCO is encouraged to liaise with the relevant departments to allow this water to flow offsite. This will prevent the needing for this clean water to be pumped back into the saline water system and released through the HRSTS. This will not only be a major benefit to downstream

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Condition Ref	Requirement	Independent Audit Finding	Recommendation
		under the HRSTS under normal climatic conditions. WMP (2021) states runoff within saline water management system is re-used for dust suppression. Pit Water Dam used for storage of saline water (process water). Pit Water Dam supplemented by Raw Water Dam (which receives Hunter River Water (pumped under licence)). Raw Water Dam has a saline seepage interception system. As well, Raw Water Dam maintained with freeboard to act as secondary storage during periods of high rainfall. The 2021 Operation Water Management Plan (internal document) cited, included a 5-year modelling/forecast to address water inventory and associated risk and to help guide management decisions. Evidence was cited of an internal TARP that guides when discharges to the Hunter Water would be required based on site storage levels. It is noted that all runoff from rehabilitated catchments onsite are currently captured or transferred back into the saline management system. Whilst this currently assists with mine water security during dry and normal climatic periods, during the wet climatic period which we are currently in, it has contributed to the requirement for emergency release of mine water from site through the HRSTS. This has a negative impact on the watercourses immediately downstream of the rehabilitation area and leads to increased operational costs. A review of recent water quality samples taken from runoff from the South Pit Rehabilitation area are encouraging for off-site release. It was noted that the receiving dams inspected in	watercourse ecosystem/s, but limit operational costs. As the rehabilitated catchments are becoming larger as the mine life evolves, both environmental and financial benefits will become increasing larger during wet climatic periods.

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Condition Ref	Requirement	Independent Audit Finding	Recommendation														
B48	The Applicant must ensure that the development complies with the performance measures in Table 6. Table 6: Water management performance measures <table><tr><th>Feature</th><th>Performance Measure</th></tr><tr><td>Water management – General</td><td> • Maintain separation between clean, dirty (i.e. sediment-laden) and mine water management systems • Minimise the use of clean and potable water on the site • Maximise water recycling, reuse and sharing opportunities • Minimise the use of make-up water from external sources • Design, install, operate and maintain water management systems in a proper and efficient manner • Minimise risks to the receiving environment and downstream water users </td></tr><tr><td>Alluvial aquifers</td><td> • Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: - negligible change in groundwater levels; - negligible change in groundwater quality; and - negligible impact to other groundwater users, • Maintain appropriate setbacks in accordance with the <i>Aquifer Interference Policy</i> (DPI, 2012) </td></tr><tr><td>Erosion and sediment control works</td><td> • Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book (Landcom, 2004)</i>, <i>Volume 2A: Installation of Services (DECC, 2008)</i>, <i>Volume 2C: Unsealed Roads (DECC, 2008)</i>, <i>Volume 2D: Main Road Construction (DECC, 2008)</i> and <i>Volume 2E: Mines and Quarries (DECC, 2008)</i> • Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) • Design, install and maintain any new infrastructure within 40 metres of watercourses in in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012) </td></tr><tr><td>Clean water diversions and storage infrastructure</td><td> • Design, install and maintain the clean water system to capture and convey the 100 year ARI flood • Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site </td></tr><tr><td>Flood protection works</td><td> • Design, install and maintain flood levees to protect mining areas from a 100 year ARI flood event and ensure no increased flooding impacts on roads or privately-owned land beyond that predicted in the document/s listed in condition A2(c) • Design the Wybong Road haul road overpass to include drainage measures to maintain appropriate flood management of Wybong Road, as described in the document/s listed in condition A2(c) </td></tr><tr><td>Sediment dams</td><td> • Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004)</i> and <i>2E Mines and Quarries (DECC, 2008)</i> and the requirements </td></tr></table>	Feature	Performance Measure	Water management – General	• Maintain separation between clean, dirty (i.e. sediment-laden) and mine water management systems • Minimise the use of clean and potable water on the site • Maximise water recycling, reuse and sharing opportunities • Minimise the use of make-up water from external sources • Design, install, operate and maintain water management systems in a proper and efficient manner • Minimise risks to the receiving environment and downstream water users	Alluvial aquifers	• Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: - negligible change in groundwater levels; - negligible change in groundwater quality; and - negligible impact to other groundwater users, • Maintain appropriate setbacks in accordance with the <i>Aquifer Interference Policy</i> (DPI, 2012)	Erosion and sediment control works	• Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book (Landcom, 2004)</i>, <i>Volume 2A: Installation of Services (DECC, 2008)</i>, <i>Volume 2C: Unsealed Roads (DECC, 2008)</i>, <i>Volume 2D: Main Road Construction (DECC, 2008)</i> and <i>Volume 2E: Mines and Quarries (DECC, 2008)</i> • Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) • Design, install and maintain any new infrastructure within 40 metres of watercourses in in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)	Clean water diversions and storage infrastructure	• Design, install and maintain the clean water system to capture and convey the 100 year ARI flood • Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site	Flood protection works	• Design, install and maintain flood levees to protect mining areas from a 100 year ARI flood event and ensure no increased flooding impacts on roads or privately-owned land beyond that predicted in the document/s listed in condition A2(c) • Design the Wybong Road haul road overpass to include drainage measures to maintain appropriate flood management of Wybong Road, as described in the document/s listed in condition A2(c)	Sediment dams	• Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004)</i> and <i>2E Mines and Quarries (DECC, 2008)</i> and the requirements	the South Pit Area had bare and eroded internal batters and would need modification and stabilisation to assist in maintained good water quality within the structures from the rehabilitation areas. Water Management - General: Section 3 of the WMP outlines the clean, dirty and mine (saline) water management systems. Clean water diversions are currently in the process of being installed in preparation of mining to the north of Wylong Rd. A review of the Maximum Harvestable Rights was undertaken most recently in 2019 by MCP. This review found that any clean water that is not diverted and captured within the water management system is within harvestable right provisions (Section 3.5 of WMP) Water is collected and reused onsite for coal processing and dust suppression. Potable water use is limited to that used for domestic site uses. Water Management schematic provided in 2021 Annual Water and Salt Balance Review by Engeny Water Management (February 2022). Excerpt (Figure 2 and Table 1) of 2021 Annual Water and Site Balance model indicates focus on water accounting. Approach to dirty water (sediment-laden) management outlined in Erosion and Sediment Control Plan. Current revision is Version 8 (January 2020). Sighted the Tailings and water management Erosion and sediment control civil works construction report indicating implementation of the ESCP in addition during the site inspection. Alluvial Aquifers: Latest groundwater model predictions presented in AGE (2019), implying	Raw Water Dam: Recommend a ‘trace line’ figure of water level in Raw Water Dam be included in AEMR. Chemical and Hydrocarbons: Recommend photographic record of condition of bunds be included in the AEMR. Tailings Storages: Recommend photographic record of periodic inspection of Tailings Dams be included in the AEMR. Overburden Emplacement: Suggests consideration of mechanism to demonstrate management of potentially acid forming materials during placement. This could take the form of periodic testing. Surface Water Prioritise revegetation of the disturbance areas adjacent Wybong Road associated with the MCCO Project (i.e. visual bund and recently constructed road diversion). Ongoing South Pit Rehabilitation water quality monitoring entering the dams is strongly encouraged. Early indications are that the water quality entering these dams from the Rehabilitation is of a quality that can be released from site. The condition of the dams is then leading to a degradation of the water quality with significant erosion of the dam batters. To minimise the need to capture and pump runoff from older and established rehabilitation areas
Feature	Performance Measure																
Water management – General	• Maintain separation between clean, dirty (i.e. sediment-laden) and mine water management systems • Minimise the use of clean and potable water on the site • Maximise water recycling, reuse and sharing opportunities • Minimise the use of make-up water from external sources • Design, install, operate and maintain water management systems in a proper and efficient manner • Minimise risks to the receiving environment and downstream water users																
Alluvial aquifers	• Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: - negligible change in groundwater levels; - negligible change in groundwater quality; and - negligible impact to other groundwater users, • Maintain appropriate setbacks in accordance with the <i>Aquifer Interference Policy</i> (DPI, 2012)																
Erosion and sediment control works	• Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book (Landcom, 2004)</i>, <i>Volume 2A: Installation of Services (DECC, 2008)</i>, <i>Volume 2C: Unsealed Roads (DECC, 2008)</i>, <i>Volume 2D: Main Road Construction (DECC, 2008)</i> and <i>Volume 2E: Mines and Quarries (DECC, 2008)</i> • Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) • Design, install and maintain any new infrastructure within 40 metres of watercourses in in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)																
Clean water diversions and storage infrastructure	• Design, install and maintain the clean water system to capture and convey the 100 year ARI flood • Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site																
Flood protection works	• Design, install and maintain flood levees to protect mining areas from a 100 year ARI flood event and ensure no increased flooding impacts on roads or privately-owned land beyond that predicted in the document/s listed in condition A2(c) • Design the Wybong Road haul road overpass to include drainage measures to maintain appropriate flood management of Wybong Road, as described in the document/s listed in condition A2(c)																
Sediment dams	• Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004)</i> and <i>2E Mines and Quarries (DECC, 2008)</i> and the requirements																

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Condition Ref	Requirement	Independent Audit Finding	Recommendation																
	<table><tr><th>Feature</th><th>Performance Measure</th></tr><tr><td></td><td>under the POEO Act or <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i></td></tr><tr><td>Mine water storages</td><td> - Design, install and maintain mine water storage infrastructure to avoid unlicensed or uncontrolled discharge of mine water - New storages designed to contain the 100 year ARI storm event and minimise permeability - Ensure adequate freeboards within all mine water storage dams and voids at all times to minimise the risk of discharge to surface waters </td></tr><tr><td>Raw water dam</td><td> - Water levels must be managed so that the Raw Water Dam does not discharge water from the premises except in a 1 in 250 Annual Exceedance Probability 72-hour rainfall event or greater </td></tr><tr><td>Chemical and hydrocarbon storage</td><td> - Chemical and hydrocarbon products must be stored in bunded areas in accordance with the relevant Australian Standard </td></tr><tr><td>Tailings storages</td><td> - Design and maintain tailings storage areas to encapsulate and prevent the movement of tailings seepage/leachate </td></tr><tr><td>Overburden emplacements</td><td> - Design, install and maintain emplacements to encapsulate and prevent migration of acid forming and potentially acid forming materials, and saline and sodic material - Design, install and maintain out-of-pit emplacements to prevent and/or manage long term saline seepage </td></tr><tr><td>Aquatic and riparian ecosystems</td><td> - Ensure negligible environmental consequences beyond those predicted in the document/s listed in condition A2(c) - Maintain or improve baseline channel stability of Big Flat Creek - Develop site-specific in-stream water quality objectives in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000) and Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006) </td></tr></table>	Feature	Performance Measure		under the POEO Act or <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>	Mine water storages	- Design, install and maintain mine water storage infrastructure to avoid unlicensed or uncontrolled discharge of mine water - New storages designed to contain the 100 year ARI storm event and minimise permeability - Ensure adequate freeboards within all mine water storage dams and voids at all times to minimise the risk of discharge to surface waters	Raw water dam	Water levels must be managed so that the Raw Water Dam does not discharge water from the premises except in a 1 in 250 Annual Exceedance Probability 72-hour rainfall event or greater	Chemical and hydrocarbon storage	Chemical and hydrocarbon products must be stored in bunded areas in accordance with the relevant Australian Standard	Tailings storages	Design and maintain tailings storage areas to encapsulate and prevent the movement of tailings seepage/leachate	Overburden emplacements	- Design, install and maintain emplacements to encapsulate and prevent migration of acid forming and potentially acid forming materials, and saline and sodic material - Design, install and maintain out-of-pit emplacements to prevent and/or manage long term saline seepage	Aquatic and riparian ecosystems	- Ensure negligible environmental consequences beyond those predicted in the document/s listed in condition A2(c) - Maintain or improve baseline channel stability of Big Flat Creek - Develop site-specific in-stream water quality objectives in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000) and Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006)	original predictions (MER, 2006) were overly conservative. 2021 Annual Water and Salt Balance Review undertaken by Engeny Water Management indicates that the magnitude of groundwater inflow is understood. Groundwater monitoring undertaken in accordance with Groundwater Monitoring Plan (current revision is Version 5, July 2014). Groundwater level and quality monitoring reported in monthly reports. AEMR 2021 indicates that trends in groundwater level are consistent with current predictions (AGE, 2019). Erosion and Sediment Control Works: The ESCP (Appendix E of the WMP) is consistent with the requirements of the Managing Urban Stormwater Volume 1 and 2 (blue book). Installed control measures observed onsite during the audit inspection had generally being installed and maintained as per blue book requirements. As outlined in the supplied ‘Surface Infrastructure Basis of Design-Feasibility’ report by Arkhill Engineers for the MCCO project, the Big Flat Creek Crossing culverts (which are currently under construction) have been designed to convey the 0.1% AEP event. Clean Water Diversions and Storage Infrastructure: Clean Water diversions in preparation for mining to the north of Wylong Rd are currently under construction. As outlined in the supplied ‘Surface Infrastructure Basis of Design-Feasibility’ report by Arkhill Engineers for the MCCO project, the clean water diversion channels to divert runoff from around the mining	back into the mine water system (which is adding strain to the system during wet periods like the present), upgrade the receiving sediment dams to be stable such that runoff entering the dams remains at a quality that can be released from site. This will involve ongoing monitoring of water quality from the established rehabilitation areas and liaison with the departments to confirm such a release is allowed.
Feature	Performance Measure																		
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		operations have been designed to convey the 1% AEP event. Flood Protection Works: Wybong Road Haul Road overpass is currently under construction. It has been designed as a self-catching road and is at a level which is higher than the 0.1% AEP event. As such no additional water will contribute towards Wybong Road and the Arch for the overpass is in line with the existing road with Wybong Road to be reinstated with 2 x 3.0m traffic lanes and 1m shoulders to not impede any such road flooding. There are no flood levees currently in place or under construction at MCO. Sediment Dams: Evidence was provided for the Mine Pit Strips 1 and 2, Noop Dam and West and South Pit sediment dams, that they have been designed with volumes in accordance with the blue book. The dams for the MCCO Project are currently under construction and have been designed in accordance with Blue Book requirements as outlined in the report titled 'Surface Infrastructure Basis of Design-Feasibility' by Arkhill Engineers (July 2020) Mine Water Storages: There were two uncontrolled discharges of mine water during the audit period (from the Raw Water Dam seepage dams being the Sand Creek Farm Dam). All major water storages are monitored as part of the MCP Water Management System. Freeboards are regularly monitored to assess the risk of an uncontrolled discharge. An operational example cited was the request on 8 July 2021 from MCO to the EPA for the	

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		emergency release of water from site via the HRSTS discharge point into the Hunter River to return freeboard to required levels Chemical and Hydrocarbon Storage: AEMR (2021) indicates all bulk storage are banded in accordance with relevant standard this was confirmed during the site inspection. Tailings Storages: Tailings Storages location presented in AEMR 2021. AEMR 2021 indicates that Tailings Dam No. 4 has sufficient capacity for life-of-mine and that no capping of Tailings Dam No. 1 and 2 occurred during 2021. Overburden Emplacements: AMER 2021 provides evidence of active tracking of handling of bulk materials. Not yet triggered. Aquatic and Riparian Environments: AEMR 2021 presents analysis of data obtained from floristic and faunal monitoring locations and indicates that negligible environmental impacts have occurred beyond those predicted. The water quality criteria are listed in the SWMP. A review of the 2019, 2020 and 2021 Channel Stability monitoring surveys indicated the stability of Big Flat Creek has either improved or remained constant with the largest impact of instability being caused by stock access in Reach 2.	
B50	The Applicant must prepare a Water Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: - be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; - be prepared in consultation with OPIE Water;	Document Number: MANOC-1772150304-6221 Version: 13 Effective: 03/12/2021	Update the water management plan to include the management requirements now that MCO is allowed to release water to the Hunter River under EPL12894 and HRSTS. A further update to the WMP to meet the conditions of this consent will be

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	c. describe the measures to be implemented to ensure that the Applicant complies with the water management performance measures (see Table 6); d. utilise existing data from the Mangoola Coal Project, existing monitoring programs and, where practicable, other nearby mines; e. include a: i. Site Water Balance that includes details of: • predicted annual inflows to and outflows from the site; • sources and security of water supply for the life of the development (including authorised entitlements and licences); • water storage capacity; • water use and management on the site, including any water transfers or sharing with neighbouring mines; • licensed discharge points and limits; and • reporting procedures, including the annual preparation of an updated site water balance; ii. Salt Balance that includes details of: • sources of saline material on the site; • saline material and saline water management on the site; • measures to minimise discharge of saline water from the site; • a program to notify all downstream landowners within 2 kilometres of the discharge point prior to discharging saline water to the Hunter River; and • reporting procedures, including the annual preparation of an updated salt balance; iii. Erosion and Sediment Control Plan that: • is consistent with the requirements of <i>Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book</i> (Landcom, 2004) and <i>Volume 2E: Mines and Quarries</i> (DECC, 2008); • identifies activities that could cause soil erosion, generate sediment or affect flooding; • includes a program to review the adequacy of existing flood protection works, and ensure they comply with the relevant performance measures listed in Table 6; • describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;	Approved by Stephen O'Donoghue as nominee of the Secretary on 3 December 2021. Evidence was provided that the WMP was prepared in consultation with EPA and DPI Water by a suitably qualified expert Stephen Downes whose appointment was approved by the Secretary on 2/09/2021. The WMP contains the following: • Site Water Balance – Section 5 • Erosion and Sediment Control Plan – Appendix C • Surface Water Monitoring Plan – Appendix D • Ground Water Monitoring Program – Appendix E • Surface and Ground Water Response Plan – Appendix F As part of the MCCO project management plan approach assessment it was determined that a partial plan update was required to facilitate construction with a new WMP prepared prior to the commencement of mining north of Wybong Road under SSD8642. MCO are currently working under the revised WMP that includes minor administrative updates to facilitate commencement of construction linked to SSD8642 and has been implemented during construction. In summary, this WMP has been subjected to minor administrative updates to include approved activities and inclusive of any commitments (Umwelt, 2019a and Umwelt, 2019b) required to implemented prior to the commencement of development and construction activities associated with SSD 8642.	required prior to the commencement of extraction activities to the north of Wylong Road.

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	- describes the location, function, and capacity of all erosion and sediment control structures and flood management structures; and - describes what measures would be implemented to maintain (and if necessary decommission) the structures over time; iv. Surface Water Management Plan that includes: - detailed baseline data on surface water flows and quality of watercourses and/or water bodies potentially impacted by the development, including: -stream and riparian vegetation health; - channel stability (geomorphology); and - water supply for other surface water users; - a detailed description of the surface water management system; - details of the water licensing requirements for all water storages (i.e. exempt, harvestable rights or licenced); - detailed plans, design objectives and performance criteria for water management infrastructure, including: - any approved creek diversions or restoration works associated with the development; - water run-off diversions and catch drains; - water storages and sediment dams; - emplacement areas; - backfilled pits and any final voids for the development; and - reinstated drainage networks on rehabilitated areas of the site; - an erosion and scour monitoring and maintenance program for the Big Flat Creek riparian corridor; - surface water performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts (or trends) associated with the development, for: - water supply for other water users; - downstream surface water flows and quality; - downstream flooding impacts; - stream and riparian vegetation health; and - post-mining water pollution from rehabilitated areas of the site; - a program to monitor and evaluate:	Now that the release of water into the Hunter River is permissible under EPL12894 and the HRSTS, the WMP is to be updated to reflect the management actions required A further update to the WMP will be required prior to the commencement of extraction activities north of Wybong Road.	

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	– compliance with the relevant performance measures listed in Table 6 and the performance criteria in this plan; – controlled and uncontrolled discharges and seepage/leachate from the site; – impacts on water supply for other water users; – surface water inflows, outflows and storage volumes, to inform the Site Water Balance; and – the effectiveness of the surface water management system and the measures in the Erosion and Sediment Control Plan; • reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results; and • a trigger action response plan to respond to any exceedances of the relevant performance measures or performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development; v. Groundwater Management Plan that includes: • detailed baseline data of groundwater levels, yield and quality for groundwater resources and groundwater dependent ecosystems potentially impacted by the development, including groundwater supply for other water users; • a detailed description of the groundwater management system; • groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts (or trends) associated with the development, on: – regional and local aquifers (alluvial and hard rock); and – groundwater supply for other water users such as licensed privately-owned groundwater bores; • a program to monitor and evaluate: – compliance with the relevant performance measures listed in Table 6 and the performance criteria in this plan; – water loss/seepage from water storages into the groundwater system, including from any final voids; – groundwater inflows, outflows and storage volumes, to inform the Site Water Balance;		

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	– the hydrogeological setting of any nearby alluvial aquifers and the likelihood of any indirect impacts from the development; – impacts on groundwater dependent ecosystems; – impacts on groundwater supply for other water users; and – the effectiveness of the groundwater management system; • a contingency plan for isolating the Big Flat Creek alluvium from Anvil Creek alluvium and mining areas in the event that it is required; • reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results; • a trigger action response plan to respond to any exceedances of the relevant performance measures and groundwater performance criteria, and repair, mitigate and/or offset any adverse groundwater impacts of the development; and • a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years (unless otherwise agreed by the Planning Secretary), and comparison of monitoring results with modelled predictions; and a protocol to report on the measures, monitoring results and performance criteria identified above, in the Annual Review referred to in condition D11.		
B75	The Applicant must: - take all reasonable steps to minimise the visual and off-site lighting impacts of the development; - take all reasonable steps to shield views of mining operations and associated equipment from users of public roads and privately-owned residences; - ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure; - ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal (except where required for emergency safety purposes); - ensure that all external lighting associated with the development complies with relevant Australian Standards including the latest version of <i>Australian Standard AS4282 (INT) 2019 - Control of Obtrusive Effects of Outdoor Lighting</i>; - implement a landscaping strategy to shield public views of the development that includes a road-side tree planting and/or	Review of the complaints register, OCE inspections, and inspection of visual bunds indicated that MCO are generally implementing controls to minimise the visual impacts of the operation. MCO were noted to be taking all reasonable steps to minimise the visual and off-site lighting impacts of the development during the audit period. Noted that new fixed LED lighting was installed at the CHPP during the audit period and was linked to a compliant on 24/08/2020. MCO implements the Lighting Plant Procedure to ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal.	The Mangoola "Equipment Procurement Process" forms should be amended to include the requirement that all new lighting is compliant with AS4282. Additionally following the installation of new lighting an offsite inspection should be completed and recorded. Undertake an updated external lighting audit to ensure compliance with AS4282 (INT) 2019 - Control of Obtrusive Effects of Outdoor Lighting.

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	maintenance schedule for all vegetation screens and bunds shown in Appendix 8; and g. ensure that the visual appearance of any new buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape.	No new buildings have been constructed during the audit period.	
D6	Management Plan Requirements The Applicant must ensure that management plans prepared for the development are consistent with the conditions of this consent and any EPL issued for the site.	Review of the applicable management plans indicated that they are consistent with the conditions of this consent and EPL12894.	Ensure all management plans are updated in accordance with the approved MCCO Project Management Plan Approach.
L4.2	The airblast overpressure level from blasting operations in or on the premises must not exceed: 120 dB (Lin Peak) at any time; at either monitoring point 16, 21 or 32 in Condition P1.4.	Blast #1200 was fired at 12.21pm in Main Pit West and an overpressure reading of 120.9dB was recorded at Blast Monitor 07 (BM07/ EPL Monitoring point 21). This reading is above the 120bB impact assessment criteria outlined in Schedule 3, Condition 10 of PA 06_0014 and EPL 12894, Condition L4.2. Notifications were made to both DPE and the EPA following the blast with the follow up incident investigation reports required under Schedule 5, Condition 4 of PA 06_0014 and Condition R2.2 of EPL 12984 submitted to the relevant departments on 11 March 2020. A formal warning letter was received from DPE on 24 March 2020.	Review of actions following incident determined that mitigation measures developed are sufficient. No further recommendations required.
L4.6	Offensive blast fume must not be emitted from the premises. <i>Definition:</i> <i>Offensive blast fume means post-blast gases from the detonation of explosives at the premises that by reason of their nature, duration, character or quality, or the time at which they are emitted, or any other circumstances:</i> <i>1. are harmful to (or likely to be harmful to) a person that is outside the premises from which it is emitted, or</i> <i>2. interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted.</i>	A blast odour complaint was received on 12 June 2020 at 12:42PM. Complaint received via Hotline. Complainant stated they smelt the blast. Two blasts were fired in Main Pit West (MPW) in quick succession. The Mangoola E&C Officer reviewed the meteorological conditions at the time of the blast, as well as the daily dust summary. The video footage was reviewed at the time of the blast by the Environment and Community Manager (ECM) and both	Consider including a link to the NSW Health - Mine blast fume and you factsheet https://www.health.nsw.gov.au/environment/factsheets/Pages/mine-blast-fumes.aspx in the Community Newsletter to better educate the community on what constitutes blast fume.

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		blasts dissipated within the pit, not leaving the site boundary. The ECM called the complainant back at 18:45 to discuss the complaint, the complainant stated that sometime after the blast they were able to smell something similar to a diesel truck. The ECM explained that a blast usually smells like gun powder and the complainant also mentioned that no dust was visible from the blast. The pre-blast permit identified the blast as being low risk for fume generation and all pre-blast assessments indicated that the conditions were suitable for blasting. Review of the incident suggests that the odour was not blast fume.									
M2.2	Air Monitoring Requirements POINT 19,20 <table border="1"> <thead> <tr> <th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr> </thead> <tbody> <tr> <td>PM10</td><td>micrograms per cubic metre</td><td>Continuous</td><td>Special Method 1</td></tr> </tbody> </table> Note: Special Method 1 requires the Licensee to undertake the monitoring of PM10 concentration in strict accordance with the manufacturer's operating manual supplied with the continuous monitoring equipment and titled "E-Sampler-9800 Particulate Monitor Operation Manual Revision K", or any updated version as published by the manufacturer.	Pollutant	Units of measure	Frequency	Sampling Method	PM10	micrograms per cubic metre	Continuous	Special Method 1	Between 20-23 February 2021, the monitoring unit malfunctioned at Monitoring Point 20 (D8-DC), as outlined in Table 4.3 of the approved AQMP. This was a non-compliance in accordance with Sampling Method – Special Method 1. Field maintenance was undertaken on the E-Sampler at the earliest time to attempt to repair, however the unit could not be fixed in the field and was taken offsite for repairs. A replacement unit was installed, however the stabilising period resulted in a loss of three days data. This was reported in the EPL 12894 Annual Return in 2021.	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.
Pollutant	Units of measure	Frequency	Sampling Method								
PM10	micrograms per cubic metre	Continuous	Special Method 1								
M4.1	For each monitoring point specified in the table below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns: Point 5; and Point 18	Failure to monitor continuously monitor weather at Monitoring Point 5 and Monitoring Point 18: Monitoring Point 5: - Rainfall: 16 x 15 min averaging (av) periods; - Temperature (2m): 2 x 15 min av periods; and	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.								

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Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method																																												
Rainfall	mm	Continuous	1 hour	AM-4																																												
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Solar radiation	W/m2	Continuous	15 minutes	AM-4																																												
Additional requirements - siting - measurement				AM-2 & AM-4 AM-2 & AM-4																																												
M7.1	To determine compliance with conditions L4.1, L4.2, L4.3 and L4.4: a) Airblast overpressure and ground vibration levels must be measured and electronically recorded for monitoring points 16, 21 and 32 for the parameters specified in Column 1 of the table below; and b) The licensee must use the units of measure, sampling method, and sample at the frequency specified opposite in the other columns. <table><tr><th>Parameter</th><th>Units of Measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Airblast Overpressure</td><td>Decibels (Linear Peak)</td><td>All Blasts</td><td>Australian Standard AS 2187.2-2006</td></tr><tr><td>Ground Vibration Peak Particle Velocity</td><td>millimetres/second</td><td>All Blasts</td><td>Australian Standard AS 2187.2-2006</td></tr></table>	Parameter	Units of Measure	Frequency	Sampling Method	Airblast Overpressure	Decibels (Linear Peak)	All Blasts	Australian Standard AS 2187.2-2006	Ground Vibration Peak Particle Velocity	millimetres/second	All Blasts	Australian Standard AS 2187.2-2006	On 1 October 2021 Blast monitor at BM07 (Point 21) failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.																																	
Parameter	Units of Measure	Frequency	Sampling Method																																													
Airblast Overpressure	Decibels (Linear Peak)	All Blasts	Australian Standard AS 2187.2-2006																																													
Ground Vibration Peak Particle Velocity	millimetres/second	All Blasts	Australian Standard AS 2187.2-2006																																													
G2.2	The licensee is to update the EPA through the eConnect EPA platform of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.	Notification to the eConnect EPA platform of the change in E&C Manager to Sam Palmer was undertaken on 18 January 2022.	Record notification of changes in the future or request receipt from the EPA when using eConnect.																																													
Stakeholder SC20	Sustainable Agriculture Offset Area There is a portion of land identified in Figure 14 of the 2021 Annual Review labelled as "Sustainable Agriculture Offset Area". Please provide a	SSD8642 Condition B85 states "The Applicant must rehabilitate the site in accordance with the conditions imposed	Change land label from "Sustainable Agriculture Offset Area" to a more suitable description of the intended																																													

REPORT

Condition Ref	Requirement	Independent Audit Finding	Recommendation
	discussion on what makes it “sustainable”. Is this site being compared to an analogue site, and if so, what are some of the methods being used to compare the sites.	on the mining lease(s) associated with the development under the Mining Act 1992. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the documents listed in condition A2(c) and shown in Appendix 9 and must comply with the objectives in Table 9”. Table 9 outlines provisions for “area proposed for agricultural land”. As defined in the EIS the intention is to provide a final rehabilitated landform of native vegetation woodlands and grassland. A key objective of the progressive rehabilitation at Mangoola is to return much of the MCCO Project Area to a mixture of woodland habitat generally consistent with ecological communities that would have historically occurred in the area and grassland areas that will provide future opportunity for appropriately managed grazing. The potential future grazing opportunities would be based on future land use decisions and approvals, and hence grazing is not a primary consideration for current rehabilitation, or a planned land use as described in the EIS.	land use to reduce confusion in future Annual Reviews.
9	The lease holder must: a. ensure that at least 143 competent people are efficiently employed on the lease area on each weekday except Sunday or any weekday that is a public holiday, OR b. expend on operations carried out in the course of prospecting or mining the lease area, an amount of not less than \$2,502,500 per annum whilst the lease is in force.	Condition 9 of ML1626 was removed as approved by the regulator.	Provide updated record of change to Mining Lease on project website.

REPORT

Condition Ref	Requirement	Independent Audit Finding	Recommendation
	The Minister may at any time or times, by instrument in writing served on the lease holder, increase or decrease the expenditure required or the number of people to be employed.		
15	a. <u>Ground Vibration</u> The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the lease area does not exceed 10 mm/second and does not exceed 5 mm/second in more than 5% of the total number of blasts over a period of 12 months at any dwelling or occupied premises as the case may be, unless determined otherwise by the Department of Environment and Climate Change. b. <u>Blast Overpressure</u> The lease holder must ensure that the blast overpressure noise level generated by any blasting within the lease area does not exceed 120 dB (linear) and does not exceed 115 dB (linear) in more than 5% of the total number of blasts over a period of 12 months, at any dwelling or occupied premises, as the case may be, unless determined otherwise by the Department of Environment and Climate Change.	On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPE and EPA were notified.	Continue to implement the Blast Management Plan to minimise the dust and fume emissions of any blasting.
18	Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, waterbody or groundwaters. The lease holder must observe and perform any instructions given by the Director-General in this regard.	Sandy Creek Farm Dams - Saline Water Discharges - 17/02/2020, 26/11/2021, and 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall. Discharge results show that there was no environmental harm caused based on the chemistry of the water discharged when compared to the receiving environment. The PIRMP was enacted	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for areas considered to be high risk prior to predicted excessive rainfall events.

7 LIMITATIONS OF IEA REPORT

In preparing this IEA report, RPS has assessed all activities appropriate and necessary to evaluate the environmental status of the site and operations undertaken within the audit period. RPS has addressed all technical matters which might reasonably be considered to be relevant to such an assessment conducted to standards which apply in NSW. Based on observations of the site, interviews with appropriate staff and a review of available documentation, it is RPS's opinion that the potential critical environmental issues associated with the site and operations are those discussed in this report. However, RPS can only advise on the basis of the information available to them and therefore cannot dismiss absolutely the possibility that parts of the site, or adjacent properties, may give rise to additional issues. The conclusions presented in this report are professional opinions based solely upon RPS's visual observations of the site and the immediate site vicinity, and review of available documentation, interviews and conversations with personnel knowledgeable about the site and other available information, 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 RPS' site inspections on 5 July 2022 and 22 July 2022, and those areas accessible. They necessarily cannot apply to conditions and features which RPS 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, or to draw conclusions as to whether any circumstances constitute a breach of relevant legislation.

A large, light grey abstract shape with rounded corners and a diagonal cutout. The cutout reveals a maroon-colored area underneath. The text 'Appendix A' and 'DPE Audit Team Approval' is positioned within the grey area.

Appendix A

DPE Audit Team Approval

Department of Planning and Environment

Sam Palmer
Environment and Community Manager
Mangoola Coal
Wonnarua Country
Muswellbrook NSW 2333

20/06/2022

Dear Mr Palmer

**Mangoola Continued Operations (SSD-8642 and PA 06_0014)
Independent Environmental Audit Proposal**

I refer to your request (SSD-8642-PA-36) for the Secretary's approval of suitably qualified persons to prepare the 2022 Independent Environmental Audit (IEA) for Mangoola Continued Operations.

The Department of Planning and Environment (the department) has reviewed the nominations and information you have provided and is satisfied that these experts are suitably qualified and experienced. Consequently, I can advise that the Secretary approves the appointment of the following audit team to prepare the 2022 IEA.

In accordance with Schedule 2 Condition D13 of SSD-8642, Schedule 5 Condition 7 of Project Approval 06_0014 as modified (the consents) and the *Independent Audit Guideline - Post-approval requirements for State significant developments* (October 2015), the Secretary has agreed to the following audit team:

- Ian Richardson, Lead Auditor, air quality specialist
- Sam Mitchell, Audit Assistant, back-up Lead Auditor
- Arie Zuanic, Audit Assistant
- Mark Aitkens, biodiversity specialist
- Shelomi Doyle, biodiversity specialist
- Clayton Richards, rehabilitation specialist.
- Oliver Muller, noise and vibration specialist
- Dale Redwood, noise and vibration specialist
- Dean Jarvis, surface water, erosion and sediment control specialist
- Dr Justin Bell, groundwater specialist

Please ensure this correspondence is appended to the IEA report.

The IEA must be prepared, undertaken and finalised in accordance with the *Independent Audit Guideline - Post-approval requirements for State significant developments* (October 2015). Failure to meet these requirements will require revision and resubmission.

Should you wish to discuss the matter further, please contact Jennifer Sage, Compliance Officer on 0400 245 170 or compliance@planning.nsw.gov.au

Yours sincerely

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

Heidi Watters
Team Leader Northern
Compliance

As nominee of the Planning Secretary

A large, light grey abstract shape with rounded corners and a maroon-colored cutout on its right side. The cutout is a rounded rectangle with a diagonal line through it, creating a maroon shape that fits into the grey one.

Appendix B Audit Checklists

B.1 PA06_0014 Audit Checklist

PA06_0014 MOD 8 AUDIT CHECKLIST – MANGOOLA IEA 2022

PA06_0014 MOD 8 AUDIT CHECKLIST – MANGOOLA IEA 2022	1
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Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
SCHEDULE 2 – ADMINISTRATIVE CONDITIONS				
OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT				
S2 C1	In addition to meeting the specific performance criteria established under this approval, the Proponent must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the project.	Mangoola was observed to be implementing all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the project.	Compliant	
TERMS OF APPROVAL				
S2 C2	The Proponent must carry out the project generally in accordance with the: a. EA; b. EA (MOD 1); c. EA (MOD 2); d. EA (MOD 3); e. EA (MOD 4); f. EA (MOD 5); g. EA (MOD 6); h. EA (MOD 7); i. EA (MOD 8); and j. the Project Layout Plan. <i>Note: The Project Layout Plan is included in Appendix 2.</i>	Mangoola has generally carried out the project in accordance with the EA, MODs, and Project Plan Layout during the audit period.	Compliant	
S2 C2A	The proponent must carry out the project in accordance with the conditions of this approval.	The following non-conformances were recorded during the audit period: • S3 C10 – Blast Criteria • S3 C15 – Operating Conditions • S3 C17 – Blast Management Plan • S3 C19 – Impact Assessment Criteria • S3 C27 – Water Pollution	Non-compliant	No recommendation required.
S2 C3	If there is any inconsistency between the documents listed in condition 2 of Schedule 2, the most recent document shall prevail to the extent of the	SSD8642 was approved on 26 April 2021 with commencement of the development and construction	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	undertaken on 6 December 2021. The documents listed in SSD8642 have prevailed over PA06_0014 from 6 December 2021.		
S2 C4	The Proponent must comply with any reasonable requirement/s of the Secretary arising from The Department's assessment of: a. any reports, plans, programs, strategies or correspondence that are submitted in accordance with this approval; b. any reports, reviews or audits commissioned by the Department regarding compliance with this approval; and c. the implementation of any actions or measures contained in these documents.	Mangoola was observed to have complied with all reasonable requirement/s of the Secretary arising from DPE during the audit period.	Compliant	
LIMITS ON APPROVAL				
S2 C5	Mining operations may take place for 21 years from the grant of the mining lease for the project. <i>Note: Under this approval, the Proponent is required to rehabilitate the site and perform additional undertakings to the satisfaction of both the Secretary and the Executive Director Mineral Resources. Consequently, this approval will continue to apply in all other respects other than the right to conduct mining operations until the rehabilitation of the site and these additional undertakings have been carried out satisfactorily.</i>	ML1626 was granted on 20 November 2008 for 21 years. As such, mining operations can continue until 20 November 2029. It is noted that PA06_0014 is due to be relinquished on 6 December 2022 in accordance with SSD8642.	Compliant	
S2 C6	The Proponent must not extract more than 13.5 million tonnes of ROM coal from the site in any calendar year.	Mining operations during the audit period continued in the Main Pit and South Pit with no more than 13.5 million tonnes of ROM coal extracted from the site in any calendar year: 2019 – 12.9 Million tonnes (Mt) 2020 – 9.37 Mt 2021 – 8.03 Mt 2022 (forecast) – 10,733,095 Mt	Compliant	
S2 C7	The Proponent must only transport coal from the site by rail.	No coal was transported other than by rail during the reporting period.	Compliant	
STAGED SUBMISSION OF STRATEGIES, PLANS OR PROGRAMS				
S2 C8	With the approval of the Secretary, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.	There has been no request for staging or approved staging relating to PA06_0014 during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	Notes: - While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times; and - If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.			
STRUCTURAL ADEQUACY				
S2 C9	The Proponent must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. Notes: - Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. - Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.	2019 to 2022 – No construction undertaken in association with approval. Construction works for the MCCO Project SSD8642 commenced on 6 December 2021. This included the upgrade of three existing gates, installation of demountable buildings, and the construction of two new access points. In addition, minor roadworks and traffic control measures were implemented on Wybong Road.	Not triggered	
DEMOLITION				
S2 C10	The Proponent must ensure that all demolition work is carried out in accordance with <i>Australian Standard AS 2601-2001: The Demolition of Structures</i>, or its latest version.	2019-2020 Demolition Program House demolition project which was undertaken within the biodiversity offset areas in 2019-2020. Ten houses were demolished in 2019-2020 in accordance with AS 2601-2001.	Compliant	
OPERATION OF PLANT AND EQUIPMENT				
S2 C11	The Proponent must ensure that all plant and equipment used on site, or any equipment used for monitoring the performance of the project is: - maintained in a proper and efficient condition; and - operated in a proper and efficient manner.	All employees, contractors (and their sub-contractors) are required, at a minimum, to complete the Mangoola Site Familiarisation Induction that outlines the environmental requirements for undertaking work at Mangoola.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		Plant and equipment used onsite was generally observed to be maintained and operated in a proper and efficient manner. Monthly inspections of key areas onsite are conducted by the E&C team to ensure plant and equipment is being maintained and operated in a proper and efficient manner, including but not limited to, workshops, construction areas, hydrocarbon and waste handling and storage areas. A management system/schedule is in place Maintenance Plans and Work Orders through SAP. These maintenance schedules also include details of any repairs that are required outside of the planned maintenance schedules. This information is then used to monitor other plant and machinery for similar breakdown issues.		
VOLUNTARY PLANNING AGREEMENT				
S2 C12	By the end of September 2014, or as otherwise agreed by the Secretary, the Proponent must revise and update the VPA for the project with Council in accordance with: a. Division 6 of Part 4 of the EP&A Act; and b. the terms of the Proponent's offer for contributions endorsed by Council in August 2013 (for Modification 6), which includes the matters set out in Appendix 3.	Viewed 2019 to 2021 invoice numbers and associated remittances which confirm payments in accordance with Appendix 3 showing the general terms for the revised planning agreement.	Compliant	
SCHEDULE 3 – SPECIFIC ENVIRONMENTAL CONDITIONS				
ACQUISITION ON REQUEST				
S3 C1	Upon receiving a written request for acquisition from the owner of the land listed in Table 1, the Proponent must acquire the land in accordance with the procedures in conditions 5-6 of schedule 4.	No acquisition request relating to PA06_0014 during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																																																	
	Table 1: Land subject to acquisition upon request <table><tr><th colspan="2">Land Number¹</th></tr><tr><td>25</td><td>121[*]</td></tr><tr><td>34</td><td>132[*]</td></tr><tr><td>65[*]</td><td>164[*]</td></tr><tr><td>81</td><td>Lot 1 DP 75029, Lot 1 DP 414239[*]</td></tr><tr><td>83</td><td>Lots 68, 69, 70, 71, 76 & 77 DP 750924[*]</td></tr></table> Acquisition rights for the landowners identified in the above table with * will cease 12 months from the date of the approval of Modification 6 (28 April 2015). Note: 1. To interpret the locations referred to in Table 1, see applicable figure in Appendix 4.	Land Number ¹		25	121 [*]	34	132 [*]	65 [*]	164 [*]	81	Lot 1 DP 75029, Lot 1 DP 414239 [*]	83	Lots 68, 69, 70, 71, 76 & 77 DP 750924 [*]																																								
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NOISE																																																					
S3 C2	Noise Impact Assessment Criteria The Proponent must ensure that the noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land or at the Anglican Church, Castlerock Road. Table 2: Noise impact assessment criteria dB(A) <table><tr><th>Day</th><th>Evening</th><th colspan="2">Night</th><th rowspan="2">Land Number</th></tr><tr><th>L_{day}(1 minute)</th><th>L_{even}(1 minute)</th><th>L_{night}(1 minute)</th><th>L₁₀(1 minute)</th></tr><tr><td>40</td><td>40</td><td>40</td><td>45</td><td>132A</td></tr><tr><td>39</td><td>39</td><td>39</td><td>45</td><td>121, 132B</td></tr><tr><td>38</td><td>38</td><td>38</td><td>45</td><td>176</td></tr><tr><td>37</td><td>37</td><td>37</td><td>45</td><td>25, 68, 110, 130, 148, 154, 164</td></tr><tr><td>36</td><td>36</td><td>36</td><td>45</td><td>106C, 111, 174A, 174B, 175</td></tr><tr><td>35</td><td>35</td><td>35</td><td>45</td><td>109, 134A, 134B, 177, 190, 251</td></tr><tr><td>35</td><td>35</td><td>35</td><td>45</td><td>All other privately-owned land</td></tr><tr><td>41</td><td>41</td><td>41</td><td>-</td><td>Anglican Church, Castlerock Road</td></tr></table> Note: To interpret the land ref Noise generated by the Mangoola mine is to be measured in accordance with the relevant requirements of the <i>NSW Industrial Noise Policy</i>. Appendix 8 sets out the metrological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria. However, these criteria do not apply if the Proponent has an agreement with the owner/s of the relevant residence or land to generate higher noise	Day	Evening	Night		Land Number	L _{day} (1 minute)	L _{even} (1 minute)	L _{night} (1 minute)	L ₁₀ (1 minute)	40	40	40	45	132A	39	39	39	45	121, 132B	38	38	38	45	176	37	37	37	45	25, 68, 110, 130, 148, 154, 164	36	36	36	45	106C, 111, 174A, 174B, 175	35	35	35	45	109, 134A, 134B, 177, 190, 251	35	35	35	45	All other privately-owned land	41	41	41	-	Anglican Church, Castlerock Road	Nil exceedances of the criteria in the audit period. The Annual Review documents for 2019, 2020 and 2021 demonstrate compliance with the noise criteria at all locations. Review of noise monitoring reports for January to June 2022 demonstrated compliance with the noise criteria at all locations.	Compliant	
Day	Evening	Night		Land Number																																																	
L _{day} (1 minute)	L _{even} (1 minute)	L _{night} (1 minute)	L ₁₀ (1 minute)																																																		
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41	41	41	-	Anglican Church, Castlerock Road																																																	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	levels, and the Proponent has advised the Department in writing of the terms of this agreement.			
S3 C3	Deleted	Deleted	Not triggered	
S3 C4	Additional Noise Mitigation Measures Upon receiving a written request from: - the owner of a residence on the land listed in Table 1 (unless the landowner has requested acquisition); or - the owner of any residence identified with a specific land number listed in Table 2 (except where a negotiated noise agreement is in place); or - the owner of residences 246, 249 or 251 due to road traffic noise impacts (except where a negotiated noise agreement is in place for road traffic noise). the Proponent must implement additional noise mitigation measures such as double glazing, insulation, and/or air conditioning at any residence on the land in consultation with the landowner. These additional mitigation measures must be reasonable and feasible. If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution. Within 3 months of this approval (or within 3 months of any subsequent modification to the approval which results in additional properties being affected), the Proponent must notify all applicable landowners that they are entitled to receive additional noise mitigation measures.	R176 requested noise mitigation under PA06_0014. Sighted written request from resident dated 17/09/21 Sighted letter from resident confirming that agree mitigation measures were received.	Compliant	
S3 C5	Cumulative Noise Criteria The Proponent must take all reasonable and feasible measures to ensure that the noise generated by the project combined with the noise generated by other mines does not exceed the following amenity criteria on any privately-owned land, excluding the land listed in the table to Table 1 above, to the satisfaction of the Secretary: - LAeq(11 hour) 50 dB(A) – Day; - LAeq(4 hour) 45 dB(A) – Evening; and - LAeq(9 hour) 40 dB(A) – Night.	Cumulative mine noise contributions, including those from Mangoola, were below the relevant noise limits at all monitoring locations during the audit period. Cumulative noise criteria were not included in SSD 8642 so, as of December 2021, there is no requirement to monitor or assess cumulative mine noise.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
S3 C6	Cumulative Noise Criteria If the cumulative noise generated by the project combined with the noise generated by other mines causes sustained exceedances of the following amenity criteria on any privately-owned land, excluding the land listed in the table to Table 1 above, then upon receiving a written request from the landowner, the Proponent must take all reasonable and feasible measures to acquire the land on as equitable basis as possible with the relevant mines, in accordance with the procedures in conditions 10-11 of schedule 4, to the satisfaction of the Secretary: LAeq(11 hour) 53 dB(A) – Day; LAeq(4 hour) 48 dB(A) – Evening; and LAeq(9 hour) 43 dB(A) – Night. Notes: - For the purpose of this condition, the expression "Proponent" in conditions 10-11 of schedule 4 should be interpreted as the Proponent and any other relevant mine owners. - The cumulative noise generated by the project combined with the noise generated by other mines is to be measured in accordance with the relevant procedures in the NSW Industrial Noise Policy.	Not triggered during the audit period. In accordance with S3 C5, cumulative mine noise contributions remained below the noise limits at all monitoring locations during the audit period.	Not triggered	
S3 C7	Operating Conditions The Proponent must: - implement all reasonable and feasible measures to minimise the operational, road and rail noise of the project; - operate a comprehensive noise management system on site that uses a combination of predictive meteorological forecasting and real-time noise monitoring data to guide the day to day planning of mining operations, and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this approval; - minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply (see Appendix 8); - carry out monthly attended monitoring in accordance with Appendix 8 (unless otherwise agreed with the Secretary), to determine whether the project is complying with the relevant conditions of this approval, to the satisfaction of the Secretary.	Section 4.1 of the NMP (MANOC-1772150304-4345) details noise mitigation measures to be applied to minimise noise emissions. Discussions with Mangoola representatives identified measures implemented including enclosure of CHPP and conveyors, low noise rollers, siting of rail loop to take advantage of natural topography, continued roll out of noise suppression packages on plant and equipment, annual sound power testing, use of real-time noise monitors, and initial and ongoing training including 'Site Familiarisation'. To reduce road traffic noise, project-related traffic has been restricted from	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		using Reedy Creek Road, Mangoola Road, Roxburgh Road or Castle Road. Noise controls are considered adequate given that there have been no exceedances of the noise criteria measured during the audit period. Section 4.2 of the NMP describes procedure for meteorological forecasting. Discussed forecasting system with Mangoola staff. Sighted example of forecast email sent to all operations staff 2x daily and discussed at daily operations meeting. Sighted meeting minutes from daily operations meeting including discussion of noise enhancing conditions and risk of elevated noise levels. Section 4.1, Section 4.2.2 and Section 6.2.3 of the NMP describe active management practices through the use of a real-time noise monitoring network. Section 6.2.3 of the NMP describes the procedure in the event that a trigger noise level is exceeded. Reviewed Trigger Action Response Plan (TARP) including examples of review undertaken for trigger of SMS alert levels (Level 1 alarm 18/06/22, Level 2 alarm 6/06/22). Section 6.2.5 of the NMP describes the attended noise monitoring program. Monthly noise monitoring results are		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		published in Annual Review and attended monitoring reports.		
S3 C8	Hours of Gravel Operations The Proponent must only undertake gravel screening and crushing operations on the site between 7 am and 6 pm Monday to Friday, and between 8 am and 1 pm on Saturdays. No gravel screening and crushing operations are allowed on Sundays, public holidays, or at any time without the written approval of the Secretary.	No gravel screening or crushing operations occurred within the audit period as per AR (2019, 2020, 2021), Section 4.1.4 and confirmed on site.	Not triggered	
S3 C9	Noise Management Plan The Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must: a. describe the measures that would be implemented to ensure compliance with the noise criteria and operating conditions in this approval; b. describe the proposed noise management system in detail; and c. include a monitoring program that: • evaluates and reports on: – the effectiveness of the noise management system; – compliance against the noise criteria in this approval; and – compliance against the noise operating conditions; • includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time (so the real-time noise monitoring program can be used as a better indicator of compliance with the noise criteria in this approval and trigger for further attended monitoring); and • defines what constitutes a noise incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents. The Proponent must implement the approved management plan as approved from time to time by the Secretary.	Mangoola has a current Noise Management Plan (MANOC-1772150304-4345 version 23) effective as of 22/11/2022. Review of the plan: • identifies that the plan was prepared to the satisfaction of the Secretary (Appendix A); • describes noise mitigation measures (Section 4 and Section 6); • describes noise management system (Section 4 and Section 6); and includes a monitoring program (Section 6.2) that evaluates and reports on the effectiveness of the noise management system and compliance against criteria and operation conditions (Section 6.2.5.1), calibration and validation of real-time noise monitoring (Section 6.2.3) and defines what constitutes a noise incidence (Section 6.3 and Section 6.4).	Compliant	
S3 C9A	Noise Management Plan The Proponent must continue to contribute to reasonable maintenance and recurrent operating costs associated with the additional noise	Section 4.6.1 of the NMP details Mangoola procedure for the delivery, maintenance and recurrent operations	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																			
	mitigation measures already installed at privately-owned residences previously identified as having additional noise mitigation rights under the original Project Approval No 06-0014. The contribution to ongoing maintenance and recurrent operating costs must be consistent with any existing agreement between the Proponent and the relevant landowner. <i>Note: If there is any dispute about the implementation of this condition, then either party may refer the matter to the Secretary for resolution.</i>	costs associated with additional mitigation measures.																					
BLASTING																							
S3 C10	Blasting Criteria The proponent must ensure that blasting on site does not cause exceedances of the criteria in Table 4. <i>Table 4: Blasting criteria</i> <table><tr><th>Location</th><th>Airblast overpressure (dB(Lin Peak))</th><th>Ground vibration (mm/s)</th><th>Allowable exceedance</th></tr><tr><td rowspan="2">Residence on privately owned land</td><td>120</td><td>10</td><td>0%</td></tr><tr><td>115</td><td>5</td><td>5% of the total number of blasts over a period of 12 months</td></tr><tr><td>500kV transmission line pylons – tension towers</td><td></td><td>50</td><td>0%</td></tr><tr><td>500kV transmission line pylons – suspension towers</td><td></td><td>100</td><td>0%</td></tr></table> However, these criteria do not apply if the Proponent has a written agreement with the relevant owner to exceed these criteria, and has advised the Department in writing of the terms of this agreement.	Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance	Residence on privately owned land	120	10	0%	115	5	5% of the total number of blasts over a period of 12 months	500kV transmission line pylons – tension towers		50	0%	500kV transmission line pylons – suspension towers		100	0%	Blasting – Blasting Criteria On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPIE and EPA were notified. Notifications were made to both DPIE and the EPA following the blast with the follow up incident investigation reports required under Schedule 5, Condition 4 of PA 06_0014 and Condition R2.2 of EPL 12984 submitted to the relevant departments on 11 March 2020. A formal warning letter was received from DPIE on 24 March 2020, while to date no formal response from the EPA has been received. There was a recorded exceedance of the vibration limit on a suspension pylon footing. This was reported directly to the asset owner as per the agreement with the infrastructure owner and follow-up non-destructive testing was carried out, with no damage confirmed. Agreement has been updated to a level of 150mm/s	Non-compliant	Review of actions following incidents determined that mitigation measures developed are sufficient. No further recommendations required. Continue to ensure that Mangoola does not contribute to air quality impacts during extraordinary weather events.
Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance																				
Residence on privately owned land	120	10	0%																				
	115	5	5% of the total number of blasts over a period of 12 months																				
500kV transmission line pylons – tension towers		50	0%																				
500kV transmission line pylons – suspension towers		100	0%																				

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		effective from 17 September 2020. Correspondence for the approval of vibration limits is provided in Appendix A of the Blast management Plan. On 1 October 2021 blast monitor BM07 failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.		
S3 C11	Blasting Hours The Proponent must only carry out blasting on site between 9am and 3pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the written approval of EPA.	Written approval received from the EPA 06/01/2016 extending blasting hours. Approval received outside of the audit period. Condition L4.5 of EPL: Approved hours of blasting have increased from 09:00 - 15:00 Monday to Saturday inclusive to 09:00 - 17:00 Monday to Saturday inclusive. Monthly monitoring reports identify that all blasts occurred within the approved blasting hours during the audit period.	Compliant	
S3 C12	Blasting Frequency The Proponent may carry out a maximum of: a. 2 blasts a day; and b. 6 blasts a week, averaged over a calendar year on the site. This condition does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, blasts misfires or blasts required to ensure the safety of the mine or its workers. <i>Note: For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the mine.</i>	A review of blast data in monthly monitoring reports noted that there were no occurrences of more than two blasts per day, and an average of 2.2 to 3.0 blasts per week.	Compliant	
S3 C13	Property Inspections If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of any approved open cut mining pit on site for a property inspection to establish the baseline condition of any	No requests were received during audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	buildings and/or structures on his/her land, or to have a previous property inspection updated, then within 2 months of receiving this request the Proponent must: a. commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to: - o establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and - o identify measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures; and b. give the landowner a copy of the new or updated property inspection report. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Secretary for resolution.			
S3 C14	Property Investigations If the owner of any privately-owned land within 2km of the site (or on any other land where the Secretary agrees that a property investigation is warranted) claims that buildings and/or structures on his/her land have been damaged as a result of blasting on the site, then within 2 months of receiving this claim the Proponent must: a. commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and b. give the landowner a copy of the property investigation report. If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent must repair the damage to the satisfaction of the Secretary. If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution.	No requests were received during audit period. A written request was received from owner of any privately-owned land within 2 kilometres on 18 January 2019 (outside of the current audit period). This request was not identified in the previous audit. Emails evidence provided that Anthony Fowler of Acumen Engineers was commissioned as a suitably qualified, experienced and independent person, whose appointment was acceptable by the landowner and Mangoola. A new property report was prepared and issued to the landowner. There was no evidence provided indicating there were any disputes regarding the outcomes of the report.	Not triggered	
S3 C15	Operating Conditions	Section 3 of the Blast Management Plan (MANOC-1772150304-4601)	Non-compliant	Continue to implement the Blast Management Plan to minimise

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	The Proponent must: a. implement best practice to manage potential blasting impacts associated with the project to: - o protect the safety of people and livestock in the surrounding area; - o protect public or private infrastructure/property in the surrounding area from any damage; and - o minimise the dust and fume emissions of any blasting; b. ensure that blasting on the site does not damage Aboriginal rock shelter sites, Anvil Rock and "The Book" rock formations; c. operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site, to the satisfaction of the Secretary.	provides blast management controls to ensure safety of people and livestock and prevent impacts to property and public infrastructure. On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPIE and EPA were notified. Overpressure exceedance attributed to blast design (sighted CMO report 20200304155.2). Noted that no further exceedances recorded at BM07. Exceedance of the vibration limit on a suspension pylon footing noted. This was reported directly to the asset owner as per the agreement with the infrastructure owner and follow-up non-destructive testing was carried out, with no damage confirmed. Agreement has been updated to a level of 150mm/s effective from 17 September 2020. Blasting – Operating Conditions On 10 January 2020, a category 4B fume occurred, however this did not leave the site boundary and dissipated on-site. This was reported to DPIE. Correspondence received from DPIE on 12 February 2020 indicate they were satisfied with the fume rankings and investigation outcomes. Section 4.3 and Section 4.4.4 of the BMP detail the rock structure and rock shelter monitoring program and the blast impact evaluation procedure for		the dust and fume emissions of any blasting.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		rock formations and Aboriginal rock shelters. Structural condition monitoring is undertaken using a network of blast cameras, 6-monthly LiDAR surveys and measurements using digital tape extensometers (per comms). Mangoola operates a Community Response Line and Blasting Hotline (24 hours), with the number listed on their website and published in the Mangoola 'Community Newsletter'. Additionally, Mangoola has an established register for local landowners/occupiers to whom notification of scheduled blasts is provided (Section 5.2 of BMP). Operational blast controls considered to be appropriate given the general compliance with the blasting limits during the audit period.		
S3 C16	Operating Conditions The Proponent must not undertake blasting on site within 500 metres of any public road or any land outside the site not owned by the Proponent unless the Proponent has: a. demonstrated to the satisfaction of the Secretary that the blasting can be carried out closer to the infrastructure or land without compromising the safety of people or livestock or damaging the infrastructure and/or other buildings and structures; and b. updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the infrastructure or land; or c. a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the infrastructure or land, and the Proponent has advised the Department in writing of the terms of this agreement.	Muswellbrook Shire Council (MSC) approval applies to the section of Wybong Road starting at Wybong Post Office Road and extending west adjacent to the Main Pit (email provided in Appendix C of BMP). Section 3 of the BMP describes management measures to minimise blast impacts. Mangoola Coal will implement road closures for Main Pit blasting within 500m of Wybong Road. These will involve closure to public access for up to 20 minutes duration each, no more than three times per week, subject to the required notice to MSC. The road will not be closed for periods longer than is necessary and multiple blasts	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		will be fired within 5 minutes for a single closure, or at least 45 minutes apart for multiple closures. Blasting will be conducted as per applicable drill and blast procedures and the Mangoola Coal Blast Management Plan. Approval of the agreement with TransGrid is included in Appendix A of the BMP.		
S3 C17	Blast Management Plan The Proponent must prepare a Blast Management Plan for the project to the satisfaction of the Secretary. This plan must: a. describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this approval; b. propose and justify any alternative ground vibration limits for public infrastructure on the vicinity of the site (if relevant); and c. include a monitoring program for evaluating and reporting on compliance with the blasting criteria and operating conditions of this approval. The Proponent must implement the approved management plan as approved from time to time by the Secretary.	Mangoola has a current Blast Management Plan (MANOC-1772150304-4601 version 18) effective as of 6/10/2020 (letter from DPIE provided in Appendix A of BMP). Section 3 of BMP describes measures to ensure compliance with the blast criteria and operating conditions of PA06_0014. Section 4.4.3 of BMP details agreement with TransGrid for alternative ground vibration limits (agreement provided in Appendix A of BMP). Section 4 of BMP provides blast monitoring methodology to confirm compliance with the approval, Section 4.4 of BMP provides blast impact evaluation, and Section 5.5 of BMP provides incident and exceedance reporting procedure. On 1 October 2021 blast monitor BM07 failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.	Non-compliant	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
AIR QUALITY				
S3 C18	Odour The Proponent must ensure that no offensive odours, as defined under the POEO Act, are emitted from the site.	A blast odour complaint was received on 12 June 2020 at 12:42PM. Complaint received via Hotline. Complainant stated they smelt the blast. Two blasts were fired in Main Pit West (MPW) in quick succession. The Mangoola E&C Officer reviewed the meteorological conditions at the time of the blast, as well as the daily dust summary. The video footage was reviewed at the time of the blast by the Environment and Community Manager (ECM) and both blasts dissipated within the pit, not leaving the site boundary. The ECM called the complainant back at 18:45 to discuss the complaint, the complainant stated that sometime after the blast they were able to smell something similar to a diesel truck. The ECM explained that a blast usually smells like gun powder and the complainant also mentioned that no dust was visible from the blast. The pre-blast permit identified the blast as being low risk for fume generation and all pre-blast assessments indicated that the conditions were suitable for blasting. Review of the incident suggests that the odour was not blast fume.	Compliant	Consider including a link to the NSW Health - Mine blast fume and you factsheet https://www.health.nsw.gov.au/environment/factsheets/Pages/mine-blast-fumes.aspx in the Community Newsletter to better educate the community on what constitutes blast fume.
S3 C19	Impact Assessment Criteria The Proponent must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not cause exceedances of the	Multiple exceedances of the Air Quality - PM10 24-hour average during the audit period.	Non-compliant	Review of the incidents and DPE correspondence indicates that no further recommendations are required.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																							
	criteria listed in Tables 5, 6 and 7 at any residence on privately-owned land (excluding the dust affected properties listing in Table 1). <i>Table 5: Long term impact assessment criteria for particulate matter</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>*Criterion</th></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>≈ 90 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td>≈ 30 µg/m³</td></tr></table> <i>Table 6: Short term impact assessment criterion for particulate matter</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>*Criterion</th></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td>≈ 50 µg/m³</td></tr></table> <i>Table 7: Long term impact assessment criteria for deposited dust</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>Maximum increase in deposited dust level</th><th>Maximum total deposited dust level</th></tr><tr><td>Deposited dust</td><td>Annual</td><td>≈ 2 g/m²/month</td><td>≈ 4 g/m²/month</td></tr></table> <i>Notes to Tables 5-7:</i> a. Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources); b. Incremental impact (i.e. incremental increase in concentrations due to the development on its own); c. Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method; and d. Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.	Pollutant	Averaging period	*Criterion	Total suspended particulate (TSP) matter	Annual	≈ 90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	≈ 30 µg/m ³	Pollutant	Averaging period	*Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	≈ 50 µg/m ³	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	Deposited dust	Annual	≈ 2 g/m ² /month	≈ 4 g/m ² /month	The 24-hour average PM10 exceeded the consent criterion of 50 µg/m³ on multiple days at the monitors surrounding the mine. As per PA06_0014, the Department were notified of the exceedances and internal investigations commenced. Most of the events were classified as extraordinary events by DPE. Those that were not classified as extraordinary events were also notified to DPE, and letters were sent to neighbouring private landowners and tenants as per PA06_0014. The Department notified Mangoola that they were satisfied that reasonable and feasible measures were undertaken on the days of exceedance.		
Pollutant	Averaging period	*Criterion																									
Total suspended particulate (TSP) matter	Annual	≈ 90 µg/m ³																									
Particulate matter < 10 µm (PM ₁₀)	Annual	≈ 30 µg/m ³																									
Pollutant	Averaging period	*Criterion																									
Particulate matter < 10 µm (PM ₁₀)	24 hour	≈ 50 µg/m ³																									
Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level																								
Deposited dust	Annual	≈ 2 g/m ² /month	≈ 4 g/m ² /month																								
S3 C20	Land Acquisition Criteria If particulate matter emissions generated by the project exceed the criteria, or contribute to the exceedances of the relevant cumulative criteria, in Tables 8, 9 and 10 at any residence on privately-owned land then upon receiving a written request for acquisition from the landowner, the Proponent must acquire the land in accordance with the procedures in conditions 10-11 of schedule 4.	No request received for acquisition during the audit period.	Not triggered																								

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																										
	<i>Table 8: Long term land acquisition criteria for particulate matter</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>^aCriterion</th></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>^a 90 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td>^a 30 µg/m³</td></tr></table> <i>Table 9: Short term land acquisition criteria for particulate matter</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>^aCriterion</th></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td>^a 150 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td>^b 50 µg/m³</td></tr></table> <i>Table 10: Long term land acquisition criteria for deposited dust</i> <table><tr><th>Pollutant</th><th>Averaging period</th><th>Maximum increase in deposited dust level</th><th>Maximum total deposited dust level</th></tr><tr><td>^a Deposited dust</td><td>Annual</td><td>^b 2 g/m²/month</td><td>^c 4 g/m²/month</td></tr></table> Notes to Tables 8-10: <i>a. Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources);</i> <i>b. Incremental impact (i.e. incremental increase in concentrations due to the development on its own);</i> <i>c. Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS.NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method; and</i> <i>d. Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.</i> If the air quality acquisition criteria in Tables 8, 9 and 10 are being exceeded, and more than one mine is responsible for this non-compliance, then the Proponent must, together with the relevant mine/s acquire the land on as equitable a basis as possible with the relevant mine/s, in accordance with the procedures in conditions 10-11 of schedule 4. If the Proponent cannot agree on the arrangements for the acquisition of the land with the relevant/ mine/s within 3 months of the written request from the landowner, then the Proponent must refer the matter to the Secretary for resolution.	Pollutant	Averaging period	^a Criterion	Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³	Pollutant	Averaging period	^a Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 150 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	24 hour	^b 50 µg/m ³	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	^a Deposited dust	Annual	^b 2 g/m ² /month	^c 4 g/m ² /month			
Pollutant	Averaging period	^a Criterion																												
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³																												
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³																												
Pollutant	Averaging period	^a Criterion																												
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 150 µg/m ³																												
Particulate matter < 10 µm (PM ₁₀)	24 hour	^b 50 µg/m ³																												
Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level																											
^a Deposited dust	Annual	^b 2 g/m ² /month	^c 4 g/m ² /month																											
S3 C21	Mine-owned Land The Proponent must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter	Review of management plans, incidents and following the site inspection indicated that MCO are implementing reasonable and feasible	Compliant																											

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	emissions generated by the project do not cause exceedances of the criteria listed in Tables 8, 9 and 10 at any occupied residence on mine-owned land (including land owned by another mine) unless: a. the tenant and landowner has been notified of any health risks associated with such exceedances in accordance with the notification requirements under schedule 4 of this approval; b. the tenant of any land owned by the Proponent can terminate their tenancy agreement without penalty at any time, subject to giving reasonable notice; c. air quality monitoring is regularly undertaken to inform the tenant and landowner of the actual particulate emissions; and d. data from this monitoring is presented to the tenant in an appropriate format, for a medical practitioner to assist the tenant in making informed decisions on the health risks associated with occupying the property, to the satisfaction of the Secretary.	avoidance and mitigation measures so that particulate matter emissions generated by the project do not cause exceedances of the criteria listed in Tables 8, 9 and 10 at any occupied residence on mine-owned land.		
S3 C22	Operating Conditions The Proponent must: a. implement all reasonable and feasible measures to minimise the off-site odour, fume and dust emissions of the project; b. implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site; c. minimise any visible off-site air pollution generated by the project; d. minimise the surface disturbance of the site; e. operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting and real-time air quality monitoring data to guide the day to day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this approval; f. minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see Note d above under Table 10), to the satisfaction of the Secretary.	Mangoola Open Cut's Spontaneous Combustion Management Plan details the monitoring and control measures used by Mangoola Open Cut to reduce the incidence and impact of spontaneous combustion. Blast fume is managed in accordance with Mangoola Open Cut's Blast Fume Management Procedure. This document outlines the monitoring and control measures for minimising blast fume potential and impact at Mangoola Open Cut. Mangoola implements a number of design and operational controls to limit air quality impacts for the project and are outlined in the AQMP. These were observed to be implemented during the audit period through review of reports and following the site inspection. Mangoola Open Cut air quality monitoring program includes a	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		combination of dust deposition gauges, high volume air samplers (TSP and PM10), real-time continuous dust monitoring devices (PM10 and PM2.5) and meteorological stations. Evidence was sighted that predictive meteorological forecasting and real-time air quality monitoring data to guide the day-to-day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures. Mangoola has a system which provides daily forecasts of site specific weather conditions. These forecasts are discussed at pre-shift meetings and, in the event of adverse weather conditions, modifications to activities are considered. Blasting is restricted to optimal meteorological conditions to manage compliance objectives where possible. Energy consumption (electricity, diesel and liquefied petroleum gas) at Mangoola is monitored and reported in accordance with Glencore requirements and the National Greenhouse and Energy Reporting Act 2007 (NGER Act). Mangoola operates in accordance with the approved Energy Savings Action Plan (ESAP). The ESAP has been produced to comply with Schedule 3, Condition 55 of PA 06_0014. Mangoola continually assesses the viability of initiatives to improve energy efficiency and reduce greenhouse emissions from proposed operations.		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		The ESAP identifies opportunities at Mangoola to reduce greenhouse gas emissions and energy consumption, as well as specifying actions to realise these opportunities. The three-yearly energy audit was conducted in 2019 as required by the ESAP and energy efficiency improvement opportunities were investigated as a result. In the most recent annual report (2020/21), the total emissions produced by Mangoola were 135,015 t CO2-e which represents a ~22% decrease from 2019/20 (173,405 t CO2-e).		
S3 C23	Air Quality Management Plan The Proponent must prepare an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must: - describe the measures that would be implemented to ensure compliance with the relevant air quality criteria and operating conditions of this approval; - describe the project air quality management system; - include an air quality monitoring program that: - uses a combination of real-time monitors and supplementary monitors, to evaluate the performance of the project against the air quality criteria in this approval; - adequately supports the proactive and reactive air quality management system; - includes PM2.5 monitoring (although this obligation could be satisfied by the regional air quality monitoring network if sufficient justification is provided); - evaluates and reports on the effectiveness of the air quality management system and compliance against the air quality operating conditions; and	Document Number: MANOC-1772150304-4624 Version: 16 Effective: 16/11/2021 Section 3.1 and 3.2 describes the measures that would be implemented to ensure compliance with the relevant air quality criteria and operating conditions. Section 3 describes the project air quality management system. The air quality monitoring program is described in Section 4. Section 3.3 describes the management process and mitigation measures to minimise the effect of dust deposits on the performance of rainwater filtration for human consumption and electronic solar systems on private residential properties.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	- defines what constitutes an air quality incident, and includes a protocol for determining and notifying the Department and relevant stakeholders of any air quality incidents; and d. describe the management process and apply the necessary mitigation measures to minimise the effect of dust deposits on the performance of rainwater filtration for human consumption and electronic solar systems on private residential properties. The Proponent must implement the approved management plan as approved from time to time by the Secretary.			
METEOROLOGICAL MONITORING				
S3 C24	During the life of the project, the Proponent must ensure that there is a suitable meteorological station in the vicinity of the site that: a. complies with the requirements in the <i>Approved Methods for Sampling of Air Pollutants in New South Wales guideline</i>; and b. is capable of continuous real-time measurement of temperature lapse rate in accordance with the <i>NSW Industrial Noise Policy</i>, unless a suitable alternative is approved by the Secretary following consultation with the EPA.	Evidence sighted of regular calibrations by CBased and inspection being undertaken for the northern and southern MET stations.	Compliant	
WATER				
S3 C25	Water Supply The Proponent must not use any licensable water from the Wybong Creek Water Source for mining purposes. <i>Note: This restriction does not apply to water used outside the project disturbance area for revegetation purposes associated with implementation of the Biodiversity Offset Strategy, or to any licensable water within the project disturbance area that is collected as an incidental result of approved mining activities.</i>	Mangoola does not use any licensable water from the Wybong Creek Water Source for mining purposes other than that incidentally collected by approved mining operations. The proposed water management system results in the incidental collection of runoff from several operational areas with clean runoff where diversions are not feasible.	Compliant	
S3 C26	Water Supply The Proponent must ensure that it has sufficient water for all stages of the project, and if necessary adjust the scale of mining operations to match its available water supply, to the satisfaction of the Secretary.	To assist in determining the likely future water security and reliability of Mangoola, a predicted water balance model for each of the conceptual mine plans for Years 2, 5 and 10 was undertaken using a daily time-step	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		historical simulation water balance model, GOLDSIM. This model assists in determining the scale of the likely water deficit or surplus that is likely given the anticipated operations. Review of the site balance during the audit period indicates that the project had sufficient water and did not require a change in scale of the operation. 2021 AEMR indicates that 170ML taken from Hunter River during 2020-2021 wy, and 1932ML in previous year. WAL is 2758ML (General Security). Groundwater usage was 121.5ML/wy compared to licence of 700ML, with no usage from Wybong Water Source. considered overly conservative. Current revision of the groundwater model is AGE (2019). Annual Water and Salt Balance Review (latest, 2021) by Engeny Water Management indicates groundwater inflow component is small.		
S3 C27	Water Pollution Unless an EPL or the EPA authorises otherwise, the Proponent must comply with Section 120 of the POEO Act and the <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>.	Sandy Creek Farm Dams - Saline Water Discharges - 17/02/2020, 26/11/2021, and 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall.	Non-compliant	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for areas considered to be high risk prior to predicted excessive rainfall events.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
S3 C27A	Water Pollution The Proponent must implement all reasonable and feasible measure on the site to minimise the need to discharge saline water to the Hunter River under the Hunter River Salinity Trading Scheme.	Mangoola implements measures to manage surplus saline water by reusing it for coal washing and dust suppression. Discharges to the Hunter River are not required under average climate conditions, only under period of prolonged wet weather. HRSTS discharges were required following prolonged wet weather events during the audit period: 1 – 6 April 2022 4 – 23 July 2022 WMP (2021) states runoff within saline water management system used for dust suppression. Pit Water Dam used for storage of saline water (process water). Pit Water Dam supplemented by Raw Water Dam (which receives Hunter River Water (pumped under licence)). Raw Water Dam has a saline seepage interception system. As well, Raw Water Dam maintained with freeboard to act as secondary storage during periods of high rainfall.	Compliant	It would be good to present in the AEMR the dam levels over time, as a line trace, together with the Residual Mass (Rainfall) or Cumulative Departure from Mean Rainfall (CRD) curve.
S3 C28	Site Water Management Plan The Proponent must prepare and a Site Water Management Plan for the project to the satisfaction of the Secretary. This plan must: - be prepared in consultation with EPA and DPI Water by suitably qualified expert/s whose appointment/s have been approved by the Secretary; and - include: - a Site Water Balance; - an Erosion and Sediment Control Plan; - a Surface Water Monitoring Plan; - a Ground Water Monitoring Program; and	Document Number: MANOC-1772150304-6221 Version: 13 Effective: 03/12/2021 Approved by Stephen O'Donoghue as nominee of the Secretary on 3 December 2021. Evidence was provided that the WMP was prepared in consultation with EPA and DPI Water by a suitably qualified expert Stephen Downes whose	Compliant	Ongoing South Pit Rehabilitation water quality monitoring entering the dams is strongly encouraged. Early indications are that the water quality entering these dams from the Rehabilitation is of a quality that can be released from site. The condition of the dams is then leading to a degradation of the water quality with significant erosion of the dam batters. To minimise the

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	○ a Surface and Ground Water Response Plan. The Proponent must implement the approved management plan as approved from time to time by the Secretary.	appointment was approved by the Secretary on 2/09/2021. The WMP contains the following: • Site Water Balance – Section 5 • Erosion and Sediment Control Plan – Appendix C • Surface Water Monitoring Plan – Appendix D • Ground Water Monitoring Program – Appendix E • Surface and Ground Water Response Plan – Appendix F		need to capture and pump runoff from older and established rehabilitation areas back into the mine water system (which is adding strain to the system during wet periods like the present), upgrade the receiving sediment dams to be stable such that runoff entering the dams remains at a quality that can be released from site. This will involve ongoing monitoring of water quality from the established rehabilitation areas and liaison with the departments to confirm such a release is allowed.
S3 C29	Site Water Balance The Site Water Balance must: a. include details of: ○ sources and security of water supply; ○ water use on site; ○ water management on site; ○ off-site water transfers; ○ reporting procedures; and b. investigate and describe measures to minimise water use by the project.	Mangoola operates a comprehensive and calibrated site water balance to inform water management at the site. Water held and captured onsite at Mangoola by the water management system during the calendar year is reported in the Annual Review. Section 5 of the WMP provides an overview of the Site Water Balance for the project and details sources and security of water supply, water use on site, water management on site, off-site water transfers, and reporting procedures. Measures to minimise water use are described in Sections 3 and 4 of the WMP, and summarised in Section 7 of the ARs.	Compliant	
S3 C30	Erosion and Sediment Control The Erosion and Sediment Control Plan must:	Erosion and Sediment Control Plan Number: MANOC-1772150304-6266	Compliant	Bunded fuel fill up point had a build-up of sediment and material present within the bund

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	a. be consistent with the requirements of the Department of Housing's Managing Urban Stormwater: Soils and Construction manual; b. identify activities that could cause soil erosion and generate sediment; c. describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters; d. describe the location, function, and capacity of erosion and sediment control structures; and e. describe what measures would be implemented to maintain the structures over time.	Version: 8 Effective: 10/03/2021 Approved by Matthew Sprott as nominee to the Secretary on 10 March 2021. Standard erosion and sediment control techniques are utilised in accordance with the requirements of Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) and Volumes 2A, 2C, 2D and 2E (DECC 2008) (the Blue Book). Activities that could cause soil erosion and generate sediment are identified in Section 2.2 of the ESCP. Measures to minimise soil erosion and the potential for the transport of sediment to downstream waters are described in Section 3.3 of the ESCP. The location, function, and capacity of erosion and sediment control structures is outlined in Section 3.4 of the ESCP. Inspection and maintenance measures that are implemented to maintain the erosion and sediment control structures over time are outlined in Section 4 of the ESCP.		that may impact operation of the bund during a spill event (5/7/22). Potential to increase workshop inspection frequencies are increased during wet weather events.
S3 C31	Surface Water Monitoring The Surface Water Management and Monitoring Plan must include: a. detailed baseline data on surface water flows and quality in creeks and other waterbodies that could potentially be affected by the project; b. surface water and stream health impact assessment criteria; c. a program to monitor surface water flows, quality and impacts on water users (upstream and downstream of the project in Anvil Creek, Sandy Creek, Big Flat Creek and Wybong Creek);	Surface Water Monitoring Plan Number: MANOC-1772150304-6264 Version: 9 Effective: 10/03/2021 Approved by Matthew Sprott as nominee to the Secretary on 10 March 2021. Section 2 outlines the detailed baseline data on surface water flows and quality	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	d. a program to assess stream health conditions in Anvil Creek, Sandy Creek, Big Flat Creek and Wybong Creek; e. a program to monitor channel stability in Anvil Creek, Sandy Creek and Big Flat Creek; f. reporting procedures for the results of the monitoring program; g. a program to monitor, and a strategy to minimise, any saline water discharges to the Hunter River under the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002; h. a Saline Dispersion Study for discharges to the Hunter River prepared and implemented to the satisfaction of the EPA; and i. a program to notify all downstream landowners within 2 kilometres of the discharge point prior to discharging saline water to the Hunter River. <i>Note: Conditions (g) – (i) only apply once the EPL for the project has been amended to allow discharges into the Hunter River.</i>	in creeks and other waterbodies that could potentially be affected by the project. Impact assessment criteria contained in Section 2.2 for surface water and Section 3.5 for stream health. A program to monitor surface water flows, quality and impacts on water users is outlined in Section 3.3. Section 3.5 provides a program to monitor channel stability in Anvil Creek, Sandy Creek and Big Flat Creek Section 3.4 provides a program to monitor channel stability in Anvil Creek, Sandy Creek, and Big Flat Creek. Reporting procedures for the results of the monitoring programs are described in Section 5. A program to monitor, and a strategy to minimise, any saline water discharges to the Hunter River under the Protection of the Environment Operations is contained in Section 9 of the WMP. The Saline Dispersion Study and program to notify all downstream landowners within 2 kilometres of the discharge point prior to discharging saline water to the Hunter River is outlined in Section 3.6.2.		
S3 C32	Groundwater Monitoring The Groundwater Monitoring Program must include: a. detailed baseline data, based on sound statistical analysis, to benchmark the pre-mining natural variation in groundwater levels, yield and quality (including privately owned groundwater bores within the predicted drawdown impact zone identified in the EA);	Groundwater Monitoring Program Version: 5 Effective: 22/12/2014 The GWMP was updated in 2017 and submitted for comment to the EPA, Natural Resources Access Regulator	Compliant	Recommend that a comparison to predictions / intended drawdown is included in the Annual Reviews, without making the report 'voluminous'.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	b. groundwater impact assessment criteria (including for monitoring bores and privately owned bores); c. a program for accurately delineating the boundary of the Big Flat Creek alluvial aquifer in any areas intersected by mining, including plans for isolation of the mining pit from the alluvium at least 6 months before mining within 150 metres of the alluvium; d. a program to monitor: - o impacts on the groundwater supply of potentially affected landowners; - o impacts on the Big Flat Creek and Wybong Creek alluvial aquifers; - o impacts on groundwater dependent ecosystems and riparian vegetation; - o the volume of ground water seeping into the open cut mine workings; - o regional ground water levels and quality in the alluvial, coal seam, and overburden/interburden aquifers; and - o the groundwater pressure response in the surrounding coal measures; e. procedures for the verification of the groundwater model, and f. reporting procedures for the results of the monitoring program and model verification.	(NRAR) and DPIE. Consultation is ongoing. This later version of the GWMP has not yet been approved. Detailed baseline data contained in Section 2. Groundwater impact assessment criteria contained in Section 5. A program for accurately delineating the boundary of the Big Flat Creek alluvial aquifer in any areas intersected by mining, including plans for isolation of the mining pit from the alluvium at least 6 months before mining within 150 metres of the alluvium is described in Section 2.1 and Section 6. A monitoring program is described in Section 3. Section 5 provides a procedure for the verification of the groundwater model. Section 5 of the WMP outlines the reporting procedures for the results of the monitoring program and model verification.		Also, if possible, Interpreted contours.
S3 C33	Surface and Ground Water Response Plan The Surface and Ground Water Response Plan must include: a. a protocol for the investigation, notification and mitigation of any exceedances of the surface water, stream health and groundwater impact assessment criteria; b. measures to mitigate and/or compensate potentially affected landowners with privately owned groundwater bores within the predicted drawdown impact zone identified in the EA, including provision of alternative supply of water to the affected landowner that is equivalent to the loss attributed to the project; c. measures to mitigate and/or compensate potentially affected landowners for the loss of surface water flows in Sandy Creek, Big Flat Creek and Wybong Creek downstream of the project;	Surface Water and Groundwater Response Plan Number: MANOC-1772150304-6223 Version: 8 Effective: 29/01/2021 Approved by Matthew Sprott as nominee to the Secretary on 29 January 2021. The SWGWRP was found to include adequate protocols that outline the responses required in the event that operations result in potential adverse impacts to the surrounding surface	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations										
	d. measures to minimise, prevent or offset groundwater leakage from the Big Flat Creek alluvial aquifer; e. measures to mitigate any direct hydraulic connection between the backfilled open cuts and the Big Flat Creek alluvium if the potential for adverse impacts is detected; f. a contingency plan for isolating the Big Flat Creek alluvium from Anvil Creek alluvium and mining areas in the event that it is required; and g. the procedures that would be followed if any unforeseen impacts are detected during the project.	water and/or groundwater environment in accordance with the condition.												
BIODIVERSITY														
S3 C34	Biodiversity Offset Strategy The Proponent must implement the Biodiversity Offset Strategy as outlined in Table 11, and as generally described in the EA (and shown conceptually in Appendix 5). <i>Table 11: Biodiversity Offset Strategy</i> <table><tr><th>Area</th><th>Minimum Size</th></tr><tr><td>Existing vegetated (treed) areas</td><td>1,586 ha</td></tr><tr><td>Treed areas to be established</td><td>1,104 ha</td></tr><tr><td>Grassland areas</td><td>330 ha</td></tr><tr><td>Total</td><td>3,020 ha</td></tr></table> Notes: a. The offset areas are in addition to, and outside, the rehabilitated areas of the project disturbance area. b. The quantum of existing and revegetated treed areas may be varied within reason, subject to meeting the total minimum offset area.	Area	Minimum Size	Existing vegetated (treed) areas	1,586 ha	Treed areas to be established	1,104 ha	Grassland areas	330 ha	Total	3,020 ha	Biodiversity Offset Management Plan and Strategy Document Number: MANOC-1772150304-3505 Version: 12 Effective: 05/11/2018 Approved by Jessie Evans as nominee for the Secretary on 5 November 2018. Review of available monitoring reports and annual reviews for the audit period indicates that MCO are implementing the Biodiversity Offset Strategy as outlined in Table 11 through the BOMP following the provisions of Section 4.0. The conceptual target areas were generally achieved for each vegetation community and management strategies that need to be implemented to establish an additional 1,104 hectares of treed (vegetated) areas for Years 9-11 during the audit period. Areas viewed during the site inspection were generally trending to compliance and were confirmed through review of available documentation.	Compliant	Continued weed and pest control recommended. Recommendation to modify seeding/planting ratios as recommended by 2021 Ecological monitoring report (Umwelt 2022). Nest boxes may be more successful if located higher up in trees (3m is usually sufficient). This may be easier now that the trees have grown taller. Some translocated Cymbidium orchids were installed closer to the ground than originally due to logistics of salvage. Simple fencing may protect these from herbivore browsing. Fireweed (<i>Senecio madagascariensis</i>) is a Weed of National Significance that was observed in the offset areas. It is difficult to control, but targeted efforts during autumn and winter before the peak flowering and seeding occurs in
Area	Minimum Size													
Existing vegetated (treed) areas	1,586 ha													
Treed areas to be established	1,104 ha													
Grassland areas	330 ha													
Total	3,020 ha													

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
				spring could reduce numbers significantly.
S3 C35	Biodiversity Offset Strategy The Proponent must ensure that the Biodiversity Offset Strategy (and the rehabilitation of the site) is focused on the re-establishment of: a. significant and/or threatened plant communities, including: - o Ironbark Woodland Complex; - o Bulloak Woodland; - o Paperbark Woodland; - o Slaty Box Woodland; - o Forest Red Gum Riparian Woodland; - o Rough Barked Apple Woodland; - o Swamp Oak Riparian Forest; and - o Weeping Myall Woodland; b. significant and/or threatened plant species, including: - o Goodenia macbarronii; - o Diuris tricolor; - o Prasophyllum sp. aff. Petilum; - o Oligochaetochilus sp. aff. Praetermissus; - o Cymbidium canaliculatum; - o Bothriochloa biloba; - o Acacia pendula; - o Prasophyllum sp. wybong; - o Commersonia rosea; and - o Pomaderris queenslandica; and c. significant and/or threatened animal species, including molluscan fauna.	The preliminary target stem densities for the key target vegetation communities are displayed in Section 4 Table 4.1 of the BOMPS. The preliminary targets are based on data obtained from existing vegetation communities on site. The preliminary target densities are reviewed and refined as more stem count data from benchmark communities becomes available. The re-establishment significant and/or threatened plant species is outlined in Section 5.10 of the BOMPS and in the Mangoola Open Cut Translocation Plan 2018. Review of the ARs indicated that the above measures associated with the Biodiversity Offset Strategy were being implemented.	Compliant	
S3 C36	Biodiversity Offset Strategy The Proponent must ensure the regeneration of grassland within the biodiversity offset strategy is focused on the re-establishment of flora species typical of the Ironbark Woodland Complex as defined under the TSC Act.	Evidence sighted during the site inspection that the regeneration of grassland within the biodiversity offset strategy is focused on the re-establishment of flora species typical of the Ironbark Woodland Complex as defined under the TSC Act	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
S3 C37	Long Term Security of Offset By the end of 30 September 2014, unless otherwise agreed by the Secretary, the Proponent must make suitable arrangements to provide appropriate long term security for the offset areas to the satisfaction of the Secretary.	Conservation Agreements were finalised on 6/12/2019, for five areas in line with Schedule 3, Condition 37 of PA 06_0014 as long-term security for the existing Biodiversity Offset Areas.	Compliant	
S3 C38	Translocation Plan for Orchids and Other Threatened Flora The Proponent must implement the mitigation and management measures for the identified orchids and other threatened flora species within the project disturbance area in accordance with the approved <i>Translocation Plan for Orchids and Other Threatened Flora</i> , dated September 2012 and prepared by Umwelt, to the satisfaction of the Secretary.	Translocation Management Plan Document Number: MANOC-1772150304-2867 Version: 3.0 Effective: 5/11/2018 A summary of the implementation of the mitigation and management measures outlined in the Translocation Management Plan are outlined in Section 6.6 and 8.5 of the annual review during the audit period. It was noted in the 2021 AR that based on 11 years of monitoring, Eastcoast Flora Survey, recommend a revised monitoring program for the terrestrial orchids, which continues annual monitoring of selected recipient plots (those in mine rehabilitation, controls, and some Prasophyllum-dominated plots in offsets), introduces cyclical post-fire monitoring of most other plots for two consecutive years after burns, and discontinues all monitoring of other poorly performed plots (Translocation # 1, and all tuber translocations) (Bell, 2021). Following the submission of the AR and these recommendations, a review of the plans was completed. It was determined that no changes were required to the monitoring program at that time. This was communicated to	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		DPE in a letter from Sam Palmer (E&C Manager) dated 27 May 2022.		
S3 C39	Biodiversity Management Plan The Proponent must prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must: - be prepared in consultation with OEH, and submitted to the Secretary for approval by 30 September 2014; - describe the short, medium, and long term measures that would be implemented to: - implement the Biodiversity Offset Strategy; - manage the remnant vegetation and habitat on the site and in the offset areas; and - integrate the implementation of the biodiversity offset strategy to the greatest extent practicable with the rehabilitation of the site; - include detailed performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary); - include a detailed description of the measures that would be implemented over the next 3 years for: - enhancing the quality of existing vegetation and fauna habitat in the biodiversity offset areas; - creating native vegetation and fauna habitat in the biodiversity offset areas and rehabilitation area through focusing on assisted natural regeneration, targeted vegetation establishment and the introduction of naturally scarce fauna habitat features (where necessary); - maximising the salvage of resources within the approved disturbance area - including vegetative and soil resources – for beneficial reuse in the enhancement of the biodiversity offset areas or rehabilitation area; - minimising the risk of <i>Phytophthora cinnamomi</i> spread, based on detailed soil investigations; - collecting and propagating seed; - protecting vegetation and fauna habitat outside the approved disturbance area on-site;	Biodiversity Offset Management Plan and Strategy Document Number: MANOC-1772150304-3505 Version: 12 Effective: 05/11/2018 Approved by Jessie Evans as nominee for the Secretary on 5 November 2018. The contents of this document satisfy the conditions stated S3 C39. Mangoola were observed to be implementing the BOMPS and are trending to compliance with the Biodiversity Offset Strategy.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	○ minimising the impacts on fauna on site, including undertaking pre-clearance surveys; ○ managing any potential conflicts between the proposed enhancement works in the Biodiversity Offset Strategy areas and any Aboriginal heritage values (both cultural and archaeological) in these areas; ○ managing salinity; ○ controlling weeds and feral pests; ○ controlling erosion; ○ managing grazing and agriculture on site; ○ controlling access; and ○ bushfire management; e. include a seasonally-based program to monitor and report on the effectiveness of these measures, and progress against the detailed performance and completion criteria; f. identify the potential risks to the successful implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate against these risks; and g. include details of who would be responsible for monitoring, reviewing, and implementing the plan. The Proponent must implement the approved management plan as approved from time to time by the Secretary.			
S3 C40	Conservation Bond Within 3 months of the approval of the Biodiversity Management Plan, the Proponent must lodge a conservation and biodiversity bond with the Department to ensure that the Offset Strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan. The sum of the bond shall be determined by: a. calculating the full cost of implementing the Biodiversity Offset Strategy (other than land acquisition costs); and b. employing a suitably qualified quantity surveyor to verify the calculated costs, to the satisfaction of the Secretary.	The conservation bond was approved on 14/1/19 for the revised amount of \$8,737,374 for 3,047 ha. This occurred outside of the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	The calculation of the Conservation Bond must be submitted to the Department for approval at least 1 month prior to lodgement of the final bond. If the Offset Strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the conservation bond. If the Offset Strategy is not completed to the satisfaction of the Secretary, the Secretary will call in all or part of the conservation bond, and arrange for the satisfactory completion of the relevant works.			
ABORIGINAL CULTURAL HERITAGE				
S3 C41	Aboriginal Cultural Heritage Management Plan The Proponent must prepare an Aboriginal Cultural Heritage Management Plan to the satisfaction of the Secretary. This plan must: - be prepared in consultation with OEH and the Aboriginal communities; - be submitted to the Secretary for approval prior to the disturbance of any Aboriginal object or site; and - include a: - detailed salvage program and management plan for all Aboriginal sites within the project disturbance area; - detailed description of the measures that would be implemented to protect Aboriginal sites outside the project disturbance area, including the 16 Aboriginal rock shelter sites identified in the EA; - detailed plan for the management of Aboriginal cultural heritage values of high significance in the offset areas (see condition 34 above), including managing Site SC10 for use by the Aboriginal community for teaching and educational purposes, and maintaining reasonable access to Aboriginal sites; - detailed monitoring program for the 16 Aboriginal rock shelter sites identified in the EA; - description of the measures that would be implemented if any new Aboriginal objects or skeletal remains are discovered during the project; and - protocol for the ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site.	Aboriginal Cultural Heritage Management Plan Version: 11.0 Effective: 29/09/2021 Number: MANOC-1772150304-6102 Approval of the ACHMP was provided by Stephen O'Donoghue as nominee of the Planning Secretary on 29 September 2021. Version 8 (May 2021) to Version 11 were prepared to address conditions of SSD 8642 and additional management measures associated with the Mangoola Coal Continued Operations Project. Distributed to Registered Aboriginal parties and Heritage NSW for consultation. The SSD8642 conditions supersede those of S3 C41 of PA06_0014 following approval of SSD8642. The ACHMP was prepared in consultation with OEH and the Aboriginal communities and was submitted to DPE for approval. Section 3 details the salvage program and management plan for all Aboriginal	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	The Proponent must implement the approved management plan as approved from time to time by the Secretary. <i>Note: The 16 Aboriginal rock shelter sites include sites AC38, AC42, BFC12, CG01, CG08, CG09, CG10, WC05, WC25, WC26, WC27, WC33, WC43, WC45, WC46 and WC47, as shown on the figure in Appendix 6.</i>	sites within the project disturbance area. Section 3.4 outlines the management of aboriginal archaeological sites outside of approved disturbance area. Section 3.6 outlines the management of sites within Offset Areas including managing Site SC10 for use by the Aboriginal community for teaching and educational purposes in accordance with Care Agreement C0003885. Section 3.6.3 outline the monitoring of 25 rockshelter sites, including the 16 sites with an additional four identified during subsequent inspections and five recorded during the assessment for the MCCO Project. Sections 3.3.2.3, 3.4.2, 3.5 describes measures that would be implemented if any new Aboriginal objects or skeletal remains are discovered during the project. Section 2 and Section 7.4 provides a protocol for the ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on site.		
HERITAGE				
S3 C42	Wybong Community Heritage Prior to starting mining operations on site, the Proponent must prepare a report documenting the history of the Wybong community to the satisfaction of the Secretary. This report must: a. be prepared in consultation with the Wybong community and OEH; and b. include:	Wybong Oral Heritage Report was prepared on 10 November 2008 outside of the current audit period.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	- o detailed historical research and oral history for all the land within the 40dBA noise contour (see the EA); and - o archival recording, in accordance with the requirements and guidelines of OEH, for all items of heritage value within the project disturbance area and blast affectation area (including 'Castle Hill').			
S3 C43	Wybong Community Heritage The Proponent must prepare a detailed Conservation Management Strategy for all heritage items within the blast affectation area to the satisfaction of the Secretary. This strategy must: a. be prepared in consultation with the relevant landowners and OEH; b. be submitted to the Secretary for approval prior to starting mining operations on site; and c. include a: - o program for baseline dilapidation surveys of the heritage items; - o program to monitor the effects of blasting on the heritage items; and - o description of the measures that would be implemented to protect relevant heritage items (particularly Castle Hill) from the effects of blasting; and - o description of the measures that would be implemented to protect Anvil Rock and 'The Book' rock formations from the effects of blasting. The Proponent must implement the approved management strategy as approved from time to time by the Secretary. <i>Note: For the purposes of these conditions the blast affectation area includes all properties predicted to exceed the 5mm/sec ground vibration criteria.</i>	Conservation Management Strategy Number: MANOC-1772150304-3567 Effective: 09/08/2021 Version: 9 Version 9 was prepared to address administrative updates to permit construction activities associated with SSD 8642. Section 1.7 outlines the consultation undertaken with the relevant landowners and OEH. The Version 8 CMS was submitted to DPE for approval by Mathew Sprott as the planning Secretary's nominee on 16 July 2021. Version 9 was submitted to DPE with no comments on the document. The Secretary was unable to approve the CMS as there are no requirement under SSD8642 for this to occur. A program to monitor the effects of blasting on the heritage items is described in Section 4. A description of the measures that would be implemented to protect relevant heritage items, Anvil Rock, and 'The Book' rock formations from the effects of blasting is described in Section 4.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
TRAFFIC AND TRANSPORT				
S3 C44	Monitoring of Coal Transport The Proponent must: a. keep records of the: - o amount of coal transported from the site each year; and - o number of coal haulage train movements generated by the project (on a daily basis); and b. include these records in the Annual Review.	Coal transport and haulage records are contained in Appendix F of each Annual Review during the audit period.	Compliant	
S3 C45	Thomas Mitchell Drive The Proponent must contribute to the upgrade and maintenance of Thomas Mitchell Drive, and the upgrade of the Thomas Mitchell Drive/Denman Road intersection, proportionate to its impact (based on usage) on that infrastructure, in accordance with the Contributions Study prepared by GHD titled, "Thomas Mitchell Drive Contributions Study, March 2014" (or its latest version), unless otherwise agreed with the Secretary. For Thomas Mitchell Drive, the contributions must: a. be paid to Council by 31 December 2014 for the upgrade works; and b. be paid to Council in accordance with the maintenance schedule established in accordance with the Contributions Study during the life of the project, unless other agreed with Council. For the Thomas Mitchell Drive/Denman Road intersection, the contributions must be paid to the relevant road authority undertaking the works (or if another mining company is undertaking the works, to that mining company) by 30 June 2016, unless otherwise agreed with the Secretary. <i>Note: In making a determination about the applicable contribution/s under this condition, the Secretary shall take into account the contributions already paid and currently required to be paid towards the upgrade and maintenance of the local road network to the west of Muswellbrook under this approval and any associated Voluntary Planning Agreement with Council.</i>	Extension letter from DPIE to BHP and Invoice from Muswellbrook Shire were sighted during the audit outlining that the Department requests that HVEC engage with the relevant roads authorities about the implementation of the intersection upgrade as soon as possible and with sufficient lead time to ensure that the works are completed to the satisfaction of the relevant roads authorities by no later than 31 December 2022.	Compliant	
S3 C46	Other Road Upgrades and Maintenance The Proponent must upgrade:	Other road upgrades and maintenance works occurred during the previous	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	a. the Bengalla Link Road intersections with Wybong Road and Denman Road, to the satisfaction of the RMS and Council, in conjunction with the construction of the Bengalla Link Road extension and prior to carrying out any development on site apart from the defined early works; b. Wybong Road and its intersection with the mine access road to the satisfaction of Council, prior to carrying out any development on site apart from the defined early works; c. the Golden Highway/Wybong Road intersection to the satisfaction of the RMS, prior to carrying out any development on site apart from the defined early works, unless otherwise agreed by the Secretary; d. lighting and signposting of the relevant intersections to the satisfaction of the RMS/Council, in conjunction with the relevant intersection upgrades; e. all bus stops affected by the proposal to the satisfaction of Council, prior to carrying out any development on site apart from the defined early works; and f. the Wybong Road intersections with Wybong Post Office Road and Yarraman Road to the satisfaction of Council, by the end of April 2013, or as otherwise agreed by the Secretary. With regard to the Wybong Road upgrade identified in (b) above, the Proponent must: i. reassess and rectify the identified defects in the road upgrade works to the satisfaction of Council, by the end of April 2013, unless otherwise agreed by the Secretary in consultation with Council; ii. implement the additional recommendations identified in the 'Hyder Report', including improvements to curves, clear zones and intersection safety, and investigate and implement measures to improve safety at 'Bus Stop 2', to the satisfaction of Council by the end of April 2013, unless otherwise agreed by the Secretary in consultation with Council; and iii. contribute to the maintenance of the upgraded road for the life of the mining operations in accordance with the terms of the planning agreement required in condition 12 of schedule 2.	audit periods outside of the audit period.		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	If there are any disputes in relation to these upgrade and maintenance works, then either party may refer the matter to the Secretary for resolution. <i>Note: For the purposes of this condition:</i> 1. the Wybong Road upgrade refers to the section of Wybong Road from the mine access road to the intersection with Bengalla Link Road; and 2. the 'Hyder Report' means the report titled Mangoola Coal Project: Road Design, Safety and Traffic review of Wybong Road West, prepared by Hyder Consulting, dated November 2011.			
S3 C47	Other Road Upgrades and Maintenance The Proponent must undertake the following in relation to the section of Wybong Road between the Golden Highway and the mine access road: a. undertake a road condition survey, in consultation with Council and to the satisfaction of the Secretary, prior to carrying out any development on site; b. maintain the road to the satisfaction of Council, from the commencement of project-related works until the Bengalla Link Road extension is commissioned; c. undertake a second road condition survey, in consultation with Council and to the satisfaction of the Secretary, following the completion and commissioning of the Bengalla Link Road extension; and d. following approval of the second road condition survey, repair the road to at least the condition determined by the initial survey, to the satisfaction of Council. The road condition surveys must be undertaken by a suitably qualified expert/s whose appointment/s have been approved by the Secretary.	Other road upgrades and maintenance works occurred during the previous audit periods outside of the audit period.	Compliant	
S3 C48	Other Road Upgrades and Maintenance No project related traffic shall Reedy Creek Road, Mangoola Road (apart from that section forming part of Construction Route 1 during construction of the project pipeline), Roxburgh Road or Castlerock Road to get to or from the site, except in an emergency to avoid the loss of lives, property and/or to prevent environmental harm. No project-related heavy vehicle traffic shall use Wybong Road west of the mine access road (to the intersection with the Golden Highway) to access the site, except in any emergency to avoid the loss of lives, property and/or prevent environmental harm.	Signage is currently in place and the access and road requirements are outlined in the site inductions.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	<i>Note: This condition does not apply to any employees that may reside on Reedy Creek Road, Mangoola Road, Roxburgh Road or Castlerock Road, or the infrequent use of the roads for consultation, environmental monitoring, and inspection and maintenance of nearby infrastructure.</i>			
S3 C49	Train Movements and Refuelling The Proponent must: a. restrict train movements to/from site to a maximum of 20 train movements a day (i.e.. 10 trains in; 10 trains out); b. use its reasonable endeavours to ensure that its rail spur is only accessed by locomotives that are approved to operate on the NSW rail network in accordance with noise limits L6.1 to L6.4 in RailCorp's EPL (No. 12208); and c. only refuel trains on site that are directly associated with the coal transport operations of the project.	Review of the train movements to/from site were restricted to a maximum of 20 train movements a day during the audit period. Review email from Aurizon indicating that: • The Aurizon locomotives that are operating in NSW are certified to operate in NSW by ARTC and Transport for NSW (exception being the 5000 class due to the axle load in the TfNSW network). • Aurizon currently do not fuel locomotives at Mangoola, however if we needed to the only trains that would fuel is an empty coal train that was scheduled to load coal at Mangoola. No other commodity service would be planned to fuel at Mangoola.	Compliant	
VISUAL IMPACT				
S3 C50	Additional Visual Impact Mitigation Within 12 months of this approval, the Proponent must prepare a report that: a. identifies the residences that are likely to experience significant visual impacts during the construction and operation of the project; and b. describes (in general terms) the additional mitigation measures that could be implemented to reduce the visibility of the mine from these residences, to the satisfaction of the Secretary.	Completed during the 2014 and 2016 IEA periods.	Compliant	
S3 C51	Additional Visual Impact Mitigation	Completed during the 2016 IEA period.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	Within 3 months of the Secretary approving this report, the Proponent must advise all owners of residences identified in the report that they are entitled to additional mitigation measures to reduce the visibility of the mine from their properties.			
S3 C52	Additional Visual Impact Mitigation Upon receiving a written request from an owner of a residence identified in this report, the Proponent must implement additional visual impact mitigation measures (such as landscaping treatments or vegetation screens) in consultation with the landowner, and to the satisfaction of the Secretary. These mitigation measures must be reasonable and feasible. If within 3 months of receiving this request from the owner, the Proponent and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution. <i>Note: The additional visual impact mitigation measures must be aimed at reducing the visibility of the mine from significantly affected residences and do not necessarily require measures to reduce visibility of the mine from other locations on the affected properties. The additional visual impact mitigation measures do not necessarily have to include measures on the affected property itself (i.e. the additional measures may consist of measures outside the affected property boundary that provide an effective reduction in visual impacts).</i>	Mangoola received one written request from a private landholder (Property ID 192) on 4 July 2018 outside of the audit period. No additional request for additional visual impact mitigation in this audit period.	Not triggered	
S3 C53	Additional Visual Impact Mitigation By July 2010 the Proponent must plant a vegetation screen from the north of view point 3 to view point 4, as identified in Appendix 7. The Proponent must maintain the vegetation screen for the life of the project.	Annual inspections undertaken by Environment and Community Coordinator – Land Management. Visual tree screening was established via direct seeding of appropriate local flora species along sections of Yarraman Road during 2018 to reduce visual exposure as the mine progresses to the north-west. As a result of the ongoing drought conditions in 2019, the direct seeding campaign undertaken in 2018 resulted in no germination and 2019 there was no attempt to re-sow due to ongoing drought. In 2020, the tree screen areas	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		along Yarraman and Wybong Roads were sprayed (where required)/slashed and planted with tube-stock. Additional infill planting in these areas was also undertaken during 2021.		
S3 C54	Visual Amenity The Proponent must: a. implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project; and b. ensure that all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version</i>, to the satisfaction of the Secretary.	A lighting audit was conducted in September 2013 to the satisfaction of the Director General. Review of the complaints register, OCE inspections, and inspection of visual bunds indicated that MCO are generally implementing controls to minimise the visual impacts of the operation. MCO were noted to be taking all reasonable steps to minimise the visual and off-site lighting impacts of the development during the audit period. Noted that new fixed LED lighting was installed at the CHPP during the audit period and was linked to a compliant on 24/08/2020. MCO implements the Lighting Plant Procedure to ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal. No new buildings have been constructed during the audit period.	Compliant	A lighting register should be managed to ensure that new lighting utilised at the site is adequately positioned and conforms with AS4282. Undertake an updated external lighting audit to ensure compliance with AS4282 (INT) 2019 - Control of Obtrusive Effects of Outdoor Lighting.
GREENHOUSE GAS				
S3 C55	Energy Savings Action Plan The Proponent must prepare an Energy Savings Action Plan for the project to the satisfaction of the Secretary. This plan must be prepared in accordance with the requirements and guidelines of DPI Water, and submitted to the Secretary for approval prior to starting mining operations on site.	Energy Savings Action Plan Number: MANOC-1276546935-5 Version: 8 Effective: 30/11/2019	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	The Proponent must implement the approved action plan as approved from time to time by the Secretary.	Approved by Matthew Sprott as nominee of the Secretary on 8 February 2020. Annual Reviews for the audit period outline the greenhouse gas emissions monitoring results and abatement measures for each year. The three-yearly energy audit was conducted in 2019 as required by the ESAP and energy efficiency improvement opportunities were investigated as a result. In 2020/2021, the total emissions produced by Mangoola were 135,015 t CO2-e which represents a ~22% decrease from 2019/2020 (173,405 t CO2-e). No reportable incidents regarding greenhouse gas and energy occurred during the reporting period. Review of annual greenhouse gas reporting indicated that MCO are generally implementing the ESAP.		
S3 C56	Monitoring and Reporting The Proponent must: a. monitor the greenhouse gas emissions generated by the project; b. investigate ways to reduce greenhouse gas emissions generated by the project; and c. report on greenhouse gas monitoring and abatement measures in the Annual Review, to the satisfaction of the Secretary.	Section 2.3, 2.4, 3 & 4 of the Energy Savings Action Plan outlines the monitoring and reporting requirements for the project. Section 6.15 of the Annual Reviews outline the greenhouse gas emissions monitoring results and abatement measures for each year.	Compliant	
WASTE MINIMISATION				
S3 C57	The Proponent must: a. monitor the amount of waste generated by the project; b. implement reasonable and feasible measures to minimise waste generated by the project;	Evidence of waste generation monitoring is contained in the Annual Reviews for the audit period. Waste production has generally declined in the audit period between 2019 and 2021. Waste contractor spreadsheets	Compliant	Water was noted within the minor volume contaminated soil waste bin – suggest an improved sealed storage bin system is implemented and lids are closed at all times.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	c. ensure irrigation of treated wastewater is undertaken in accordance with EPA's Environmental Guideline for the Utilisation of Treated Effluent; d. manage on-site sewage treatment and disposal in accordance with the requirements of Council; and e. report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.	were also viewed during the site inspection which records mixed waste, recycling, effluent, oil, scrap metal, oil filters. Treated wastewater is only used for reused on site for CHPP operation and dust suppression and is not used for irrigation on site. MSC issued an approval to operate an on-site sewage management system on 13/09/2021 valid until 29/07/2026. Review of monitoring reports indicates that Mangoola managing on-site sewage treatment and disposal in accordance with the requirements of Council.		
REHABILITATION				
S3 C58	Rehabilitation Objectives The Proponent must rehabilitate the site to the satisfaction of the Executive Director Mineral Resources. The rehabilitation must comply with the objectives in Table 12, and be consistent with the conceptual rehabilitation plans in Appendix 5.	Whilst the specific rehabilitation objectives were 'not triggered' as they refer to final stage rehabilitation outcomes, the progression of rehabilitation towards these objectives and outcomes was assessed during the site inspection, and via rehabilitation monitoring reports. The site showed adequate measures in place for the creation and management of a safe, stable and non-polluting mine site. These measures included surface ripping, revegetation, erosion control structures, sedimentation capture dams, pumping systems, and drainage structures. The rehabilitation of surface disturbance was evident. The buffer land was maintained for agricultural capabilities.	Not triggered	Commendations for designing into the landform, water retention areas 'frog ponds' and depressed areas. Historically these have been undesirable due to risk of tunnelling and blow outs, however trialling these on lower profile landforms is worth the effort. Ecologically these are great additions. Vegetation translocation program for both threatened and non-threatened but 'tricky' species is worthy of the noting as a 'best practice' example on site.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations												
	Table 12. Rehabilitation Objectives <table><tr><th>Feature</th><th>Objective</th></tr><tr><td>Mine site (as a whole)</td><td> • Safe, stable and non-polluting • Final landforms designed to incorporate natural micro-relief and natural drainage lines • Restore self-sustaining ecosystems, including establishing: ◦ appropriate native woodland species; and ◦ at least 700 hectares of native grassland, in the final rehabilitated landscape. </td></tr><tr><td>Final voids</td><td> • Designed as long term groundwater sinks and to maximise groundwater flows across back-filled pits to the final void • Minimise to the greatest extent practicable: ◦ the size and depth of final voids ◦ the drainage catchment of final voids ◦ any high wall instability risk ◦ risk of flood interaction for all flood events up to and including the Probable Maximum Flood. </td></tr><tr><td>Anvil Creek realignment</td><td> • Restore self-sustaining ecological and hydrological function of the creek. </td></tr><tr><td>Surface infrastructure</td><td> • To be decommissioned and removed, unless the Executive Director Mineral Resources agrees otherwise. </td></tr><tr><td>Community</td><td> • Ensure public safety • Minimise the adverse socio-economic effects associated with mine closure </td></tr></table>	Feature	Objective	Mine site (as a whole)	• Safe, stable and non-polluting • Final landforms designed to incorporate natural micro-relief and natural drainage lines • Restore self-sustaining ecosystems, including establishing: ◦ appropriate native woodland species; and ◦ at least 700 hectares of native grassland, in the final rehabilitated landscape.	Final voids	• Designed as long term groundwater sinks and to maximise groundwater flows across back-filled pits to the final void • Minimise to the greatest extent practicable: ◦ the size and depth of final voids ◦ the drainage catchment of final voids ◦ any high wall instability risk ◦ risk of flood interaction for all flood events up to and including the Probable Maximum Flood.	Anvil Creek realignment	• Restore self-sustaining ecological and hydrological function of the creek.	Surface infrastructure	• To be decommissioned and removed, unless the Executive Director Mineral Resources agrees otherwise.	Community	• Ensure public safety • Minimise the adverse socio-economic effects associated with mine closure	Continue with the current rehabilitation activities and procedures. The site is having very good success in early stage rehabilitation during some dry years, which have created challenging conditions for rehabilitation establishment. Areas of rehabilitation across the entire site were inspected and observations were made, including photographs. Landform – The geomorphic landforms appear to be stable and drainage lines have held up well in recent rains. There was evidence that rills developing into gullies (greater than 0.3m) were monitored and repaired. Surface Prep – The deep contour ripping is effective in promoting water infiltration and minimising erosion whilst creating effective microclimates for high success rate of germinating seeds. Topsoil Mgt – The mulching and stripping process is well developed on site. Examples of higher diversity in direct placed soil areas shows a preference for this in future, where practical. Example of soil amelioration with gypsum was noted on site. Temporary Rehab – There were examples on site where temporary rehab was being applied. Great to see these areas are sewn with permanent seed mixes to build organic matter (future mulching) and seed bank. Weed Mgt – The site’s philosophy of ‘hit it early, hit it hard’ in regard to weed spraying in particular invasive perennials has proven more cost		
Feature	Objective															
Mine site (as a whole)	• Safe, stable and non-polluting • Final landforms designed to incorporate natural micro-relief and natural drainage lines • Restore self-sustaining ecosystems, including establishing: ◦ appropriate native woodland species; and ◦ at least 700 hectares of native grassland, in the final rehabilitated landscape.															
Final voids	• Designed as long term groundwater sinks and to maximise groundwater flows across back-filled pits to the final void • Minimise to the greatest extent practicable: ◦ the size and depth of final voids ◦ the drainage catchment of final voids ◦ any high wall instability risk ◦ risk of flood interaction for all flood events up to and including the Probable Maximum Flood.															
Anvil Creek realignment	• Restore self-sustaining ecological and hydrological function of the creek.															
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Community	• Ensure public safety • Minimise the adverse socio-economic effects associated with mine closure															

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		effective in the long term. Good budget and continual vigilance shows results. Vegetation – Monitoring and management of the vegetation is a major focus on site. All rehab areas are well signposted with adequate tracks for inspections and maintenance, some tracks require maintenance after recent rains. The vegetation appeared healthy with very few limiting factors to inhibit success. Secondary succession was noted and the process of leaf litter cycling into nutrient and soil processes is obvious amongst the rehab. Feral Animals – actively controlled and managed.		
S3 C59	Progressive Rehabilitation The Proponent must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation. <i>Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to further disturbance in future.</i>	Noted. The audit found the progressive rehabilitation was being undertaken as soon as reasonably practicable following disturbance. Continue with the current rehabilitation practices. And future decommissioning works on surface infrastructure when required.	Compliant	
S3 C60	Rehabilitation Management Plan The Proponent must prepare a Rehabilitation Management Plan for the project to the satisfaction of the Executive Director, Mineral Resources. This plan must: - submitted to the Executive Director, Mineral Resources for approval by 30 September 2014; - be prepared in consultation with the Department, DPI Water, OEH and Council; - be prepared in accordance with any relevant DRE guideline; - describe how the rehabilitation of the site would be integrated with the implementation of the biodiversity offset strategy;	Mangoola Coal Mining Operations Plan 2021 (Extended until July 2022) satisfies this condition. - Approval letter of extension of current MOP available on website. - Section 1.4 - Section 1.0, table 1.1 - Section 7.0 - Section 6.0 - Sections 4.0, 6.0-10.0	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	e. include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and triggering remedial action (if necessary); f. describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, and address all aspects of rehabilitation including mine closure, final landform including final voids, and final land use; g. include interim rehabilitation where necessary to minimise the area exposed for dust generation; h. include a program to monitor, independently audit and report on the effectiveness of the measures, and progress against the detailed performance and completion criteria; and i. build to the maximum extent practicable on other management plans required under this approval. The Proponent must implement the approved management plan as approved from time to time by the Secretary.	g. Section 2.0 h. Section 8.0 and 10.0 i. Section 3.0		
SCHEDULE 4 – ADDITIONAL PROCEDURES				
NOTIFICATION OF LANDOWNERS				
S4 C1	Within 1 month of this approval, the Proponent must: a. notify in writing the owners of: - o any residence on the land listed in Table 2 of schedule 3 that they have the right to request the Proponent to ask for additional noise mitigation measures to be installed at their residence at any stage during the project; and - o any privately-owned land within 2 kilometres of the approved open cut mining pit/s that they are entitled to ask for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated; b. notify the tenants of any mine-owned land of their rights under this approval; and c. send a copy of the NSW Health fact sheet entitled “Mine Dust and You” (as may be updated from time to time) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the EA identify that dust emissions generated by the	Notification to owners was completed during the previous audit periods.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	project are likely to be greater than the relevant air quality criteria in schedule 3 at any time during the life of the project.			
S4 C2	Prior to entering into any tenancy agreement for any land owned by the Proponent that is predicted to experience exceedances of the recommended dust and/or noise criteria, or for any of the land listed in Table 2 that is subsequently purchased by the Proponent, the Proponent must: a. advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time); and b. advise the prospective tenants of the rights they would have under this approval, to the satisfaction of the Secretary.	Copies of signed rental agreements and the default 'Mine Dust and You' fact sheet that is provided to prospective tenants were provided during the audit.	Compliant	
S4 C3	As soon as practicable after obtaining monitoring results showing: a. an exceedance of any relevant criteria in schedule 3, the Proponent must notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and b. an exceedance of the relevant air quality criteria in schedule 3, the Proponent must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).	Notification to private landowner following TEOM exceedance during the audit period were sighted during the audit.	Compliant	
INDEPENDENT REVIEW				
S4 C4	If a landowner considers the project to be exceeding the impact assessment criteria in schedule 3, except where this is predicted in the EA, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land. If the Secretary is satisfied that an independent review is warranted, the Proponent must within 3 months of the Secretary advising that an independent review is warranted: 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 Secretary, to conduct monitoring on the land, to determine whether the project is complying with the relevant impact assessment criteria in	There have not been any independent reviews requested during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	schedule 3, and identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and c. give the Secretary and landowner a copy of the independent review.			
S4 C5	If the independent review determines that the project is complying with the relevant impact assessment criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary.	There have not been any independent reviews requested during the audit period.	Not triggered	
S4 C6	If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 3, and that the project is primarily responsible for this noncompliance, then the Proponent must: a. take all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria; and b. conduct further monitoring to determine whether these measures ensure compliance; or c. secure a written agreement with the landowner to allow exceedances of the criteria in schedule 3, to the satisfaction of the Secretary. If the additional monitoring referred to above subsequently determines that the project is complying with the relevant criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary. If the Proponent is unable to finalise an agreement with the landowner, then the Proponent or landowner may refer the matter to the Secretary for resolution. If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process (see Appendix 9). If the measures referred to in (a) do not achieve compliance with the air quality and/or noise land acquisition criteria in schedule 3, and the Proponent cannot secure a written agreement with the landowner to allow these exceedances within 3 months, then the Proponent must, upon receiving a written request from the landowner, acquire all or part of the landowner's land in accordance with the procedures in conditions 10-11 below.	There have not been any independent reviews requested during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
S4 C7	If the independent review determines that the relevant criteria in schedule 3 are being exceeded, but that more than one mine is responsible for this non-compliance, then the Proponent must, together with the relevant mine/s: a. take all reasonable and feasible measures, in consultation with the landowner, to ensure that the relevant criteria are complied with; and b. conduct further monitoring to determine whether these measures ensure compliance; or c. secure a written agreement with the landowner and other relevant mines to allow exceedances of the criteria in schedule 3, to the satisfaction of the Secretary. If the additional monitoring referred to above subsequently determines that the projects are complying with the relevant criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary. If the Proponent is unable to finalise an agreement with the landowner and/or other mine/s, then the Proponent or landowner may refer the matter to the Secretary for resolution. If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process (see Appendix 9). If the measures referred to in (a) do not achieve compliance with the air quality and/or noise land acquisition criteria in schedule 3, and the Proponent together with the relevant mine/s cannot secure a written agreement with the landowner to allow these exceedances within 3 months, then upon receiving a written request from the landowner, the Proponent must acquire all or part of the landowner's land on as equitable a basis as possible with the relevant mine/s, in accordance with the procedures in conditions 10-11 below.	There have not been any independent reviews requested during the audit period.	Not triggered	
S4 C8	If the landowner disputes the results of the independent review, either the Proponent or the landowner may refer the matter to the Secretary for resolution. If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process.	There have not been any independent reviews requested during the audit period.	Not triggered	
S4 C9	If, following the Independent Dispute Resolution Process, the Secretary decides that the Proponent must acquire all or part of the landowner's	There have not been any independent reviews requested during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	land, then the Proponent must acquire this land in accordance with the procedures in conditions 10-11 below.			
LAND ACQUISITION				
S4 C10	Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent must make a binding written offer to the landowner based on: a. the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the project the subject of the project application, having regard to the: - o existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and - o presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the 'additional noise mitigation measures' in condition 4 of schedule 3; b. the reasonable costs associated with: - o relocating within the Muswellbrook local government area, or to any other local government area determined by the Secretary; - o obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and c. reasonable compensation for any disturbance caused by the land acquisition process. However, if at the end of this period, the Proponent and landowner cannot agree on the acquisition price of the land, and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Secretary for resolution. Upon receiving such a request, the Secretary shall request the President of the NSW Division of the Australian Property Institute (API) to appoint a qualified independent valuer to: a. consider submissions from both parties;	There have not been any requests for acquisition during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	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. Within 14 days of receiving the independent valuer's report, the Proponent must make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination. However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Secretary for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Secretary shall determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above, the independent valuer's report and the detailed report of the party that disputes the independent valuer's determination. Within 14 days of the Secretary's determination, the Proponent must make a binding written offer to the landowner to purchase the land at a price not less than the Secretary'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 Secretary determines otherwise.			
S4 C11	The Proponent must pay all reasonable costs associated with the land acquisition process described in condition 10 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of Registrar-General.	There have not been any requests for acquisition during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
SCHEDULE 5 – ENVIRONMENTAL MANAGEMENT, AUDITING AND REPORTING				
ENVIRONMENTAL MANAGEMENT				
S5 C1	Environmental Management Strategy The Proponent must prepare an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must: - be submitted to the Secretary for approval prior to the commencement of any development on the site; - provide the strategic framework for environmental management of the project; - identify the statutory approvals that apply to the project; - describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; - 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; - respond to any non-compliance; - respond to emergencies; and - include: - copies of any strategies, plans and programs approved under the conditions of this approval; and - a clear plan depicting all the monitoring to be carried out in relation to the project. The Proponent must implement the approved management strategy as approved from time to time by the Secretary.	Environmental Management Strategy Number: MANOC-1772150304-4652 Effective: 21/08/2020 Version: 10 Approved by Matthew Sprott as nominee of the Planning Secretary on 21 August 2020. A strategic framework for environmental management of the project is provided in Section 2 to Section 5. The statutory approvals that apply to the project are outlined in Section 2.3. The role, responsibility, authority, and accountability of all key personnel involved in the environmental management of the project are detailed in Section 3.2. The EMS contains the required procedures to address the items outlined in S5 C1(e). Section 3.1 outlines the plans and programs approved under the conditions of this approval with copies provided on the project website. Environmental monitoring is outlined in Section 5.1 with a plan contained in Appendix B. Specific monitoring details are contained in the applicable management plans listed in the EMS.	Compliant	
S5 C2	Adaptive Management The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 3. Any exceedance of these criteria and/or	Adaptive management is outlined in Section 3.7 of the EMS. Review of criteria and performance measure exceedance during the audit period	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity: a. take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur; b. consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and c. implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.	indicated that Mangoola are implementing the adaptive management measures identified.		
S5 C3	Management Plan Requirements The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include: a. detailed baseline data (where available); b. a description of: - o the relevant statutory requirements (including any relevant approval, licence or lease conditions); - o any relevant limits or performance measures/criteria; - o the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; c. a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; d. a program to monitor and report on the: - o impacts and environmental performance of the project; - o effectiveness of any management measures (see c above); e. a program to investigate and implement ways to improve the environmental performance of the project over time; f. a protocol for managing and reporting any: - o incidents; - o complaints'	Review of the applicable management plans under the EMS and approval indicated that they have been prepared in general accordance with the applicable relevant guidelines and included the information outlined in this condition. It is noted that following the approval of SSD8642 and commencement of development/constructions the management plan conditions of SSD8642 prevail to the extent of any inconsistency, ambiguity, or conflict between those of PA06_0014.	Compliant	Ensure all management plans are updated in accordance with the approved MCCO Project Management Plan Approach.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	- non-compliances with statutory requirements; and - exceedances of the impact assessment criteria and/or performance criteria; and g. a protocol for periodic review of the plan.			
REPORTING				
S5 C4	Incident Reporting The Proponent must immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.	Review of incidents during the audit period indicated that the Secretary was notified immediately upon becoming aware of incidents and provided a detailed report within 7 days.	Compliant	
S5 C5	Regular Reporting The Proponent must provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.	Review of available and provided information indicated that Mangoola has provided regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.	Compliant	
ANNUAL REVIEW				
S5 C6	By the end of March each year, or other timing as may be agreed by the Secretary, the Proponent must submit a report to the Department reviewing the environmental performance of the project 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 next year; b. include a comprehensive review of monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against the: - relevant statutory requirements, limits or performance measures/criteria; - monitoring results of previous years; and - relevant predictions in the documents listed in condition 2 of Schedule 2;	Annual Review 2019 – 2021 were all submitted by 31 March each year through the Major Project Portal, and all contained the information required by S5 C6.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	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 monitoring data over the life of the project; e. identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and f. describe what measures will be implemented over the next year to improve the environmental performance of the project.			
AUDITING				
S5 C7	Within 2 years of this approval, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the project. 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 project, and its effects on the surrounding environment and whether it is complying with the requirements in this approval, and any other relevant approvals, relevant EPL/s and/or Mining Lease (including any assessment, plan or program required under these approvals); d. review the adequacy of any approved strategy/plan/program required under this approval; and, if necessary, e. recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and f. be conducted and reported to the satisfaction of the Secretary. Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.	Review of the previous 2019 audit indicated that it was conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Secretary on 9 May 2019. Evidence of consultation with the relevant agencies was provided in Section 3.3 of the report. The audit was conducted and reported to the satisfaction of the Secretary evidence by acceptance of the audit report.	Compliant	
S5 C8	Within 12 weeks of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary with a response to any recommendations contained in the audit report.	A copy of the 2019 audit report was submitted on 15 October 2019 within 12 weeks of the commissioning of the audit.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
S5 C9	Revision of Strategies, Plans and Programs Within 3 months: a. the submission for audit under condition 7 above; b. the submission for Annual Review under condition 6 above; c. the submission for incident report under condition 4 above; and d. any modification to the conditions of this approval, the Proponent must review, and if necessary revise, the strategies, plans, programs and reports required under this approval to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted to the Secretary for approval. <i>Note: This is to ensure the strategies, plans, programs and reports are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</i>	Mangoola has reviewed applicable Strategies, Plans and Programs as outlined in Section 12.1 of the annual returns for the audit period in accordance with the provisions of this condition.	Compliant	
COMMUNITY CONSULTATIVE COMMITTEE				
S5 C10	The Proponent must operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. This CCC must be operated in general accordance with the <i>Guidelines for Establishing and Operating Consultative Committees for Mining Projects</i> (Department of Planning, 2007, or its latest version). <i>Note: The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.</i> <i>The CCC should be comprised of an independent chair and appropriate representation from the Proponent, Council, recognised environmental groups and the local community.</i>	Minutes for the Mangoola Coal Community Consultative Committee are published on the Mangoola Coal website - these minutes show that the CCC has met quarterly for the full audit period. The CCC is conducted in general accordance with the Community Consultative Committee Guidelines (DPIE, 2016). The CCC is run by an Independent Chair.	Compliant	
ACCESS TO INFORMATION				
S5 C11	The Proponent must: a. make the following information publicly available on its website: - o the documents listed in condition 2 of Schedule 2; current statutory approvals for the project; - o approved strategies, plans or programs required under the conditions of this approval;	Website reviewed checked 8 July 2022 A copy of the environmental assessments prepared for the eight modifications are available through the Company's website. A copy of the current consolidated Project Approval, EPL,	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	○ a comprehensive summary of the compliance monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval; ○ a complaints register, which is to be updated on a monthly basis; ○ minutes of CCC meetings; ○ the last five annual reviews; ○ any independent environmental audit; and the Proponent's response to the recommendations in any audit; and b. keep this information up to date; to the satisfaction of the Secretary. <i>Note: The information on the Proponent's website must be updated at least every quarter, but as far as possible, information under this condition should be made publicly available more frequently to ensure the community has access to the most up to date information about the performance of the project.</i>	Exploration Lease and Mining Leases available on the Company's website. Copies of the approved strategies, plans and programs required under this condition is provided on the Company's website. A document summarising the monitoring results air quality, surface water, groundwater and noise is provided on the Company's website. Copies of each Annual Review from 2008 are provided. CCC Minutes provided. Complaints register available. Independent Audit from 2010, 2014, 2016, and 2019 are available. Verified from review of available documents on Mangoola's website and is reported in the AR, which is approved by the Secretary.		

B.2 SSD8642 Audit Checklist

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Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
SCHEDULE 2 PART A – ADMINISTRATIVE CONDITIONS				
OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT				
A1	In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.	Mangoola was observed to be implementing all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction or rehabilitation of the project.	Compliant	
TERMS OF CONSENT				
A2	The development may only be carried out: a. in compliance with the conditions of this consent; b. in accordance with all written directions of the Planning Secretary; c. generally in accordance with the EIS; and d. generally in accordance with the Development Layout in Appendix 2.	The following non-compliances against the conditions of this consent were identified during the audit period: • B46 Sandy Creek Farm Dams - Saline Water Discharge. MCCO - Dirty Water Discharge	Non-compliant	No recommendation required.
A3	Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to: a. the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and b. the implementation of any actions or measures contained in any such document referred to in condition A3(a).	Mangoola was observed to have followed and implemented all written directions from the Planning Secretary during the audit period.	Compliant	
A4	The conditions of this consent prevail to the extent of any inconsistency, ambiguity or conflict between them and a document/s listed in condition A2(b), (c) or (d). In the event of an inconsistency, ambiguity or conflict between any of the document/s listed in condition A2(b), (c) or (d), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.	Observed that the SSD conditions have prevailed over PA06_0014 from the commencement of development on 6 December 2021.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
LIMITS OF CONSENT				
A5	Mining Operations Mining operations may be carried out on the site until 31 December 2030. Notes: - Under this consent, the Applicant is required to decommission and rehabilitate the site and carry out other requirements in relation to mining operations. Consequently, this consent will continue to apply in all respects other than to permit the carrying out of mining operations until the rehabilitation of the site and other requirements have been carried out to the required standard. - Mining operations and rehabilitation are also regulated under the Mining Act 1992.	Operation associated with MCCO has not occurred within the audit period. Mining within ML1626 has continued within the audit period. Review of documentation and confirmation from Mangoola that mining will cease by 2030.	Compliant	
A6	Coal Extraction and Transportation A maximum of 13.5 million tonnes of ROM coal may be extracted from the site in any calendar year.	2021 – 8.03 Mt 2022 (forecast) – 10,733,095 Mt No coal extraction associated with the MCCO.	Compliant	
A7	Coal Extraction and Transportation A maximum of 13.5 million tonnes of ROM coal from the site may be processed in any calendar year.	2021 – 8.03 Mt 2022 (forecast) – 10,733,095 Mt No coal extraction associated with the MCCO.	Compliant	
A8	Coal Extraction and Transportation Product coal may only be transported from the site by rail.	No MCCO coal transported during the audit period. All other coal was only transported by train.	Compliant	
A9	Coal Extraction and Transportation A maximum of 10 laden trains may leave the site in any 24 hour period.	No MCCO coal transported during the audit period. No more than 10 laden trains left the site in any 24-hour period during the audit period.	Compliant	
A10	Hours of Operation The Applicant may undertake the development 24 hours a day, 7 days a week, except for; a. gravel screening and crushing as described in condition A 11; and b. blasting operations as described in condition B 13.	No gravel screening or crushing operations occurred within the audit period. All development operations and blasting within the specified hours of operation.	Compliant	
A11	Hours of Operation The Applicant may only undertake gravel screening and crushing operations on the site between 7 am and 6 pm Monday to Friday, and	No gravel screening or crushing operations occurred within the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	between 8 am and 1 pm on Saturdays. No gravel screening and crushing operations are allowed on Sundays, public holidays, or at any other time without the written approval of the Planning Secretary.			
A12	Identification of Approved Disturbance Area Within three months of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must provide to the Department a survey plan of the boundaries of the approved disturbance areas.	A survey plan of the final disturbance area was sent to DPE on 3 March 2022 within 3 months of commencement of development.	Compliant	
NOTIFICATION OF COMMENCEMENT				
A13	The date of commencement of each of the following phases of the development must be notified to the Department in writing, at least two weeks before that date: a. commencement of development under the consent; b. commencement of construction under the consent; c. commencement of mining operations under the consent; d. cessation of mining operations (i.e. mine closure); and e. any period of suspension of mining operations (i.e. care and maintenance).	DPE notified on 19 November 2021 that Mangoola intended to commence development and construction on 6 December 2021. Operation did not commence during the audit period.	Compliant	
A14	If the phases of the development are to be further staged, the Department must be notified in writing at least two weeks prior to the commencement of each stage, of the date of commencement and the development to be carried out in that stage.	No further staging of the development other than the approved phases was required or requested during the audit period.	Not triggered	
SURRENDER OF EXISTING CONSENTS OR APPROVALS				
A15	Within 12 months of the date of commencement of development under this consent, or other timeframe agreed by the Planning Secretary, the Applicant must surrender the existing project approval for the Mangoola Coal Project (PA 06_0014) in accordance with the EP&A Regulation.	Mangoola commenced development on 6 December 2021 and intend to surrender consent by 6 December 2022.	Compliant	
A16	Upon the commencement of development under this consent, and before the surrender of existing development consents or project approvals required under condition A15, the conditions of this consent prevail to the extent of any inconsistency with the conditions of those consents or approvals. <i>Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under the former Part 4A of the EP&A Act or Part 6 of the EP&A Act as applies from 1 September 2018. The surrender should not be understood as implying that works legally</i>	Observed that the SSD conditions have prevailed over PA06_0014 from the commencement of development on 6 December 2021.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	<i>constructed under a valid consent or approval can no longer be legally maintained or used.</i>			
PLANNING AGREEMENT				
A17	Within six months of the date of commencement of development, or other timeframe agreed by the Planning Secretary, the Applicant must enter into a PA with Council in accordance with: a. Division 7.1 of Part 7 of the EP&A Act; and b. the terms of the Applicant's offer to Council in Appendix 10.	A PA has been entered with Council and was executed on 4 April 2022.	Compliant	
A18	If the Applicant and Council do not enter into a PA within the timeframe under condition A17, then within a further 3 months, the Applicant must make a Section 7.12 of the EP&A Act contribution to Council of \$525,688. The amount to be paid is to be adjusted at the time of the actual payment, in accordance with the provisions of the <i>Muswellbrook Shire Council Section 94A Development Contributions Plan 2010</i> .	A PA has been entered with Council and was executed on 4 April 2022.	Not triggered	
A19	If there is any dispute between the Applicant and Council in regard to conditions A17 and A18 then either party may refer the matter to the Planning Secretary for resolution.	A PA has been entered with Council and was executed on 4 April 2022.	Not triggered	
COMMUNITY CONSULTATIVE COMMITTEE				
A20	Before the commencement of construction, or other timeframe agreed by the Planning Secretary, a Community Consultative Committee (CCC) must be established for the development in accordance with the Department's <i>Community Consultative Committee Guidelines: State Significant Projects</i> (2019). The CCC must continue to operate during the life of the development, or other timeframe agreed by the Planning Secretary. Notes: • The CCC is an advisory committee only. • In accordance with the Guidelines, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council and the local community.	Approval was granted by DPE on 9 September 2021 to combine the CCC with the existing Mangoola Coal Project prior to construction on 6 December 2021. The combination of the CCCs provided a consolidated CCC for the MCO.	Compliant	
A21	With the approval of the Planning Secretary, the Applicant may combine the CCC required by this consent with any CCC previously established for the Mangoola Coal Project.	Approval was granted by DPE on 9 September 2021 to combine the CCC with the existing Mangoola Coal Project prior to construction on 6 December 2021.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
EVIDENCE OF CONSULTATION				
A22	Where conditions of this consent require consultation with an identified party, the Applicant must: a. consult with the relevant party prior to submitting the subject document; and b. provide details of the consultation undertaken to the Department, including: i. the outcome of that consultation, matters resolved and unresolved; and ii. details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	Consultation was observed to have occurred where required by the conditions of this consent.	Compliant	
APPLICATION OF EXISTING MANAGEMENT PLANS				
A23	Prior to the approval of management plans under this consent, the Applicant must continue to implement any equivalent or similar management plan/s required under PA 06_0014, to the satisfaction of the Planning Secretary.	MCO completed a detailed review and comparison of the management plan requirements in SSD8642 with those management plans that the existing operation already had in place and approved under Project Approval (PA) 06_0014. Following the review MCO developed an approach to ensure that construction activities required to be completed as part of the MCCO Project were covered by an appropriate suite of management plans. This approach included a combination of relying on some existing management plans (where relevant) as they were currently approved, making a series of relatively minor updates to some existing plans (for example to reference changes in criteria relevant to the Recommended Conditions and revised mapping), and completing some full updates of the	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		plans as required by specific SSD8642 conditions. MCO was issued with a letter from DPE on 16 July 2021 indicating that they had reviewed the approach to updating the management plans and confirmed that they were satisfied the staged approach is appropriate and would ensure compliance with relevant conditions of consent. It was noted that the following management plans under SSD8642 were not triggered to be implemented during the audit period: • Visual Impact Management Plan – Schedule 2, Part B, Condition 75 • Bushfire Management Plan – Schedule 2, Part B, Condition 82 • Rehabilitation Strategy – Schedule 2, Part B, Condition 87 • Social Impact Management Plan – Schedule 2, Part B, Condition 107 It is noted that the above management plans will be required prior to the commencement of mining north of Wybong Road under SSD8642. All other management plans or revised management plans under PA06_0014 were implemented during the audit period.		
STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS				
A24	With the approval of the Planning Secretary, the Applicant may: a. prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);	Mangoola sent a letter to DPE on 23 March 2021 outlining the approach to Prepare Management Plans for the MCO Project. The following approach was adopted and approved by DPE on 16 July 2022:	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	b. combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); c. combine any strategy, plan, program or Annual Review required by this consent with any similar strategy, plan, program or Annual Review required under the Mangoola Coal Project (PA 06_0014); and d. update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).	Noise Management Plan - Full Update for SSD 8462 prior to construction. Blast Management Plan - Use existing with a full update prior to mining. AQGGMP – use existing AQMP with minor updates to enable construction with a full update to the AQGGMP prior to mining. WMP - use existing with minor updates with a full update prior to mining. Biodiversity Management Plan - Use existing BOMP with a full update prior to mining. Aboriginal Cultural Heritage Management Plan – Full update prior to construction. Historic Heritage Management Plan - Minor updates to existing CMS (to cover Millville archival recording) prior to construction with a new plan prepared prior to mining. Bushfire Management Plan – new plan prior to mining. Rehabilitation Strategy – new plan prior to mining. Rehabilitation Management Plan / Mining Operations Plan / RCE – full update prior to construction and prior to mining. Traffic Management Plan – new plan prior to construction. Social Impact Management Plan – new plan prior to mining. Environmental Management Strategy - minor updates prior to construction with a full update prior to mining.		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
A25	If the Planning Secretary agrees, a strategy, plan or program may be staged or updated with minor administrative amendments without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.	The AQMP had minor administrative amendments undertaken following approval of SSD8642, without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent during the audit period. This was approved by the department. There have been no minor administrative amendments without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent during the audit period.	Compliant	
A26	If the Planning Secretary agrees, a strategy, plan or program may be staged without addressing particular requirements of the relevant condition of this consent if those requirements are not applicable to the particular stage.	Not triggered during the audit periods.	Not triggered	
PROTECTION OF PUBLIC INFRASTRUCTURE				
A27	Unless the Applicant and the applicable authority agree otherwise, the Applicant must: a. repair, or pay the full costs associated with repairing, any public infrastructure ^a that is damaged by carrying out the development; and b. relocate, or pay the full costs associated with relocating, any public infrastructure ^a that needs to be relocated as a result of the development. ^a <i>This condition does not apply to any damage to roads caused as a result of general road usage or otherwise addressed by contributions required by condition A 17 or A 18, or to damage that has been compensated under the Mining Act 1992.</i>	No damage to infrastructure identified during the audit period. No relocation of public infrastructure required during the audit period.	Not triggered	
DEMOLITION				
A28	All demolition must be carried out in accordance with <i>Australian Standard AS 2601-2001 The Demolition of Structures</i> (Standards Australia, 2001).	All demolition has been carried out in accordance with <i>Australian Standard AS 2601-2001 The Demolition of Structures</i> during the audit period.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
STRUCTURAL ADEQUACY				
A29	All new building and structures, and any alterations or additions to existing buildings and structures, that are part of the development, must be constructed in accordance with the relevant requirements of the BCA. Notes: - Under Part 6 of the EP&A Act, the Applicant 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 development.	No buildings constructed that require BCA certification during the audit period. Demountable buildings are currently being used.	Not triggered	
OPERATION OF PLANT AND EQUIPMENT				
A30	All plant and equipment used on site, or to monitor the performance of the development must be: a. maintained in a proper and efficient condition, and b. operated in a proper and efficient manner.	Plant and equipment used onsite was generally observed to be maintained and operated in a proper and efficient manner. Monthly inspections of key areas onsite are conducted by the E&C team to ensure plant and equipment is being maintained and operated in a proper and efficient manner, including but not limited to, workshops, construction areas, hydrocarbon and waste handling and storage areas. A management system/schedule is in place Maintenance Plans and Work Orders through SAP. These maintenance schedules also include details of any repairs that are required outside of the planned maintenance schedules. This information is then used to monitor other plant and machinery for similar breakdown issues.	Compliant	
COMPLIANCE				
A31	The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the	All employees, contractors (and their sub-contractors) are required, at a minimum, to complete the Mangoola	Compliant	Update Mangoola Site Familiarisation Induction to include reference to SSD8642.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	conditions of this consent relevant to activities they carry out in respect of the development.	Site Familiarisation Induction that outlines the environmental requirements for undertaking work at Mangoola.		
APPLICABILITY OF GUIDELINES				
A32	References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of inclusion (or later update) in the condition.	Noted. Review of available documentation indicated that Mangoola are utilising the most recent guideline, protocol, Australian Standard or policy as required.	Compliant	
A33	Notwithstanding Condition A32, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, in respect of ongoing monitoring and management obligations, agree to or require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.	There has been no request from the Planning Secretary to alter any limits or criteria in this consent during the audit period.	Not triggered	
CROWN LAND				
A34	The Applicant must consult with DPIE – Crown Lands prior to undertaking any development on Crown land or Crown roads. Notes: - Under section 265 of the Mining Act 1992, the Applicant is required to enter into a compensation agreement with OPIE -Crown Lands prior to undertaking any mining operations or related activities on Crown Land or Crown Roads within a mining lease. - Under section 141 of the Mining Act 1992, the Applicant is required to enter into an access arrangement with OPIE -Crown Lands prior to undertaking any prospecting operations on Crown land or Crown roads within an exploration licence.	Compensation agreement executed for Crown land within ML1815 and ML1817 (7859378: 24919450_8) executed on 9 December 2021.	Compliant	
SCHEDULE 2 PART B – SPECIFIC ENVIRONMENTAL CONDITIONS				
NOISE				
B1	Noise Criteria The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 1 at any residence on privately-owned land. Table 1: Noise criteria dB(A)	The Annual Review document for 2021 demonstrate compliance with the noise criteria at all locations. Review of noise monitoring reports for January to June 2022 demonstrated	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																																																																								
	<table><tr><th>Noise Assessment Location ^a</th><th>Day L_{Aeq} (15 min) (Years 1 and 2)</th><th>Day L_{Aeq} (15 min) (Year 3 onward)</th><th>Evening L_{Aeq} (15 min)</th><th>Night L_{Aeq} (15 min)</th><th>Night L_{A1} (1 min)</th></tr><tr><td>171,176, 144</td><td>40</td><td>40</td><td>40</td><td>40</td><td>52</td></tr><tr><td>25, 128, 154, 193, 125A, 182B</td><td>40</td><td>40</td><td>38</td><td>38</td><td>52</td></tr><tr><td>261</td><td>42</td><td>40</td><td>38</td><td>38</td><td>52</td></tr><tr><td>54, 79, 114, 141, 151, 192, 206, 321, 125C, 182A, 241A, 241C, 190, 157</td><td>40</td><td>40</td><td>37</td><td>37</td><td>52</td></tr><tr><td>165, 177, 106B, 104, 166, 178, 251, 253, 260, 112B, 183C, 184A, 147, 112A, 112C, 240, 241B</td><td>40</td><td>40</td><td>36</td><td>36</td><td>52</td></tr><tr><td>134A</td><td>44</td><td>40</td><td>39</td><td>39</td><td>52</td></tr><tr><td>109A - F</td><td>43</td><td>40</td><td>39</td><td>39</td><td>52</td></tr><tr><td>263</td><td>42</td><td>40</td><td>39</td><td>39</td><td>52</td></tr><tr><td>164</td><td>40</td><td>40</td><td>35</td><td>39</td><td>52</td></tr><tr><td>Other privately-owned residences</td><td>40</td><td>40</td><td>35</td><td>35</td><td>52</td></tr><tr><td>Wybong Hall and Anglican Church</td><td>48</td><td>48</td><td>48</td><td>48</td><td>-</td></tr></table> ^a The Noise Assessment Locations referred to in Table 1, are shown in Appendix 5. Noise generated by the development must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the <i>NSW Noise Policy for Industry (EPA, 2017)</i>. The noise enhancing meteorological conditions determined by monitoring at the meteorological station required under condition B35 and as defined in Part D of the <i>Noise Policy for Industry (EPA, 2017)</i> apply to the noise criteria in Table 1.	Noise Assessment Location ^a	Day L _{Aeq} (15 min) (Years 1 and 2)	Day L _{Aeq} (15 min) (Year 3 onward)	Evening L _{Aeq} (15 min)	Night L _{Aeq} (15 min)	Night L _{A1} (1 min)	171,176, 144	40	40	40	40	52	25, 128, 154, 193, 125A, 182B	40	40	38	38	52	261	42	40	38	38	52	54, 79, 114, 141, 151, 192, 206, 321, 125C, 182A, 241A, 241C, 190, 157	40	40	37	37	52	165, 177, 106B, 104, 166, 178, 251, 253, 260, 112B, 183C, 184A, 147, 112A, 112C, 240, 241B	40	40	36	36	52	134A	44	40	39	39	52	109A - F	43	40	39	39	52	263	42	40	39	39	52	164	40	40	35	39	52	Other privately-owned residences	40	40	35	35	52	Wybong Hall and Anglican Church	48	48	48	48	-	compliance with the noise criteria at all locations. Review of Construction Noise Monitoring reports (December 2021 to June 2022 demonstrated compliance with the noise criteria at all locations. Review of monthly attended noise monitoring reports identified that noise monitoring undertaken in accordance with the provisions of the Noise policy for Industry (EPA, 2017).		
Noise Assessment Location ^a	Day L _{Aeq} (15 min) (Years 1 and 2)	Day L _{Aeq} (15 min) (Year 3 onward)	Evening L _{Aeq} (15 min)	Night L _{Aeq} (15 min)	Night L _{A1} (1 min)																																																																							
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B2	The noise criteria in Table 1 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.	Negotiated agreement in place with R164 which was signed on 13/8/2018 and DPIE were subsequently notified. Negotiated agreement in place with R132 which was signed on 17/11/2021 and DPIE were subsequently notified.	Compliant																																																																									
B3	Temporary Construction Noise Limits With the written agreement of the Planning Secretary, the Applicant may seek temporary construction noise limits above the noise criteria in Table 1, including for construction works outside of standard hours. In order to seek a temporary construction noise limit, the Applicant must develop a	Temporary construction noise limits above the noise criteria in Table 1 have not been requested during the audit period.	Not triggered																																																																									

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations				
	Construction Noise Protocol to the satisfaction of the Planning Secretary. This protocol must: a. b. c. be prepared in consultation with the EPA and any residents who may be affected by the noise generated by these works; specify the construction works to which the temporary construction noise limits would apply and provide justification for these limits; and address the relevant requirements of the <i>Interim Construction Noise Guideline</i> (DECC, 2009).							
B4	The Applicant must continue to operate in accordance with the noise criteria in Table 1 until and unless a Construction Noise Protocol for the specified construction works is approved by the Planning Secretary.	Noted and acknowledged by Mangoola.	Compliant					
B5	The Applicant must implement any Construction Noise Protocol approved by the Planning Secretary.	Noted and acknowledged by Mangoola.	Compliant					
B6	Road Traffic Noise Upon receiving a written request from the owner of a residence listed in Table 2, (except where a negotiated noise agreement is in place for road traffic noise), the Applicant must implement noise mitigation measures such as double glazing, insulation, and/or air conditioning at any residence on the land in consultation with the landowner to minimise the impacts of road traffic noise. These additional mitigation measures must be reasonable and feasible, directed at mitigating the traffic noise impacts of the Project and must consider any existing mitigation installed under the Mangoola Coal Project (PA 06_0014). If within 3 months of receiving this request from the landowner, the Applicant 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 Planning Secretary for resolution. Table 2: Receivers subject to Road Noise Mitigation upon request <table><tr><th>Mitigation Basis</th><th>Receiver ID</th></tr><tr><td>Road Traffic Noise</td><td>R246*, R249 and R251</td></tr></table> *Mitigation works have been implemented at this receiver under PA 06_0014	Mitigation Basis	Receiver ID	Road Traffic Noise	R246*, R249 and R251	There have been no written requests for mitigation from R246, R249 or R251 under SSD 8642.	Not triggered	
Mitigation Basis	Receiver ID							
Road Traffic Noise	R246*, R249 and R251							
B7	Noise Operating Conditions The Applicant must: a. take all reasonable steps to minimise noise from construction and operational activities, including low frequency noise and other audible	Section 4.1 of the NMP (MANOC-1772150304-4345) details noise mitigation measures to be applied to minimise noise emissions. Discussions	Compliant					

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	characteristics, as well as road and on-site rail noise associated with the development; b. implement reasonable and feasible noise attenuation measures on all plant and equipment that will operate in noise sensitive areas; c. take all reasonable steps to minimise the noise impacts of the development in noise sensitive areas during the evening and night; d. operate a comprehensive noise management system that uses a combination of predictive meteorological forecasting and real-time noise monitoring data to guide the day to day planning of mining operations, and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent; e. take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions; f. only use locomotives and rolling stock that are approved to operate on the NSW rail network in accordance with the noise limits in any relevant rolling stock operator's EPL and use reasonable endeavours to ensure that rolling stock is selected to minimise noise; g. carry out regular attended noise monitoring (at least once a month, unless otherwise agreed by the Planning Secretary) to determine whether the development is complying with the relevant conditions of this consent; and h. regularly assess the noise monitoring data and modify operations on the site to ensure compliance with the relevant conditions of this consent.	with Mangoola representatives identified measures implemented including enclosure of CHPP and conveyors, low noise rollers, siting of rail loop to take advantage of natural topography, continued roll out of noise suppression packages on plant and equipment, annual sound power testing, use of real-time noise monitors, and initial and ongoing training including 'Site Familiarisation'. To reduce road traffic noise, project-related traffic has been restricted from using Reedy Creek Road, Mangoola Road, Roxburgh Road or Castle Road. Sighted service record. Viewed random work orders. Example WO 102898296 for change of sound suppression panel. Sighted SPL measurement document 'Mobile Plant Sound Power Screening 2021' Site visit (5/07/22) of CHPP. Confirmed enclosure of CHPP and conveyors. Discussed ongoing maintenance of low noise rollers for conveyor. Section 4.2 of the NMP describes procedure for meteorological forecasting. Discussed forecasting system with Mangoola staff. Sighted example of forecast email sent to all operations staff 2x daily and discussed at daily operations meeting. Section 4.1, Section 4.2.2 and Section 6.2.3 of the NMP describe active management practices through the use of a real-time noise monitoring network. Sighted meeting minutes from daily operations meeting including discussion of noise		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		enhancing conditions and risk of elevated noise levels. Sighted email from Aurizon (20/6/2022) stating that locomotives and rolling stock are approved to operate on the NSW rail network in accordance with noise limits in RailCorp's EPL (#12208). Section 6.2.5 of the NMP describes the attended noise monitoring program. Monthly noise monitoring results are published in attended monitoring reports. Sighted monthly noise monitoring reports. Section 6.6 of the NMP details correction actions to be implemented to ensure compliance with the relevant conditions of consent.		
B8	Noise Management Plan The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: - be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; - describe the measures to be implemented to ensure: - compliance with the noise criteria and operating conditions of this consent; - best practice management is being employed; and - noise impacts of the development are minimised during noise-enhancing meteorological conditions; - describe the measures to minimise development related road traffic noise generated on public roads; - describe the noise management system in detail; and - include a monitoring program that: - uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the development; - monitors noise at locations representative of the most affected residences;	Mangoola has a current Noise Management Plan (MANOC-1772150304-4345 version 23) effective as of 22/11/2022. Review of the plan: - identifies that the plan was prepared by a suitably qualified and experienced person whose appointment has been endorsed by the Planning secretary (Section 1.2 and Appendix A); - describes noise mitigation measures including mitigation measures to be implemented during the night period and under noise enhancing conditions (Section 4 and Section 6); - describes measures to minimise road traffic noise including	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	iii. includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time; iv. adequately supports the noise management system; v. includes a protocol for distinguishing noise emissions of the development from any neighbouring developments; and vi. includes a protocol for identifying any noise-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of any such event.	restrictions on project-related traffic (Section 4.1) and additional mitigation measures Section 4.6.2); • describes noise management system (Section 4 and Section 6); and, • includes a monitoring program (Section 6.2) that evaluates and reports on the effectiveness of the noise management system and compliance against criteria and operation conditions (Section 6.2.5.1), calibration and validation of real-time noise monitoring (Section 6.2.3), a protocol for distinguishing contribution from neighbouring mines (Section 6.2.5), and defines what constitutes a noise incidence (Section 6.3 and Section 6.4).		
B9	The Applicant must not commence mining operations north of Wybong Road until the Noise Management Plan is approved by the Planning Secretary.	Noted in Section 1.2 of NMP.	Compliant	
B10	The Applicant must implement the Noise Management Plan as approved by the Planning Secretary.	Noted in Section 1.2 of NMP.	Compliant	
BLASTING				
B11	Blasting Criteria The Applicant must ensure that blasting on the site does not cause exceedances of the criteria at the locations in Table 3. Table 3: Blasting Criteria	A review of monthly monitoring reports demonstrates that there have been no exceedances of blasting criteria during SSD 8642 audit period	Compliant	

Cond No.	Condition				Comments & Evidence	Audit Findings	Recommendations																																																	
	<table><tr><th>Location</th><th>Airblast overpressure (dB(Lin Peak))</th><th>Ground vibration (mm/s)</th><th>Allowable exceedance</th></tr><tr><td rowspan="2">Residence on privately-owned land</td><td>120</td><td>10</td><td>0%</td></tr><tr><td>115</td><td>5</td><td>5% of the total number of blasts over a calendar year</td></tr><tr><td>Yariett^a Wybong Cemetery^a Wybong Hall^a Yarraman^a</td><td>133</td><td>5</td><td>0%</td></tr><tr><td>Anvil Rock^a The Book^a</td><td>-</td><td>50</td><td>0%</td></tr><tr><td>Aboriginal Rock Shelter Sites^a</td><td>-</td><td>50</td><td>0%</td></tr><tr><td>500kV transmission line pylons – tension towers</td><td>-</td><td>50</td><td>0%</td></tr><tr><td>500kV transmission line pylons – suspension towers</td><td>-</td><td>100</td><td>0%</td></tr><tr><td>11 kV transmission line – timber poles</td><td>-</td><td></td><td></td></tr><tr><td>Prescribed Water Dams</td><td>-</td><td>50</td><td>0%</td></tr><tr><td>Prescribed Tailings Dams</td><td>-</td><td>100</td><td>0%</td></tr><tr><td>Public Roads, Telecommunication infrastructure and cables</td><td></td><td>100</td><td>0%</td></tr><tr><td>All other public infrastructure</td><td></td><td>50 (or a limit determined by the structural design methodology in AS 2187.2 - 2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Planning Secretary)</td><td>0%</td></tr></table>	Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance	Residence on privately-owned land	120	10	0%	115	5	5% of the total number of blasts over a calendar year	Yariett ^a Wybong Cemetery ^a Wybong Hall ^a Yarraman ^a	133	5	0%	Anvil Rock ^a The Book ^a	-	50	0%	Aboriginal Rock Shelter Sites ^a	-	50	0%	500kV transmission line pylons – tension towers	-	50	0%	500kV transmission line pylons – suspension towers	-	100	0%	11 kV transmission line – timber poles	-			Prescribed Water Dams	-	50	0%	Prescribed Tailings Dams	-	100	0%	Public Roads, Telecommunication infrastructure and cables		100	0%	All other public infrastructure		50 (or a limit determined by the structural design methodology in AS 2187.2 - 2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Planning Secretary)	0%				
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B12	Blasting Criteria The blasting criteria in Table 3 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or infrastructure to exceed the blasting criteria, and the Applicant has advised the Department in writing of the terms of the agreement.	There are no agreements in place to exceed the blasting criteria.			Compliant																																																			
B13	Blasting Hours The Applicant must only carry out blasting on the site between 9 am and 5 pm (Monday to Saturday inclusive). No blasting is allowed on Sundays, public holidays or any other time without the prior written approval of the Planning Secretary.	Monthly monitoring reports identify that all blasts occurred within the approved blasting hours during the audit period.			Compliant																																																			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
B14	Blasting Frequency The Applicant may carry out a maximum of: a. 2 single blast events^a a day; and b. 6 single blast events^a a week, averaged over a calendar year.	A review of blast data in monthly monitoring reports noted that there were no occurrences of more than two blasts per day or an average of 6 blast events per week.	Compliant	
B15	Blasting Frequency Condition B14 does not apply to single blast events ^a that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, or to blast misfires or blasts required to ensure the safety of the mine, its workers or the general public. ^a Within conditions B14 and B15, 'single blast event' means a blast which involves either a single detonation or a number of individual blasts fired in quick succession in a discrete area of the development. Should an additional blast be required after a blast misfire, this additional blast and the blast misfire are counted as a single blast event.	Noted and acknowledged by Mangoola.	Compliant	
B16	Property Inspections If the Applicant receives a written request from the owner of any privately-owned land within 3 kilometres of any approved open cut mining pit on the site for a property inspection to establish the baseline condition of any buildings and structures on their land, or to have a previous property inspection updated, then within 2 months of receiving this request, or other timeframe agreed by the Planning Secretary, the Applicant must: a. commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to: i. establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and ii. identify measures that should be implemented to minimise the potential blasting impacts of the development on these buildings and structures; and b. give the landowner a copy of the new or updated property inspection report.	Request for property inspection received from resident of 601 Yarraman Road, Wybong on 29 July 2021 under Condition B16 of SSD 8642. RHM Consulting Engineers engaged (approved by resident) with inspection carried out on 17 September 2021 and 27 September 2021. Noted that extension to two month timeframe for issue of report granted due to COVID 19 restrictions (granted 1 September 2021). Report established baseline condition of buildings and structures, and noted measures to minimise blasting impacts. Baseline Condition Report for 601 Yarraman Road issued to resident on 12 November 2021	Compliant	
B17	Property Inspections If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with	Noted and acknowledged by Mangoola.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	the findings of the property inspection report, either party may refer the matter to the Planning Secretary for resolution.			
B18	Property Investigations If the owner of any privately-owned land within 3 kilometres of any approved open cut mining pit on the site or any other landowner where the Planning Secretary is satisfied an investigation is warranted, claims in writing that buildings or structures on their land have been damaged as a result of blasting on the site, then within 2 months of receiving this written claim, or other timeframe agreed by the Planning Secretary, the Applicant must: a. commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and b. give the landowner a copy of the property investigation report.	Condition not triggered in audit period.	Not triggered	
B19	Property Investigations If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant must repair the damage to the satisfaction of the Planning Secretary.	Noted and acknowledged by Mangoola.	Compliant	
B20	Property Investigations If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.	Noted and acknowledged by Mangoola.	Compliant	
B21	Blast Operating Conditions The Applicant must: a. take all reasonable steps to: i. ensure the safety of people and livestock from blasting impacts of the development; ii. protect public and private infrastructure and property in the vicinity of the site from blasting damage associated with the development; and iii. minimise blast-related dust and fume emissions; b. ensure that blasting on the site does not result in greater impacts to heritage items^a than those predicted in the document/s listed in condition A2(c), and develop specific measures to protect heritage items from any blasting damage associated with the development;	Section 3 of the Blast Management Plan (MANOC-1772150304-4601) provides blast management controls to ensure safety of people and livestock and prevent impacts to property and public infrastructure. Section 4 of the Conservation Management Strategy (CMS) (MANOC-1772150304-3567) provides specific measures to protect heritage items from blasting damage. Also referred to in Section 4.4.5 of the BMP.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	c. operate a comprehensive blast management system that uses a combination of meteorological forecasts and predictive blast modelling to guide the planning of blasts to minimise blasting impacts; d. minimise the frequency and duration of any public road closures for blasting, and use all reasonable efforts to avoid road closures during peak traffic periods; e. operate a suitable system to enable interested members of the public to get up-to-date information on the proposed blasting schedule on the site and any associated road closures, including notification via SMS message of the blasting schedule and associated road closures for that day and any variations to that schedule and closures; f. use all reasonable efforts to co-ordinate the timing of blasting at the site with any nearby mines to minimise cumulative blasting impacts; and g. carry out regular blast monitoring to determine whether the development is complying with the relevant conditions of this consent. ^a The locations of the heritage items referred to in paragraph (b) are shown in Appendix 7.	Section 4.2.1 of the BMP details the procedure for the review of pre-blast meteorological conditions. Section 3.2 of the BMP notes site models used for predict blasting impacts used in planning of blasts. Section 4.1 of the Closing Public Roads – Mining Procedure (MANOC-1772150304-208) details restrictions to blasting within 500m of Wybong Road to avoid peak traffic. Mangoola operates a Community Response Line and Blasting Hotline (24 hours), with the number listed on their website and published in the Mangoola 'Community Newsletter'. Additionally, Mangoola has an established register for local landowners/occupiers to whom notification of scheduled blasts is provided (Section 5.2 of BMP). Section 4.2 of the BMP identifies that blast notifications are provided to neighbouring mines. Blast monitoring is undertaken for each blast to demonstrate compliance with the conditions of consent. Operational blast controls considered to be appropriate given the demonstrated compliance with the blasting limits during the audit period.		
B22	Blast Operating Conditions The Applicant must not undertake blasting on the site within 500 metres of any public road or any land outside the site not owned by the applicant, unless the Applicant has: a. a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the public road or land, and	Blasting is carried out within 500m of Wybong Rd in accordance with the Closing Public Roads Procedure and PA 06_0014. Muswellbrook Shire Council (MSC) approval applies to the section of Wybong Road starting at Wybong Post	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	the Applicant has advised the Department in writing of the terms of this agreement; or b. demonstrated, to the satisfaction of the Planning Secretary, that the blasting can be carried out closer to the public road or land without compromising the safety of people or livestock or damaging the road or other buildings and structures and updated the Blast Management Plan to include specific mitigation measures to be implemented while blasting is being carried out within 500 metres of the road or land.	Office Road and extending west adjacent to the Main Pit (email provided in Appendix C of BMP). Approval of the agreement with TransGrid is included in Appendix A of the BMP. Section 2 of the BMP notes that Mangoola will not undertake blasting within 500m of any public road or any land outside the site not owned by the Proponent unless the Proponent has: a. demonstrated, to the satisfaction of the Planning Secretary, that the blasting can be carried out closer to the public road or land without compromising the safety of people or livestock or damaging the road or other buildings and structures; and b. updated the Blast Management Plan to include specific mitigation measures to be implemented while blasting is being carried out within 500 metres of the road or land.		
B23	Blast Management Plan The Applicant must prepare a Blast Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: a. be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; b. describe the blast management system and the measures that will be implemented to ensure compliance with the blasting criteria and conditions of this consent; c. include a Blast Fume Management Strategy for: i. minimising blast fume emissions; ii. rating and recording blast fume events; and	Mangoola has a current Blast Management Plan (MANOC-1772150304-4601 version 18) effective as of 6/10/2020 (letter from DPIE provided in Appendix A of BMP). Section 3 of BMP describes measures to ensure compliance with the blast criteria and operating conditions of PA06_0014. Section 3 of the BMP refers to the Blast Fume Management Procedure	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	iii. reporting significant blast fume events to the Department and the EPA; d. include a Road Closure Management Plan for any blasting within 500 metres of a public road, that has been prepared in consultation with relevant roads authorities and includes provisions for: i. minimising the duration of closures, both on a per event basis and weekly basis; ii. avoiding peak traffic periods as far as reasonable; and iii. co-ordinating closures with nearby mines to minimise the cumulative effect of road closures; e. identify any agreed alternative ground vibration limits for public or private infrastructure in the vicinity of the site (if relevant); f. include a strategy to monitor, mitigate and manage the effects of blasting on heritage items, particularly those identified in Appendix 7, including details of baseline (i.e. pre-blasting) and ongoing risk-based dilapidation surveys (subject to landowner access arrangements); g. include a monitoring program for evaluating and reporting on compliance with the relevant conditions of this consent; h. include a protocol for identifying any blast-related exceedance, incident or non-compliance and for notifying the Department, the EPA and relevant stakeholders of these events; i. include public notification procedures to enable members of the public, particularly surrounding residents, to get up-to-date information on the proposed blasting schedule; and j. include a protocol for investigating and responding to blast-related complaints.	(BFMP) for the minimisation of blast fume emissions. Section 3.2.1 of the BMP refers to the Closing Public Roads – Mining Procedure prepared for blasting within 500m of a public road. BMP Section 4.4.3 of BMP details agreement with TransGrid for alternative ground vibration limits (agreement provided in Appendix A of BMP). Section 4.4.5 of the BMP refers to the Conservation Management Strategy to manage the effects of blasting on heritage items. Section 4 of BMP provides blast monitoring methodology to confirm compliance with the approval, Section 4.4 of BMP provides blast impact evaluation, and Section 5.5 of BMP provides incident and exceedance reporting procedure.		
B24	Blast Management Plan The Applicant must not undertake any blasting north of Wybong Road until the Blast Management Plan is approved by the Planning Secretary.	Noted and acknowledged by Mangoola.	Compliant	
B25	Blast Management Plan The Applicant must implement the Blast Management Plan as approved by the Planning Secretary.	Noted and acknowledged by Mangoola.	Compliant	
AIR QUALITY AND GREENHOUSE GAS				
B26	Odour	No odour complaints or offensive odour emitted from the site following commencement of the development.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																
	The Applicant must ensure that no offensive odours, as defined under the POEO Act, are emitted from the site.																			
B27	Air Quality Criteria The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria listed in Table 4 at any residence on privately-owned land. Table 4: Air quality criteria <table><tr><th>Pollutant</th><th>Averaging period</th><th>Criterion</th></tr><tr><td rowspan="2">Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td>^{a, c} 25 µg/m³</td></tr><tr><td>24 hour</td><td>^b 50 µg/m³</td></tr><tr><td rowspan="2">Particulate matter < 2.5 µm (PM_{2.5})</td><td>Annual</td><td>^{a, c} 8 µg/m³</td></tr><tr><td>24 hour</td><td>^b 25 µg/m³</td></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>^{a, c} 90 µg/m³</td></tr></table> Notes: ^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources). ^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own). ^c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.	Pollutant	Averaging period	Criterion	Particulate matter < 10 µm (PM ₁₀)	Annual	^{a, c} 25 µg/m ³	24 hour	^b 50 µg/m ³	Particulate matter < 2.5 µm (PM _{2.5})	Annual	^{a, c} 8 µg/m ³	24 hour	^b 25 µg/m ³	Total suspended particulate (TSP) matter	Annual	^{a, c} 90 µg/m ³	No exceedances of the air quality criteria in Table 4 following commencement of the development.	Compliant	
Pollutant	Averaging period	Criterion																		
Particulate matter < 10 µm (PM ₁₀)	Annual	^{a, c} 25 µg/m ³																		
	24 hour	^b 50 µg/m ³																		
Particulate matter < 2.5 µm (PM _{2.5})	Annual	^{a, c} 8 µg/m ³																		
	24 hour	^b 25 µg/m ³																		
Total suspended particulate (TSP) matter	Annual	^{a, c} 90 µg/m ³																		
B28	Air Quality Criteria The air quality criteria in Table 4 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the air quality criteria, and the Applicant has advised the Department in writing of the terms of this agreement.	There are currently no agreements in place to exceed the air quality criteria.	Not triggered																	
B29	Mine-owned Land Particulate matter emissions generated by the development must not exceed the criteria listed in Table 4 at any occupied residence on mine-owned land (including land owned by another mining company) unless: a. the tenant and landowner (if the residence is owned by another mining company) have been notified of any health risks associated with such exceedances in accordance with the notification requirements under PART C of this consent;	No exceedance of the criteria listed in Table 4 following commencement of the development.	Not triggered																	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	b. the tenant of any land owned by the Applicant can terminate their tenancy agreement without penalty at any time, subject to giving 14 days notice; c. air quality monitoring is regularly undertaken to inform the tenant and landowner (if the residence is owned by another mining company) of the likely particulate matter emissions at the residence; and d. data from this monitoring is presented to the tenant and landowner in an appropriate format for a medical practitioner to assist the tenant and landowner in making informed decisions on the health risks associated with occupying the property.			
B30	Air Quality Operating Conditions The Applicant must: a. take all reasonable steps to: i. minimise odour, fume and particulate matter (including PM10 and PM2s) emissions of the development, paying particular attention to minimising wheel-generated haul road emissions; ii. manage and minimise the risk of spontaneous combustion; iii. improve energy efficiency and reduce greenhouse gas emissions of the development; iv. minimise visible off-site air pollution generated by the development; and v. minimise the extent of potential dust generating surfaces exposed on the site at any given point in time; b. ensure that all 'non-road' mobile diesel equipment used in undertaking the development includes reasonable and feasible diesel emissions reduction technology; c. operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting and real-time air quality monitoring data to guide the day to day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent; d. minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see Note c to Table 4 above);	Mangoola Open Cut's Spontaneous Combustion Management Plan details the monitoring and control measures used by Mangoola Open Cut to reduce the incidence and impact of spontaneous combustion. Blast fume is managed in accordance with Mangoola Open Cut's Blast Fume Management Procedure. This document outlines the monitoring and control measures for minimising blast fume potential and impact at Mangoola Open Cut. Mangoola implements a number of design and operational controls to limit air quality impacts for the project and are outlined in the AQMP. These were observed to be implemented during the audit period through review of reports and following the site inspection. Mangoola Open Cut air quality monitoring program includes a combination of dust deposition gauges, high volume air samplers (TSP and PM10), real-time continuous dust monitoring devices (PM10 and PM2.5) and meteorological stations. Evidence was sighted that predictive meteorological forecasting and real-	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	e. minimise air quality impacts of the development on air quality-affected land referred to in Table 10 and Table 11 for as long as the land remains privately-owned (i.e. until it is acquired); f. make all reasonable efforts to co-ordinate air quality management on the site with the air quality management at nearby mines to minimise cumulative air quality impacts; g. carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions of this consent; and h. regularly assess meteorological and air quality monitoring data, and modify operations on the site to ensure compliance with the relevant conditions of this consent.	time air quality monitoring data to guide the day-to-day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures. Mangoola has a system which provides daily forecasts of site-specific weather conditions. These forecasts are discussed at pre-shift meetings and, in the event of adverse weather conditions, modifications to activities are considered. Blasting is restricted to optimal meteorological conditions to manage compliance objectives where possible. Mangoola operates in accordance with the approved Energy Savings Action Plan (ESAP). The ESAP has been produced to comply with Schedule 3, Condition 55 of PA 06_0014. Mangoola continually assesses the viability of initiatives to improve energy efficiency and reduce greenhouse emissions from proposed operations. The ESAP identifies opportunities at Mangoola to reduce greenhouse gas emissions and energy consumption, as well as specifying actions to realise these opportunities. The three-yearly energy audit was conducted in 2019 as required by the ESAP and energy efficiency improvement opportunities were investigated as a result. In the most recent annual report (2020/21), the total emissions produced by Mangoola were 135,015 t CO₂-e which represents a ~22%		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		decrease from 2019/20 (173,405 t CO ₂ -e).		
B31	Air Quality and Greenhouse Gas Management Plan The Applicant must prepare an Air Quality and Greenhouse Gas Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: - be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; - prepared in consultation with the CCC; - describe the measures to be implemented to ensure: - compliance with the air quality criteria and operating conditions of this consent; - best practice management is being employed to: - minimise the development's air quality impacts; - minimise the development's Scope 1 and 2 greenhouse gas emissions; and - improve the development's energy efficiency; and - the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events; - describe the air quality management system in detail; and - include an air quality monitoring program, undertaken in accordance with the <i>Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales</i> (DEC, 2007), that: - establishes a diesel combustion emissions baseline; - uses monitors to evaluate the performance of the development against the air quality criteria in this consent and to guide day to day planning of mining operations; - adequately supports the air quality management system; and - includes a protocol for identifying any air quality-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.	Mangoola are currently working under the revised Air Quality Management Plan to include minor administrative updates to facilitate commencement of construction linked to SSD8642 and has been implemented during construction. Implementation of the AQMP will be staged to account for the transition from approved operations under PA 06_0014 (Stage 1) to SSD 8642 through the development and construction phase of the MCCO Project (Stage 2). As part of the minor amendments the air quality criteria (Table 2-5) as applicable for SSD 8642 and updated monitoring locations Figure 3 to include relocated monitoring locations were added. The revised AQMP was approved on 20 September 2021 by Jessie Evans as nominee of the Secretary. It is noted that the AQGGMP will be prepared prior to the commencement of mining north of Wybong Road under SSD8642.	Compliant	
B32	Air Quality and Greenhouse Gas Management Plan	No mining has occurred north of Wybong Road during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	The Applicant must not commence mining operations north of Wybong Road until the Air Quality and Greenhouse Gas Management Plan is approved by the Planning Secretary.			
B33	Air Quality and Greenhouse Gas Management Plan The Applicant must implement the Air Quality and Greenhouse Gas Management Plan as approved by the Planning Secretary.	As no mining has occurred north of Wybong Road during the audit period the AQGGMP has not been required. The AQMP is currently being implemented.	Not triggered	
B34	Monitoring and Reporting The Applicant must: a. monitor the greenhouse gas emissions generated by the Project; b. investigate ways to reduce greenhouse gas emissions generated by the project; and c. report on greenhouse gas monitoring and abatement measures in the Annual Review, to the satisfaction of the Planning Secretary.	Energy Savings Action Plan Number: MANOC-1276546935-5 Version: 8 Effective: 30/11/2019 Approved by Matthew Sprott as nominee of the Secretary on 8 February 2020. Section 2.3, 2.4, 3 & 4 of the Energy Savings Action Plan outlines the monitoring and reporting requirements for the project. Section 6.15 of the Annual Reviews outline the greenhouse gas emissions monitoring results and abatement measures for each year. The AQGGMP will supersede the ESAP following implementation.	Compliant	
METEOROLOGICAL MONITORING				
B35	Prior to the commencement of construction and for the life of the development, the Applicant must ensure that there is at least one suitable meteorological station operating in the vicinity of the site that: a. complies with the requirements in the <i>Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales</i> (DEC, 2007); and b. is capable of measuring meteorological conditions in accordance with the <i>NSW Noise Policy for Industry</i> (EPA, 2017), unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA.	EPL Point 5 Meteorological Station (North). EPL Point 18 Meteorological Station (South). Evidence sighted of regular calibrations by CBased and inspection being undertaken for the MET station.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
WATER				
B36	Water Supply The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, reduce the scale of the development to match its available water supply.	To assist in determining the likely future water security and reliability of Mangoola, a predicted water balance model for each of the conceptual mine plans for Years 2, 5 and 10 was undertaken using a daily time-step historical simulation water balance model, GOLDSIM. This model assists in determining the scale of the likely water deficit or surplus that is likely given the anticipated operations. Review of the site balance during the audit period indicates that the project had sufficient water and did not require a change in scale of the operation. 2021 AEMR indicates that 170ML taken from Hunter River during 2020-2021 wy, and 1932ML in previous year. WAL is 2758ML (General Security). Groundwater usage was 121.5ML/wy compared to licence of 700ML, with no usage from Wybong Water Source. considered overly conservative. Current revision of the groundwater model is AGE (2019). Annual Water and Salt Balance Review (latest, 2021) by Engeny Water Management indicates groundwater inflow component is small.	Compliant	
B37	Water Supply The Applicant must not use any licensable water from the Wybong Creek Water Source for mining purposes. <i>Note: This restriction does not apply to water used outside the project disturbance area for revegetation purposes associated with implementation of the Biodiversity Offset Strategy, or to any licensable water within the project disturbance area that is collected as an incidental result of approved mining activities.</i>	Mangoola does not use any licensable water from the Wybong Creek Water Source for mining purposes other than that incidentally collected by approved mining operations. The proposed water management system results in the incidental collection of runoff from	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations														
		several operational areas with clean runoff where diversions are not feasible.																
B38	Water Supply <i>Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain all necessary water licences for the development, including during rehabilitation and post mine closure.</i>	Mangoola was observed to have obtained all necessary water licences for the development, including during rehabilitation and post mine closure.	Compliant															
B39	Compensatory Water Supply Prior to commencing construction, the Applicant must notify the owners of the bores listed in Table 5 ^a that they may request monitoring of the listed bore to determine the level of drawdown from the development. In the event that monitoring data records drawdown of more than 2 metres as a result of the development, the Applicant must provide compensatory water in accordance with conditions B41 to B45. Table 5: Private bore monitoring <table><tr><th>Bore ID^b</th><th>Receiver ID</th></tr><tr><td>Bore 1</td><td>R261</td></tr><tr><td>Bore 2</td><td>R157</td></tr><tr><td>Bore 3</td><td>R130</td></tr><tr><td>GW080507</td><td>R144</td></tr><tr><td>GW201589</td><td></td></tr><tr><td>GW078502</td><td>R83</td></tr></table> ^a The receiver ID's and bore locations referred to in Table 5 are shown in Appendix 3.	Bore ID ^b	Receiver ID	Bore 1	R261	Bore 2	R157	Bore 3	R130	GW080507	R144	GW201589		GW078502	R83	Evidence sighted that the owners of the bores listed in Table 5 ^a have been notified that they may request monitoring of the listed bore to determine the level of drawdown from the development.	Compliant	
Bore ID ^b	Receiver ID																	
Bore 1	R261																	
Bore 2	R157																	
Bore 3	R130																	
GW080507	R144																	
GW201589																		
GW078502	R83																	
B40	Compensatory Water Supply Prior to the commencement of mining operations north of Wybong Road under this consent, the Applicant must notify owners of licensed privately-owned groundwater bores that are predicted to have a drawdown of greater than 2 metres as a result of the development that they may be eligible for compensatory water under conditions B41 to B45.	Mining has not commenced north of Wybong Road under this consent.	Not triggered															
B41	Compensatory Water Supply The Applicant must provide a compensatory water supply to any landowner of privately-owned land whose rightful water supply is adversely and directly impacted (other than an impact that is minor or negligible) as a	Mining has not commenced north of Wybong Road under this consent.	Not triggered															

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	result of the development, in consultation with DPIE Water, and to the satisfaction of the Planning Secretary.			
B42	Compensatory Water Supply The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent, in quality and volume, to the loss attributable to the development. The burden of proof that the impact on water supply is not due to mining, rests with the Applicant. Equivalent water supply should be provided (at least on an interim basis) as soon as practicable after the loss is identified, unless otherwise agreed with the landowner.	Mining has not commenced north of Wybong Road under this consent.	Not triggered	
B43	Compensatory Water Supply If the Applicant and the landowner cannot agree on whether the impact on water supply is attributed to the development or 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 Planning Secretary for resolution.	Mining has not commenced north of Wybong Road under this consent.	Not triggered	
B44	Compensatory Water Supply If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant must provide compensation, to the satisfaction of the Planning Secretary. Notes: The Water Management Plan (see condition 850) is required to include trigger levels for investigating potentially adverse impacts on water supplies.	Mining has not commenced north of Wybong Road under this consent.	Not triggered	
B45	Compensatory Water Supply In the event of any complaint relating to a privately-owned licenced groundwater bore which may, in the opinion of the Planning Secretary, have been adversely and directly impacted as a result of the development (other than an impact that is minor or negligible), the Applicant must, as soon as practicable, facilitate the provision of a temporary water supply, pending the outcome of any groundwater investigation and/or the provision of an alternative long term supply of water as required under conditions B41 and B42, to the satisfaction of the Planning Secretary.	There have not been any complaints regarding privately-owned licenced groundwater bore which may, in the opinion of the Planning Secretary, have been adversely and directly impacted as a result of the development.	Not triggered	
B46	Water Discharges The Applicant must ensure that all surface discharges from the site comply with:	Sandy Creek Farm Dams - Saline Water Discharges - 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in	Non-compliant	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	a. discharge limits (both volume and quality) set for the development in any EPL; or b. relevant provisions of the POEO Act and <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>.	accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall. MCCO - Dirty Water Discharge Following a period of high rainfall, a site inspection of the MCCO Project Area was conducted. During this inspection sediment laden water was observed leaving the MCCO Project Area from 1) the Wybong Road Bypass Sediment Dam via the spillway 2) a low-lying area approximately 200m east of Gate H and 3) Sediment Dam 2 via the spillway. The EPA was notified under EPL12894 - Discharge of sediment laden water and notification in accordance with the Mangoola Pollution Incident Response Management Plan.		areas considered to be high risk prior to predicted excessive rainfall events.
B47	Water Discharges The Applicant must implement all reasonable and feasible measures on the site to minimise the need to discharge saline water to the Hunter River under the Hunter River Salinity Trading Scheme.	Mangoola implements measures to manage surplus saline water by reusing it for coal washing and dust suppression. Discharges to the Hunter River are not required under average climate conditions, only under period of prolonged wet weather. HRSTS discharges were required following prolonged wet weather events during the audit period: • 1 – 6 April 2022 • 4 – 23 July 2022 WMP (2021) states runoff within saline water management system used for dust suppression.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		Pit Water Dam used for storage of saline water (process water). Pit Water Dam supplemented by Raw Water Dam (which receives Hunter River Water (pumped under licence)). Raw Water Dam has a saline seepage interception system. As well, Raw Water Dam maintained with freeboard to act as secondary storage during periods of high rainfall.		
WATER MANAGEMENT PERFORMANCE MEASURES				
B48	The Applicant must ensure that the development complies with the performance measures in Table 6. Table 6: Water management performance measures	Water Management - General: Water Management schematic provided in 2021 Annual Water and Salt Balance Review by Engeny Water Management (February 2022). Excerpt (Figure 2 and Table 1) of 2021 Annual Water and Site Balance model indicates focus on water accounting. Approach to dirty water (sediment-laden) management outlined in Erosion and Sediment Control Plan. Current revision is Version 8 (January 2020). Sighted the Tailings and water management Erosion and sediment control civil works construction report indicating implementation of the ESCP in addition during the site inspection. Alluvial Aquifers: Latest groundwater model predictions presented in AGE (2019), implying original predictions (MER, 2006) were overly conservative. 2021 Annual Water and Salt Balance Review undertaken by Engeny Water Management indicates that the	Compliant	Raw Water Dam: Recommend a 'trace line' figure of water level in Raw Water Dam be included in AEMR. Chemical and Hydrocarbons: Recommend photographic record of condition of bunds be included in the AEMR. Tailings Storages: Recommend photographic record of periodic inspection of Tailings Dams be included in the AEMR. Overburden Emplacement: Suggests consideration of mechanism to demonstrate management of potentially acid forming materials during placement. This could take the form of periodic testing. Surface Water Prioritise revegetation of the disturbance areas adjacent Wybong Road associated with the MCCO Project (i.e. visual

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations														
	<table><tr><th>Feature</th><th>Performance Measure</th></tr><tr><td>Water management – General</td><td> - Maintain separation between clean, dirty (i.e. sediment-laden) and mine water management systems - Minimise the use of clean and potable water on the site - Maximise water recycling, reuse and sharing opportunities - Minimise the use of make-up water from external sources - Design, install, operate and maintain water management systems in a proper and efficient manner - Minimise risks to the receiving environment and downstream water users </td></tr><tr><td>Alluvial aquifers</td><td> - Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: - negligible change in groundwater levels; - negligible change in groundwater quality; and - negligible impact to other groundwater users, - Maintain appropriate setbacks in accordance with the <i>Aquifer Interference Policy</i> (DPI, 2012) </td></tr><tr><td>Erosion and sediment control works</td><td> - Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book (Landcom, 2004)</i>, <i>Volume 2A: Installation of Services (DECC, 2008)</i>, <i>Volume 2C: Unsealed Roads (DECC, 2008)</i>, <i>Volume 2D: Main Road Construction (DECC, 2008)</i> and <i>Volume 2E: Mines and Quarries (DECC, 2008)</i> - Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) - Design, install and maintain any new infrastructure within 40 metres of watercourses in in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012) </td></tr><tr><td>Clean water diversions and storage infrastructure</td><td> - Design, install and maintain the clean water system to capture and convey the 100 year ARI flood - Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site </td></tr><tr><td>Flood protection works</td><td> - Design, install and maintain flood levees to protect mining areas from a 100 year ARI flood event and ensure no increased flooding impacts on roads or privately-owned land beyond that predicted in the document/s listed in condition A2(c) - Design the Wybong Road haul road overpass to include drainage measures to maintain appropriate flood management of Wybong Road, as described in the document/s listed in condition A2(c) </td></tr><tr><td>Sediment dams</td><td> - Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004)</i> and <i>2E Mines and Quarries (DECC, 2008)</i> and the requirements </td></tr></table>	Feature	Performance Measure	Water management – General	- Maintain separation between clean, dirty (i.e. sediment-laden) and mine water management systems - Minimise the use of clean and potable water on the site - Maximise water recycling, reuse and sharing opportunities - Minimise the use of make-up water from external sources - Design, install, operate and maintain water management systems in a proper and efficient manner - Minimise risks to the receiving environment and downstream water users	Alluvial aquifers	- Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: - negligible change in groundwater levels; - negligible change in groundwater quality; and - negligible impact to other groundwater users, - Maintain appropriate setbacks in accordance with the <i>Aquifer Interference Policy</i> (DPI, 2012)	Erosion and sediment control works	- Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book (Landcom, 2004)</i>, <i>Volume 2A: Installation of Services (DECC, 2008)</i>, <i>Volume 2C: Unsealed Roads (DECC, 2008)</i>, <i>Volume 2D: Main Road Construction (DECC, 2008)</i> and <i>Volume 2E: Mines and Quarries (DECC, 2008)</i> - Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) - Design, install and maintain any new infrastructure within 40 metres of watercourses in in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)	Clean water diversions and storage infrastructure	- Design, install and maintain the clean water system to capture and convey the 100 year ARI flood - Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site	Flood protection works	- Design, install and maintain flood levees to protect mining areas from a 100 year ARI flood event and ensure no increased flooding impacts on roads or privately-owned land beyond that predicted in the document/s listed in condition A2(c) - Design the Wybong Road haul road overpass to include drainage measures to maintain appropriate flood management of Wybong Road, as described in the document/s listed in condition A2(c)	Sediment dams	Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004)</i> and <i>2E Mines and Quarries (DECC, 2008)</i> and the requirements	magnitude of groundwater inflow is understood. Groundwater monitoring undertaken in accordance with Groundwater Monitoring Plan (current revision is Version 5, July 2014). Groundwater level and quality monitoring reported in monthly reports. AEMR 2021 indicates that trends in groundwater level are consistent with current predictions (AGE, 2019). Mine Water Storages: Evidence of continuous improvement and review of water management infrastructure. Excerpt is catchment analysis associated with Saline Seepage Interception System Discharge Investigation (May 2020). Chemical and Hydrocarbon Storage: AEMR (2021) indicates all bulk storage are bunded in accordance with relevant standard this was confirmed during the site inspection. Tailings Storages: Tailings Storages location presented in AEMR 2021. AEMR 2021 indicates that Tailings Dam No. 4 has sufficient capacity for life-of-mine and that no capping of Tailings Dam No. 1 and 2 occurred during 2021. Overburden Emplacements: AMER 2021 provides evidence of active tracking of handling of bulk materials. Aquatic and Riparian Environments: AEMR 2021 presents analysis of data obtained from floristic and faunal monitoring locations and indicates that		bund and recently constructed road diversion). Ongoing South Pit Rehabilitation water quality monitoring entering the dams is strongly encouraged. Early indications are that the water quality entering these dams from the Rehabilitation is of a quality that can be released from site. The condition of the dams is then leading to a degradation of the water quality with significant erosion of the dam batters. To minimise the need to capture and pump runoff from older and established rehabilitation areas back into the mine water system (which is adding strain to the system during wet periods like the present), upgrade the receiving sediment dams to be stable such that runoff entering the dams remains at a quality that can be released from site. This will involve ongoing monitoring of water quality from the established rehabilitation areas and liaison with the departments to confirm such a release is allowed.
Feature	Performance Measure																	
Water management – General	- Maintain separation between clean, dirty (i.e. sediment-laden) and mine water management systems - Minimise the use of clean and potable water on the site - Maximise water recycling, reuse and sharing opportunities - Minimise the use of make-up water from external sources - Design, install, operate and maintain water management systems in a proper and efficient manner - Minimise risks to the receiving environment and downstream water users																	
Alluvial aquifers	- Negligible impacts to alluvial aquifers as a result of the development, beyond those predicted in the document/s listed in condition A2(c), including: - negligible change in groundwater levels; - negligible change in groundwater quality; and - negligible impact to other groundwater users, - Maintain appropriate setbacks in accordance with the <i>Aquifer Interference Policy</i> (DPI, 2012)																	
Erosion and sediment control works	- Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book (Landcom, 2004)</i>, <i>Volume 2A: Installation of Services (DECC, 2008)</i>, <i>Volume 2C: Unsealed Roads (DECC, 2008)</i>, <i>Volume 2D: Main Road Construction (DECC, 2008)</i> and <i>Volume 2E: Mines and Quarries (DECC, 2008)</i> - Design, install and maintain any creek crossings in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management</i> (DPI, 2013) and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) - Design, install and maintain any new infrastructure within 40 metres of watercourses in in accordance with the guidance series for <i>Controlled Activities on Waterfront Land</i> (DPI Water, 2012)																	
Clean water diversions and storage infrastructure	- Design, install and maintain the clean water system to capture and convey the 100 year ARI flood - Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site																	
Flood protection works	- Design, install and maintain flood levees to protect mining areas from a 100 year ARI flood event and ensure no increased flooding impacts on roads or privately-owned land beyond that predicted in the document/s listed in condition A2(c) - Design the Wybong Road haul road overpass to include drainage measures to maintain appropriate flood management of Wybong Road, as described in the document/s listed in condition A2(c)																	
Sediment dams	Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004)</i> and <i>2E Mines and Quarries (DECC, 2008)</i> and the requirements																	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																
	<table><tr><th>Feature</th><th>Performance Measure</th></tr><tr><td></td><td>under the POEO Act or <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i></td></tr><tr><td>Mine water storages</td><td> - Design, install and maintain mine water storage infrastructure to avoid unlicensed or uncontrolled discharge of mine water - New storages designed to contain the 100 year ARI storm event and minimise permeability - Ensure adequate freeboards within all mine water storage dams and voids at all times to minimise the risk of discharge to surface waters </td></tr><tr><td>Raw water dam</td><td> - Water levels must be managed so that the Raw Water Dam does not discharge water from the premises except in a 1 in 250 Annual Exceedance Probability 72-hour rainfall event or greater </td></tr><tr><td>Chemical and hydrocarbon storage</td><td> - Chemical and hydrocarbon products must be stored in bunded areas in accordance with the relevant Australian Standard </td></tr><tr><td>Tailings storages</td><td> - Design and maintain tailings storage areas to encapsulate and prevent the movement of tailings seepage/leachate </td></tr><tr><td>Overburden emplacements</td><td> - Design, install and maintain emplacements to encapsulate and prevent migration of acid forming and potentially acid forming materials, and saline and sodic material - Design, install and maintain out-of-pit emplacements to prevent and/or manage long term saline seepage </td></tr><tr><td>Aquatic and riparian ecosystems</td><td> - Ensure negligible environmental consequences beyond those predicted in the document/s listed in condition A2(c) - Maintain or improve baseline channel stability of Big Flat Creek - Develop site-specific in-stream water quality objectives in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000) and Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006) </td></tr></table>	Feature	Performance Measure		under the POEO Act or <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>	Mine water storages	- Design, install and maintain mine water storage infrastructure to avoid unlicensed or uncontrolled discharge of mine water - New storages designed to contain the 100 year ARI storm event and minimise permeability - Ensure adequate freeboards within all mine water storage dams and voids at all times to minimise the risk of discharge to surface waters	Raw water dam	Water levels must be managed so that the Raw Water Dam does not discharge water from the premises except in a 1 in 250 Annual Exceedance Probability 72-hour rainfall event or greater	Chemical and hydrocarbon storage	Chemical and hydrocarbon products must be stored in bunded areas in accordance with the relevant Australian Standard	Tailings storages	Design and maintain tailings storage areas to encapsulate and prevent the movement of tailings seepage/leachate	Overburden emplacements	- Design, install and maintain emplacements to encapsulate and prevent migration of acid forming and potentially acid forming materials, and saline and sodic material - Design, install and maintain out-of-pit emplacements to prevent and/or manage long term saline seepage	Aquatic and riparian ecosystems	- Ensure negligible environmental consequences beyond those predicted in the document/s listed in condition A2(c) - Maintain or improve baseline channel stability of Big Flat Creek - Develop site-specific in-stream water quality objectives in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000) and Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006)	negligible environmental impacts have occurred beyond those predicted. .		
Feature	Performance Measure																			
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B49	The performance measures in Table 6 apply to the entire site, including all landforms constructed under previous development consents. However, these performance measures do not require any additional earthmoving works to be undertaken for landforms that have been approved and constructed under previous consents, except where those earthworks are required for the establishment of a stable and non-polluting landform.	Noted and acknowledged by Mangoola.	Compliant																	
WATER MANAGEMENT PLAN																				
B50	The Applicant must prepare a Water Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: a. be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; b. be prepared in consultation with OPIE Water; c. describe the measures to be implemented to ensure that the Applicant complies with the water management performance measures (see Table 6); d. utilise existing data from the Mangoola Coal Project, existing monitoring programs and, where practicable, other nearby mines; e. include a:	Document Number: MANOC-1772150304-6221 Version: 13 Effective: 03/12/2021 Approved by Stephen O'Donoghue as nominee of the Secretary on 3 December 2021. Evidence was provided that the WMP was prepared in consultation with EPA and DPI Water by a suitably qualified expert Stephen Downes whose	Compliant																	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	i. Site Water Balance that includes details of: • predicted annual inflows to and outflows from the site; • sources and security of water supply for the life of the development (including authorised entitlements and licences); • water storage capacity; • water use and management on the site, including any water transfers or sharing with neighbouring mines; • licensed discharge points and limits; and • reporting procedures, including the annual preparation of an updated site water balance; ii. Salt Balance that includes details of: • sources of saline material on the site; • saline material and saline water management on the site; • measures to minimise discharge of saline water from the site; • a program to notify all downstream landowners within 2 kilometres of the discharge point prior to discharging saline water to the Hunter River; and • reporting procedures, including the annual preparation of an updated salt balance; iii. Erosion and Sediment Control Plan that: • is consistent with the requirements of <i>Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book</i> (Landcom, 2004) and <i>Volume 2E: Mines and Quarries</i> (DECC, 2008); • identifies activities that could cause soil erosion, generate sediment or affect flooding; • includes a program to review the adequacy of existing flood protection works, and ensure they comply with the relevant performance measures listed in Table 6; • describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;	appointment was approved by the Secretary on 2/09/2021. The WMP contains the following: • Site Water Balance – Section 5 • Erosion and Sediment Control Plan – Appendix C • Surface Water Monitoring Plan – Appendix D • Ground Water Monitoring Program – Appendix E • Surface and Ground Water Response Plan – Appendix F As part of the MCCO project management plan approach assessment it was determined that a partial plan update was required to facilitate construction with a new WMP prepared prior to the commencement of mining north of Wybong Road under SSD8642. MCO are currently working under the revised WMP that includes minor administrative updates to facilitate commencement of construction linked to SSD8642 and has been implemented during construction. In summary, this WMP has been subjected to minor administrative updates to include approved activities and inclusive of any commitments (Umwelt, 2019a and Umwelt, 2019b) required to implemented prior to the commencement of development and construction activities associated with SSD 8642.		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	- describes the location, function, and capacity of all erosion and sediment control structures and flood management structures; and - describes what measures would be implemented to maintain (and if necessary, decommission) the structures over time; iv. Surface Water Management Plan that includes: - detailed baseline data on surface water flows and quality of watercourses and/or water bodies potentially impacted by the development, including: -stream and riparian vegetation health; - channel stability (geomorphology); and - water supply for other surface water users; - a detailed description of the surface water management system; - details of the water licensing requirements for all water storages (i.e. exempt, harvestable rights or licenced); - detailed plans, design objectives and performance criteria for water management infrastructure, including: - any approved creek diversions or restoration works associated with the development; - water run-off diversions and catch drains; - water storages and sediment dams; - emplacement areas; - backfilled pits and any final voids for the development; and - reinstated drainage networks on rehabilitated areas of the site; - an erosion and scour monitoring and maintenance program for the Big Flat Creek riparian corridor; - surface water performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts (or trends) associated with the development, for: - water supply for other water users; - downstream surface water flows and quality; - downstream flooding impacts;			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	– stream and riparian vegetation health; and – post-mining water pollution from rehabilitated areas of the site; • a program to monitor and evaluate: – compliance with the relevant performance measures listed in Table 6 and the performance criteria in this plan; – controlled and uncontrolled discharges and seepage/leachate from the site; – impacts on water supply for other water users; – surface water inflows, outflows and storage volumes, to inform the Site Water Balance; and – the effectiveness of the surface water management system and the measures in the Erosion and Sediment Control Plan; • reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results; and • a trigger action response plan to respond to any exceedances of the relevant performance measures or performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development; v. Groundwater Management Plan that includes: • detailed baseline data of groundwater levels, yield and quality for groundwater resources and groundwater dependent ecosystems potentially impacted by the development, including groundwater supply for other water users; • a detailed description of the groundwater management system; • groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts (or trends) associated with the development, on: – regional and local aquifers (alluvial and hard rock); and – groundwater supply for other water users such as licensed privately-owned groundwater bores;			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	• a program to monitor and evaluate: – compliance with the relevant performance measures listed in Table 6 and the performance criteria in this plan; – water loss/seepage from water storages into the groundwater system, including from any final voids; – groundwater inflows, outflows and storage volumes, to inform the Site Water Balance; – the hydrogeological setting of any nearby alluvial aquifers and the likelihood of any indirect impacts from the development; – impacts on groundwater dependent ecosystems; – impacts on groundwater supply for other water users; and – the effectiveness of the groundwater management system; • a contingency plan for isolating the Big Flat Creek alluvium from Anvil Creek alluvium and mining areas in the event that it is required; • reporting procedures for the results of the monitoring program, including notifying other water users of any elevated results; • a trigger action response plan to respond to any exceedances of the relevant performance measures and groundwater performance criteria, and repair, mitigate and/or offset any adverse groundwater impacts of the development; and • a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years (unless otherwise agreed by the Planning Secretary), and comparison of monitoring results with modelled predictions; and vi. a protocol to report on the measures, monitoring results and performance criteria identified above, in the Annual Review referred to in condition D11.			
B51	The Applicant must not commence mining operations north of Wybong Road until the Water Management Plan is approved by the Planning Secretary.	Mangoola has not commence mining operations north of Wybong Road.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations														
B52	The Applicant must implement the Water Management Plan as approved by the Planning Secretary.	The WMP has been found to address the relevant surface water and groundwater conditions detailed in the consents and has been implemented accordingly, as reported in the MCO Annual Review Reports available for the audit period. Following review of available monitoring data, inspection of construction and operation water management temporary and permanent infrastructure MCO are generally implementing the WMP as approved.	Compliant															
BIODIVERSITY																		
B53	Biodiversity Credits Required Prior to the commencement of mining operations north of Wybong Road, or other timeframe agreed by the Planning Secretary, the Applicant must retire the biodiversity credits specified in Table 7 below. The retirement of credits must be carried out in consultation with BCS and in accordance with the Biodiversity Offsets Scheme of the BC Act, to the satisfaction of the BCT. <i>Table 7: Biodiversity credit requirements</i> <table><tr><th>Credit Type</th><th>Credits Required</th></tr><tr><td colspan="2">Ecosystem Credits</td></tr><tr><td>HU812 Forest Red Gum grassy open forest on floodplains of the lower Hunter</td><td>1,874</td></tr><tr><td>HU816 Spotted Gum – Narrow-leaved Ironbark shrub – grass open forest of the central and lower Hunter</td><td>369</td></tr><tr><td>HU817 Narrow-leaved Ironbark – Bull Oak – Grey Box shrub – grass open forest of the central and lower Hunter</td><td>13,457</td></tr><tr><td>HU821 Blakely's Red Gum – Narrow-leaved Ironbark – Rough-barked apple shrubby woodland of the Hunter</td><td>253</td></tr><tr><td>HU906 Bull Oak grassy woodland of the central Hunter Valley</td><td>1,597</td></tr></table>	Credit Type	Credits Required	Ecosystem Credits		HU812 Forest Red Gum grassy open forest on floodplains of the lower Hunter	1,874	HU816 Spotted Gum – Narrow-leaved Ironbark shrub – grass open forest of the central and lower Hunter	369	HU817 Narrow-leaved Ironbark – Bull Oak – Grey Box shrub – grass open forest of the central and lower Hunter	13,457	HU821 Blakely's Red Gum – Narrow-leaved Ironbark – Rough-barked apple shrubby woodland of the Hunter	253	HU906 Bull Oak grassy woodland of the central Hunter Valley	1,597	The biodiversity credits will be retired by way of establishing Biodiversity Stewardship Agreements with the BCT. The applications to establish the BSAs are currently being prepared by Umwelt. To date, the land survey and mapping has been completed, Mapping of the fences and tracks is underway, and report expected to be completed in August 2022. Property title searches are completed. Final vegetation surveys and establishment of monitoring plots will be completed by mid-July 2022. Final BSA application packages should be ready to send to BCT by late August-early September 2022	Not triggered	
Credit Type	Credits Required																	
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B54	Biodiversity Credits Required The Applicant must implement the Biodiversity Offset Strategy for the development as described in the document/s listed in condition A2(c) and shown conceptually in Appendix 6.	Review of available monitoring reports and annual reviews for the audit period indicates that MCO are implementing the Biodiversity Offset Strategy as outlined in Table 11 through the BOMP following the provisions of Section 4.0. The conceptual target areas were generally achieved for each vegetation community and management strategies that need to be implemented to establish an additional 1,104 hectares of treed (vegetated) areas for Years 9-11 during the audit period. Areas viewed during the site inspection were generally trending to compliance and were confirmed through review of available documentation. The preliminary target stem densities for the key target vegetation communities are displayed in Section 4 Table 4.1 of the BOMPS. The preliminary targets are based on data obtained from existing vegetation communities on site. The preliminary target densities are reviewed and	Compliant															

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		refined as more stem count data from benchmark communities becomes available. The re-establishment significant and/or threatened plant species is outlined in Section 5.10 of the BOMPS and in the Mangoola Open Cut Translocation Plan 2018. Review of the ARs indicated that the above measures associated with the Biodiversity Offset Strategy were being implemented.		
B55	Threatened Species The Applicant must continue to implement the mitigation and management measures described in the approved Translocation Plan for Orchids and Other Threatened Flora, dated September 2012 and prepared by Umwelt for the Mangoola Coal Project disturbance area, to the satisfaction of the Planning Secretary.	Translocation Management Plan Document Number: MANOC-1772150304-2867 Version: 3.0 Effective: 5/11/2018 A summary of the implementation of the mitigation and management measures outlined in the Translocation Management Plan are outlined in Section 6.6 and 8.5 of the annual review during the audit period. It was noted in the 2021 AR that based on 11 years of monitoring, Eastcoast Flora Survey, recommend a revised monitoring program for the terrestrial orchids, which continues annual monitoring of selected recipient plots (those in mine rehabilitation, controls, and some Prasophyllum-dominated plots in offsets), introduces cyclical post-fire monitoring of most other plots for two consecutive years after burns, and discontinues all monitoring of other poorly performed plots (Translocation # 1, and all tuber translocations) (Bell, 2021).	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		Following the submission of the AR and these recommendations, a review of the plans was completed. It was determined that no changes were required to the monitoring program at that time. This was communicated to DPE in a letter from Sam Palmer (E&C Manager) dated 27 May 2022. Ongoing monitoring of translocation is included in the most recent monitoring report (Eastcoast Flora Survey, Feb 2022).		
B56	Rehabilitation Offsets Within 10 years of the cessation of mining operations, or other timeframe agreed by the Planning Secretary, the Applicant must make suitable arrangements for the long term protection of the ecological mine rehabilitation and offset areas described in the document/s listed in condition A2(c), including appropriate covenants to the satisfaction of the BCT. If the rehabilitation area does not meet the listing criteria of the targeted Plant Community Type or the completion criteria, then the Applicant must retire the relevant deficient biodiversity credits in accordance with the Biodiversity Offsets Scheme of the BC Act, to the satisfaction of the BCT. <i>Note: The rehabilitation offset performance and completion criteria form a component of the Rehabilitation Management Plan required under condition B91.</i>	Not triggered during the audit period.	Not triggered	
B57	Biodiversity Management Plan The Applicant must prepare a Biodiversity Management Plan to the satisfaction of the Planning Secretary. This plan must: a. be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; b. be prepared in consultation with BCS; c. describe the short, medium, and long term measures to be undertaken to manage the remnant vegetation and fauna habitat on the site and in any offset areas;	As part of the MCCO project management plan approach assessment it was determined that there was no update required to facilitate construction with a new Biodiversity Management Plan to be prepared prior to the commencement of mining north of Wybong Road under SSD8642 B57. The Biodiversity Offset Management Plan was found to satisfy the relevant requirements of the current consents	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	d. describe how biodiversity management would be integrated with similar measures within other management plans, including the Rehabilitation Management Plan referred to in condition B91; e. include detailed performance and completion criteria for evaluating the performance of the Biodiversity Offset Strategy and include triggers for remedial action, where these performance or completion criteria are not met; f. include strategy that describes how the biodiversity credits in Table 7 will be identified, secured and retired; g. describe the measures to be implemented within the approved disturbance areas to: i. minimise the amount of clearing; ii. minimise impacts on fauna, including undertaking pre-clearance surveys; iii. provide for the salvage, transplanting and/or propagation of threatened flora found during pre-clearance surveys, in accordance with the Guidelines for the Translocation of Threatened Plants in Australia (Vallee et al., 2004); and iv. maximise the salvage of resources, including tree hollows, vegetation and soil resources, for beneficial reuse, including fauna habitat enhancement; h. describe the measures to be implemented on the site to: i. minimise impacts to threatened ecological communities listed under the BC Act and EPBC Act, and contribute to conservation strategies for these communities; ii. minimise impacts on fauna habitat resources such as hunting and foraging areas, habitat trees, fallen timber and hollow-bearing trees; iii. enhance the quality of vegetation, vegetation connectivity and wildlife corridors including through the assisted regeneration and/or targeted revegetation of appropriate canopy, sub-canopy, understorey and ground strata; iv. introduce naturally scarce fauna habitat features such as nest boxes and salvaged tree hollows and promote the use of these introduced habitat features by threatened fauna species;	and has been prepared by suitably qualified and experienced person in in consultation with OEH and submitted to the Planning Secretary for approval. Review of the available information indicated that the conservation and BOMP objectives are generally being met. Biodiversity Offset Management Plan and Strategy Document Number: MANOC-1772150304-3505 Version: 12 Effective: 05/11/2018 Approved by Jessie Evans as nominee for the Secretary on 5 November 2018.		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	v. manage any potential conflicts with Aboriginal heritage values; vi. protect vegetation and fauna habitat outside of the approved disturbance areas; vii. manage the collection and propagation of seed from the local area; viii. control weeds, including measures to avoid and mitigate the spread of noxious weeds; ix. control feral pests with consideration of actions identified in relevant threat abatement plans; x. control erosion; xi. manage any grazing and agriculture; xii. control access to vegetated or revegetated areas; and xiii. manage bushfire hazards; i. include a seasonally-based program to monitor and report on the effectiveness of the above measures, progress against the detailed performance indicators and completion criteria, and identify improvements that could be implemented to improve biodiversity outcomes; j. identify the potential risks to the successful implementation of the biodiversity offset requirements, and include a description of the contingency measures to be implemented to mitigate these risks, including provisions for alternative direct and/or supplementary offset measures where regeneration of EECs and/or the propagation/translocation of threatened flora do not meet performance and completion criteria; and k. include details of who would be responsible for monitoring, reviewing, and implementing the plan; and l. identify the measures that would be implemented to ensure the continued implementation of the biodiversity offset and rehabilitation requirements identified under the Mangoola Coal Project (PA 06_0014), with a particular focus on the re-establishment of: i. significant and/or threatened plant communities, including: • Ironbark Woodland Complex; • Bulloak Woodland; • Paperbark Woodland;			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	• Slaty Box Woodland; • Forest Red Gum Riparian Woodland; • Rough Barked Apple Woodland; • Swamp Oak Riparian Forest; and • Weeping Myall Woodland ii. significant and/or threatened plant species, including: • Goodenia macbarronii; • Diuris tricolor, • Prasophyllum petilum; • Pterostylis praetermissa; • Cymbidium canaliculatum; • Bothriochloa biloba; • Acacia pendula; • Androcalva rosea; and • Pomaderris queenslandica; and iii. significant and/or threatened animal species, including molluscan fauna.			
B58	Biodiversity Management Plan The Applicant must not commence mining operations north of Wybong Road until the Biodiversity Management Plan is approved by the Planning Secretary.	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	
B59	Biodiversity Management Plan The Applicant must implement the Biodiversity Management Plan as approved by the Planning Secretary.	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	
B60	Conservation Bond Within 6 months of the approval of the Biodiversity Management Plan referred to in condition B57 above, or other timeframe agreed by the Planning Secretary, the Applicant must lodge a Conservation Bond with the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with the performance and completion criteria in the Biodiversity Management Plan. The sum of the bond must be determined by: a. calculating the full cost of implementing the Biodiversity Offset Strategy at third party rates (other than land acquisition costs); and	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	b. employing a suitably qualified, independent and experienced person to verify the calculated costs.			
B61	Conservation Bond The calculation of the Conservation Bond must be submitted to the Department for approval at least 2 months prior to the lodgement of the bond.	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	
B62	Conservation Bond The Conservation bond must be reviewed and if required, an updated bond must be lodged with the Department within 3 months following: a. any update or revision to the Biodiversity Management Plan; b. the completion of an Independent Environmental Audit in which recommendations relating to the implementation of the Biodiversity Offset Strategy have been made; or c. in response to a request by the Planning Secretary,	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	
B63	If the Biodiversity Offset Strategy is completed generally in accordance with the performance and completion criteria in the Biodiversity Management Plan, to the satisfaction of the Planning Secretary, or if alternate funding arrangements are provided under a long term security arrangement, the Planning Secretary will release the Conservation Bond.	Not yet completed	Not triggered	
B64	If the Biodiversity Offset Strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Planning Secretary will call in all, or part of, the Conservation Bond, and arrange for the completion of the relevant works. Notes: - The sum of the Conservation Bond may be reviewed in conjunction with any revision to the Biodiversity Offset Strategy. - Offset areas secured via a Conservation Agreement and credits retired by way of payment into the BCT do not require lodgement of a conservation bond.	Not yet completed	Not triggered	
HERITAGE				
B65	Protection of Aboriginal Heritage The Applicant must ensure that the development does not cause any direct or indirect impact on any identified heritage items located outside the approved disturbance area, beyond those predicted in the document/s listed in condition A2(c). Note: Identified heritage items are shown in the figures in Appendix 7.	A number of Aboriginal archaeological sites are recorded within or adjacent to the Mangoola project area. In order to assist with the management of Aboriginal cultural heritage, Mangoola maintains spatial information on all identified Aboriginal archaeological	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		sites within the operational geographical information system. The GIS information is utilised to inform the GDP process. There have been no direct or indirect impact on any identified heritage items located outside the approved disturbance area during the audit period.		
B66	Protection of Aboriginal Heritage If suspected human remains are discovered on the site, then all work surrounding the area must cease, and the area must be secured. The Applicant must immediately notify NSW Police Force and Heritage NSW, and work must not recommence in the area until authorised by NSW Police Force and Heritage NSW.	No human remains have been discovered on or surrounding the site during the audit period.	Not triggered	
B67	Protection of Aboriginal Heritage The Applicant must ensure that all known Aboriginal objects or Aboriginal places on the site and within any offset areas are properly recorded, and those records are kept up to date, in the Aboriginal Heritage Information Management System (AHIMS) Register.	As a result of the previous archaeological investigations at Mangoola Coal Mine, the AHIMS register records that there are 165 sites that have been salvaged under permit, five have been partially salvaged and 240 remain in situ in the landscape (although 26 of these sites are pending salvage as outlined in this ACHMP. Review of available data indicated that Aboriginal objects or Aboriginal places on the site and within any offset areas are properly recorded, and those records are kept up to date, in the AHIMS Register during the audit period.	Compliant	
B68	Aboriginal Cultural Heritage Management Plan The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the development. The plan must: a. be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Planning Secretary;	Document Number: MANOC-1772150304-6102 Version: 11.0 Effective: 29/09/2021 The ACHMP was prepared by suitably qualified and experienced person Ben	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	b. be prepared in consultation with Heritage NSW and Registered Aboriginal Parties; c. describe the measures to be implemented on the site or within any offset areas to: i. comply with the heritage-related operating conditions of this consent; ii. ensure all workers receive suitable Aboriginal cultural heritage training/inductions prior to carrying out any activities which may cause impacts to Aboriginal objects or Aboriginal places, and that suitable records are kept of these inductions; iii. protect, monitor and manage identified Aboriginal objects and Aboriginal places (including as part of any proposed archaeological investigation of potential subsurface objects and salvage of objects within the approved disturbance area) in accordance with the commitments made in the document/s listed in condition A2(c); iv. protect Aboriginal objects and Aboriginal places located outside the approved disturbance area from impacts of the development; v. manage the discovery of suspected human remains and any new Aboriginal objects or Aboriginal places, including provisions for burials, over the life of the development; vi. maintain and manage reasonable access for relevant Aboriginal stakeholders to visit Aboriginal objects and Aboriginal places (outside of the approved disturbance area); and vii. facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site; and d. include a strategy for the care, control and storage of Aboriginal objects salvaged on the site, both during the life of the development and in the long term.	Churcher whose appointment was endorsed by the Planning Secretary on 20/05/2021. The ACHMP was subsequently approved by Stephen O'Donoghue as nominee of the Planning Secretary on 29/09/2021 following consultation with Heritage NSW and Registered Aboriginal Parties. As part of the MCCO project management plan approach assessment it was determined that a full plan update was required to facilitate construction under SSD8642. The ACHMP was found to satisfy the relevant requirements of Condition B68 of SSD 8642 and sets out the procedures for the care and salvage of Aboriginal objects on Mangoola owned land within the approved Disturbance Area and adjoining Aboriginal and ecological conservation areas.		
B69	Aboriginal Cultural Heritage Management Plan The Applicant must not commence mining operations north of Wybong Road until the Aboriginal Cultural Heritage Management Plan is approved by the Planning Secretary.	The ACHMP was subsequently approved by Stephen O'Donoghue as nominee of the Planning Secretary on 29/09/2021 following consultation with Heritage NSW and Registered Aboriginal Parties.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
B70	Aboriginal Cultural Heritage Management Plan The Applicant must implement the Aboriginal Cultural Heritage Management Plan approved by the Planning Secretary.	There were no reportable incidents, performance or management issues relating to Aboriginal heritage during the audit period. During the site inspection, review of managed sites, and GDPs it was noted that MCO is satisfactorily implementing the ACHMP.	Compliant	
B71	Historic Heritage Management Plan The Applicant must prepare a Historic Heritage Management Plan for the development, in respect of all non-Aboriginal cultural heritage items, to the satisfaction of the Planning Secretary. This strategy must: a. be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; b. be prepared in consultation with the Heritage NSW, Council and relevant landowners and in accordance with the relevant Heritage NSW guidelines; c. build upon the approved Conservation Management Strategy prepared for the Mangoola Coal Project; d. describe how historic heritage values of the site would be recorded and preserved; e. identify all heritage items in the vicinity of the site and include a statement of significance for each item; f. describe the measures to be implemented on the site or within any offset areas to: i. ensure all workers on the site receive suitable heritage inductions prior to carrying out any activities which may cause impacts to historic heritage, and that suitable records are kept of these inductions; ii. protect heritage items located outside the approved disturbance area, particularly 'Castle Hill', from impacts of the development, beyond those predicted in the document/s listed in condition A2(c); iii. protect Anvil Hill Rock and "The Book" rock formations from the effects of blasting;	Document Number: MANOC-1772150304-3567 Version: 9 Effective: 09/08/2021 As part of the MCCO project management plan approach assessment it was determined that a partial plan update was required to facilitate construction with a new Historic Heritage Management Plan to be prepared prior to the commencement of mining north of Wybong Road under SSD8642. The revised CMP was submitted to the Department with acknowledgement of receipt and no comment provided. An official approval letter was not submitted due to the CMS not requiring approval under SSD8642. The version 8 was approved by Matthew Sprott as nominee to the Secretary on 16 November 2020 under PA06_0014.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations				
	iv. undertake photographic/archival recording of any items of heritage significance predicted to be impacted by the development, prior to disturbance; and v. manage any new heritage items discovered during the life of the development; g. include a program to monitor the effects of blasting on the heritage items; and h. include a strategy for the care, control and storage of heritage relics salvaged from the site.							
B72	Historic Heritage Management Plan Note: Identified heritage items are shown in the figures in Appendix 7. The Applicant must not commence mining operations north of Wybong Road until the Historic Heritage Management Plan is approved by the Planning Secretary.	Mining has not occurred north of Wybong Road during the audit period.	Not triggered					
B73	Historic Heritage Management Plan The Applicant must implement the Historic Heritage Management Plan as approved by the Planning Secretary.	Mining has not occurred north of Wybong Road during the audit period. During the site inspection and following review of incidents and activities during the audit period it was noted that MCO is satisfactorily implementing the current CMP.	Not triggered					
VISUAL								
B74	The Applicant must implement additional visual impact mitigation measures, as described in the report titled <i>Anvil Hill Coal Mine Visual Impact Mitigation Report</i> (Hansen Bailey 2008), if requested in writing by the residents in Table 8. These mitigation measures must be: a. reasonable and feasible and aimed at reducing the visibility of the Mangoola Coal Project from significantly affected residences; and b. implemented in consultation with the landowner and to the satisfaction of the Planning Secretary. Table 8: Visual Mitigation <table><tr><th>Mitigation</th><th>Receiver ID</th></tr><tr><td>Visual Mitigation</td><td>104, 110, 124, 125A, 125B, 125C, 134A, 134D, 134C, 182, 183A, 183B, 183C, 191, 193, 200, 227, 240, 241A, 241B and 241C.</td></tr></table>	Mitigation	Receiver ID	Visual Mitigation	104, 110, 124, 125A, 125B, 125C, 134A, 134D, 134C, 182, 183A, 183B, 183C, 191, 193, 200, 227, 240, 241A, 241B and 241C.	Visual tree screening was established via direct seeding of appropriate local flora species along sections of Yarraman Road during 2018 to reduce visual exposure as the mine progresses to the north-west. As a result of the ongoing drought conditions in 2019, the direct seeding campaign undertaken in 2018 resulted in no germination and 2019 there was no attempt to re-sow due to ongoing drought. In 2020, the paddocks were sprayed (where required)/slashed and planted with tube-stock. Additional	Not triggered	
Mitigation	Receiver ID							
Visual Mitigation	104, 110, 124, 125A, 125B, 125C, 134A, 134D, 134C, 182, 183A, 183B, 183C, 191, 193, 200, 227, 240, 241A, 241B and 241C.							

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		areas along Wybong Rd received the same treatment. No request for mitigation was received during the audit period.		
B75	The Applicant must: a. take all reasonable steps to minimise the visual and off-site lighting impacts of the development; b. take all reasonable steps to shield views of mining operations and associated equipment from users of public roads and privately-owned residences; c. ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure; d. ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal (except where required for emergency safety purposes); e. ensure that all external lighting associated with the development complies with relevant Australian Standards including the latest version of <i>Australian Standard AS4282 (INT) 2019 - Control of Obtrusive Effects of Outdoor Lighting</i>; f. implement a landscaping strategy to shield public views of the development that includes a road-side tree planting and/or maintenance schedule for all vegetation screens and bunds shown in Appendix 8; and g. ensure that the visual appearance of any new buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape.	Review of the complaints register, OCE inspections, and inspection of visual bunds indicated that MCO are generally implementing controls to minimise the visual impacts of the operation. MCO were noted to be taking all reasonable steps to minimise the visual and off-site lighting impacts of the development during the audit period. Noted that new fixed LED lighting was installed at the CHPP during the audit period and was linked to a compliant on 24/08/2020. MCO implements the Lighting Plant Procedure to ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal. No new buildings have been constructed during the audit period.	Compliant	A lighting register should be managed to ensure that new lighting utilised at the site is adequately positioned and conforms with AS4282. Undertake an updated external lighting audit to ensure compliance with <i>AS4282 (INT) 2019 - Control of Obtrusive Effects of Outdoor Lighting</i>.
B76	Visual Impact Management Plan The Applicant must prepare a Visual Impact Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: a. be prepared by a suitably qualified and experienced person/s; b. describe the measures to be implemented to minimise and manage the visual and off-site lighting impacts of the development; c. include a landscaping strategy to reasonably minimise or shield public views of the development (e.g. implementation of visual bunds to shield public views from the Wybong Post Office Rd realignment) from key vantage points in the public and/or private domain, that includes bunds, road-side tree planting and maintenance schedule; and	Following the review MCO developed an approach to ensure that construction activities required to be completed as part of the MCOO Project were covered by an appropriate suite of management plans. The VIMP was determined to not be required during construction and will be prepared and implemented prior to mining occurring north of Wybong Road.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	d. include a program to monitor, maintain and report on the implementation and effectiveness of the visual impact mitigation measures to the satisfaction of the Planning Secretary.	MCO was issued with a letter from DPE on 16 July 2021 indicating that they had reviewed the approach to updating the management plans and confirmed that they were satisfied the staged approach is appropriate and would ensure compliance with relevant conditions of consent.		
B77	Visual Impact Management Plan The Applicant must not commence mining operations north of Wybong Road until the Visual Impact Management Plan is approved by the Planning Secretary.	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	
B78	Visual Impact Management Plan The Applicant must implement the Visual Impact Management Plan as approved by the Planning Secretary.	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	
WASTE				
B79	The Applicant must: a. take all reasonable steps to minimise the waste (including coal rejects and tailings) generated by the development; b. classify all waste in accordance with the <i>Waste Classification Guidelines</i> (EPA, 2014); c. dispose of all waste at appropriately licensed waste facilities; d. manage on-site sewage treatment and disposal in accordance with the requirements of Council; and e. monitor and report on the effectiveness of the waste minimisation and management measures in the Annual Review referred to in condition D11.	Evidence of waste generation monitoring is contained in the Annual Reviews for the audit period. Waste production has generally declined in the audit period between 2019 and 2021. Waste contractor spreadsheets were also viewed during the site inspection which records mixed waste, recycling, effluent, oil, scrap metal, oil filters. Treated wastewater is only used for reused on site for CHPP operation and dust suppression and is not used for irrigation on site. MSC issued an approval to operate an on-site sewage management system on 13/09/2021 valid until 29/07/2026. Review of monitoring reports indicates that Mangoola managing on-site sewage treatment and disposal in	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		accordance with the requirements of Council.		
B80	Except as expressly permitted in an applicable EPL, specific resource recovery order or exemption under the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> , the Applicant must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.	No waste was received during the audit period.	Compliant	
DANGEROUS GOODS				
B81	The Applicant must ensure that the storage, handling, and transport of: a. dangerous goods is carried out in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the <i>Dangerous Goods Code</i>; and b. explosives are managed in accordance with the requirements of the Resources Regulator.	Mangoola operates under the Hazardous Substances and Dangerous Goods Procedure. This procedure outlines specific management relating to AS and transportation requirements. AS1940 audit was conducted in February 2022.	Compliant	
BUSHFIRE MANAGEMENT				
B82	The Applicant must: a. ensure that the development: i. provides for asset protection in accordance with the relevant requirements in the <i>Planning for Bush Fire Protection</i> (RFS, 2019) guideline; and ii. ensure that there is suitable equipment to respond to any fires on the site; and b. assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.	Mangoola engage a bushfire consultant to annually assess the APZ area for the mine. Sighted the bushfire hazard inspection form for the inspection undertaken on October 5/6, 2021, by Tony Hawkins - Bushfire Consultant - Kleinfelder Australia Pty. Ltd. A review of the tenanted properties was also conducted in 2020. No fires have been recorded during the audit period.	Compliant	
B83	Prior to commencing mining operations under this consent, the Applicant must prepare a Bushfire Management Plan for the development in consultation with RFS. This plan must include a: a. contact person and 24 hour contact phone number; b. schedule and description of proposed bushfire mitigation works, including: i. location of vegetation and areas that include species and/or ecological communities that are listed under the <i>Threatened</i>	As part of the MCCO project management plan approach assessment it was determined that the Bushfire Management Plan was not required for construction and is to be prepared prior to the commencement of mining north of Wybong Road under SSD8642 B82.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	<i>Species Conservation Act 1995</i> and or EPBC Act within the site; ii. location of water supply; and iii. internal access roads; c. plan identifying the location and storage of bulk flammable liquids and materials; d. 'hot works' management plan, including: i. circumstances when 'hot works' are limited or prohibited; and ii. safety measures to be implemented when 'hot works' are being conducted; and e. emergency/evacuation plan in accordance with the <i>Guidelines for the Preparation of Emergency/Evacuation Plans (RFS)</i> and Australian Standard <i>AS3745 Planning for Emergencies in Facilities</i>.			
B84	The Applicant must implement the Bushfire Management Plan in consultation with RFS.	As part of the MCCO project management plan approach assessment it was determined that the Bushfire Management Plan was not required for construction and is to be prepared prior to the commencement of mining north of Wybong Road under SSD8642 B82.	Not triggered	
REHABILITATION				
B85	Rehabilitation Objectives The Applicant must rehabilitate the site in accordance with the conditions imposed on the mining lease(s) associated with the development under the <i>Mining Act 1992</i>. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the documents listed in condition A2(c) and shown in Appendix 9, and must comply with the objectives in Table 9. Table 9: Rehabilitation and Mine Closure Objectives	Whilst the specific rehabilitation objectives were 'not triggered' as they refer to final stage rehabilitation outcomes, the progression of rehabilitation towards these objectives and outcomes was assessed during the site inspection, and via rehabilitation monitoring reports. The site showed adequate measures in place for the creation and management of a safe, stable and non-polluting mine site. These measures included surface ripping, revegetation, erosion control structures,	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations														
	<table><tr><th>Feature</th><th>Objective</th></tr><tr><td>All areas of the site affected by the development</td><td> • Safe, stable and non-polluting • Fit for the intended post-mining land use/s • Establish the final landform and post-mining land use/s as soon as practicable after cessation of mining operations </td></tr><tr><td>Areas proposed for native ecosystem re-establishment</td><td> • Establish/restore native woodland ecosystems capable of being self-sustaining in perpetuity (as conditioned by conservation agreements and other covenants implemented under the Biodiversity Offset Strategy) • Establish local plant community types, with a particular focus on the plant communities and species shown in Appendix 9 • Establish: – riparian habitat within any diverted and/or re-established creek lines and retained water features; – habitat, feed and foraging resources for threatened fauna species; and – vegetation connectivity and wildlife corridors, as far as is reasonable and feasible </td></tr><tr><td>Areas proposed for agricultural land</td><td> • Establish/restore grassland areas to support sustainable agricultural activities • Use species found in the local area that are suitable for pasture production • Achieve land and soil capabilities that suitable for the intended post-mining land-use • Located adjacent to surrounding agricultural land, where practicable </td></tr><tr><td>Final Landform</td><td> • Stable and sustainable for the intended post-mining land use/s • Integrated with surrounding natural landforms and other mine rehabilitated landforms, to the greatest extent practicable • Incorporate relief patterns and design principles consistent with natural drainage that mimic natural topography and mitigate erosion • Maximise surface water drainage to the natural environment (i.e. free draining landforms with the exception of final void catchments) • Minimise visual impacts, where practicable • Minimise post mining fugitive emissions from exposed coal seams • Minimise surface water flows and impacts on threatened orchid species </td></tr><tr><td>Final voids</td><td> • Designed as long term groundwater sink to limit the release of saline water into the surrounding environment, as described in the documents listed in condition A2(c), unless further mine planning and final landform design processes identify a more suitable outcome for the final voids (see condition B88) • Optimise the size and depth of final voids to ensure the final landform is stable and non-polluting • Minimise to the greatest extent practicable: – the size and depth; – the drainage catchment of final voids; – any high wall instability risk; and – the risk of flood interaction • Maximise potential for beneficial reuse, where practicable </td></tr><tr><td>Creek restoration works</td><td> • Engineered to be hydraulically and geomorphologically stable </td></tr></table>	Feature	Objective	All areas of the site affected by the development	• Safe, stable and non-polluting • Fit for the intended post-mining land use/s • Establish the final landform and post-mining land use/s as soon as practicable after cessation of mining operations	Areas proposed for native ecosystem re-establishment	• Establish/restore native woodland ecosystems capable of being self-sustaining in perpetuity (as conditioned by conservation agreements and other covenants implemented under the Biodiversity Offset Strategy) • Establish local plant community types, with a particular focus on the plant communities and species shown in Appendix 9 • Establish: – riparian habitat within any diverted and/or re-established creek lines and retained water features; – habitat, feed and foraging resources for threatened fauna species; and – vegetation connectivity and wildlife corridors, as far as is reasonable and feasible	Areas proposed for agricultural land	• Establish/restore grassland areas to support sustainable agricultural activities • Use species found in the local area that are suitable for pasture production • Achieve land and soil capabilities that suitable for the intended post-mining land-use • Located adjacent to surrounding agricultural land, where practicable	Final Landform	• Stable and sustainable for the intended post-mining land use/s • Integrated with surrounding natural landforms and other mine rehabilitated landforms, to the greatest extent practicable • Incorporate relief patterns and design principles consistent with natural drainage that mimic natural topography and mitigate erosion • Maximise surface water drainage to the natural environment (i.e. free draining landforms with the exception of final void catchments) • Minimise visual impacts, where practicable • Minimise post mining fugitive emissions from exposed coal seams • Minimise surface water flows and impacts on threatened orchid species	Final voids	• Designed as long term groundwater sink to limit the release of saline water into the surrounding environment, as described in the documents listed in condition A2(c), unless further mine planning and final landform design processes identify a more suitable outcome for the final voids (see condition B88) • Optimise the size and depth of final voids to ensure the final landform is stable and non-polluting • Minimise to the greatest extent practicable: – the size and depth; – the drainage catchment of final voids; – any high wall instability risk; and – the risk of flood interaction • Maximise potential for beneficial reuse, where practicable	Creek restoration works	• Engineered to be hydraulically and geomorphologically stable	sedimentation capture dams, pumping systems, and drainage structures. The rehabilitation of surface disturbance was evident. The buffer land was maintained for agricultural capabilities. Continue with the current rehabilitation activities and procedures. The site is having very good success in early-stage rehabilitation during some dry years, which have created challenging conditions for rehabilitation establishment. Areas of rehabilitation across the entire site were inspected and observations were made, including photographs. Landform – The geomorphic landforms appear to be stable and drainage lines have held up well in recent rains. There was evidence that rills developing into gullies (greater than 0.3m) were monitored and repaired. Surface Prep – The deep contour ripping is effective in promoting water infiltration and minimising erosion whilst creating effective microclimates for high success rate of germinating seeds. Topsoil Mgt – The mulching and stripping process is well developed on site. Examples of higher diversity in direct placed soil areas shows a preference for this in future, where practical. Example of soil amelioration with gypsum was noted on site. Temporary Rehab – There were examples on site where temporary rehab was being applied. Great to see		
Feature	Objective																	
All areas of the site affected by the development	• Safe, stable and non-polluting • Fit for the intended post-mining land use/s • Establish the final landform and post-mining land use/s as soon as practicable after cessation of mining operations																	
Areas proposed for native ecosystem re-establishment	• Establish/restore native woodland ecosystems capable of being self-sustaining in perpetuity (as conditioned by conservation agreements and other covenants implemented under the Biodiversity Offset Strategy) • Establish local plant community types, with a particular focus on the plant communities and species shown in Appendix 9 • Establish: – riparian habitat within any diverted and/or re-established creek lines and retained water features; – habitat, feed and foraging resources for threatened fauna species; and – vegetation connectivity and wildlife corridors, as far as is reasonable and feasible																	
Areas proposed for agricultural land	• Establish/restore grassland areas to support sustainable agricultural activities • Use species found in the local area that are suitable for pasture production • Achieve land and soil capabilities that suitable for the intended post-mining land-use • Located adjacent to surrounding agricultural land, where practicable																	
Final Landform	• Stable and sustainable for the intended post-mining land use/s • Integrated with surrounding natural landforms and other mine rehabilitated landforms, to the greatest extent practicable • Incorporate relief patterns and design principles consistent with natural drainage that mimic natural topography and mitigate erosion • Maximise surface water drainage to the natural environment (i.e. free draining landforms with the exception of final void catchments) • Minimise visual impacts, where practicable • Minimise post mining fugitive emissions from exposed coal seams • Minimise surface water flows and impacts on threatened orchid species																	
Final voids	• Designed as long term groundwater sink to limit the release of saline water into the surrounding environment, as described in the documents listed in condition A2(c), unless further mine planning and final landform design processes identify a more suitable outcome for the final voids (see condition B88) • Optimise the size and depth of final voids to ensure the final landform is stable and non-polluting • Minimise to the greatest extent practicable: – the size and depth; – the drainage catchment of final voids; – any high wall instability risk; and – the risk of flood interaction • Maximise potential for beneficial reuse, where practicable																	
Creek restoration works	• Engineered to be hydraulically and geomorphologically stable																	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations												
	<table><tr><th>Feature</th><th>Objective</th></tr><tr><td></td><td> - Incorporate erosion control measures based on vegetation and engineering revetments - Incorporate structures for aquatic habitat - Revegetate with suitable native species </td></tr><tr><td>Surface infrastructure of the development</td><td> - To be decommissioned, removed and rehabilitated, unless the Resources Regulator agrees otherwise </td></tr><tr><td>Rehabilitation materials</td><td> - Materials from areas disturbed under this consent (including topsoils, substrates and seeds) are to be recovered, managed and reused as rehabilitation resources, to the greatest extent practicable </td></tr><tr><td>Water quality</td><td> - Water retained on the site is fit for the intended post-mining land use/s - Water discharged from the site is suitable for receiving waters and fit for aquatic ecology and riparian vegetation </td></tr><tr><td>Community</td><td> - Ensure public safety - Minimise adverse socio-economic effects associated with mine closure </td></tr></table>	Feature	Objective		- Incorporate erosion control measures based on vegetation and engineering revetments - Incorporate structures for aquatic habitat - Revegetate with suitable native species	Surface infrastructure of the development	To be decommissioned, removed and rehabilitated, unless the Resources Regulator agrees otherwise	Rehabilitation materials	Materials from areas disturbed under this consent (including topsoils, substrates and seeds) are to be recovered, managed and reused as rehabilitation resources, to the greatest extent practicable	Water quality	- Water retained on the site is fit for the intended post-mining land use/s - Water discharged from the site is suitable for receiving waters and fit for aquatic ecology and riparian vegetation	Community	- Ensure public safety - Minimise adverse socio-economic effects associated with mine closure	these areas are sewn with permanent seed mixes to build organic matter (future mulching) and seed bank. Weed Mgt – The site’s philosophy of ‘hit it early, hit it hard’ in regard to weed spraying in particular invasive perennials has proven more cost effective in the long term. Good budget and continual vigilance show results. Vegetation – Monitoring and management of the vegetation is a major focus on site. All rehab areas are well signposted with adequate tracks for inspections and maintenance, some tracks require maintenance after recent rains. The vegetation appeared healthy with very few limiting factors to inhibit success. Secondary succession was noted and the process of leaf litter cycling into nutrient and soil processes is obvious amongst the rehabilitation. Feral Animals – actively controlled and managed.		
Feature	Objective															
	- Incorporate erosion control measures based on vegetation and engineering revetments - Incorporate structures for aquatic habitat - Revegetate with suitable native species															
Surface infrastructure of the development	To be decommissioned, removed and rehabilitated, unless the Resources Regulator agrees otherwise															
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Water quality	- Water retained on the site is fit for the intended post-mining land use/s - Water discharged from the site is suitable for receiving waters and fit for aquatic ecology and riparian vegetation															
Community	- Ensure public safety - Minimise adverse socio-economic effects associated with mine closure															
B86	Rehabilitation Objectives The Rehabilitation and Mine Closure Objectives in Table 9 apply to the entire site, including all landforms constructed under either this consent or previous consents. However, the Applicant is not required to undertake any additional earthmoving works on landforms that have been approved and constructed under previous consents, except where those earthworks are required for the establishment of a stable, non-polluting and free-draining landform.	Noted	Not triggered													
B87	Progressive Rehabilitation The Applicant must rehabilitate^a the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable steps must be taken to minimise the total area exposed at any time. Interim stabilisation and temporary vegetation strategies must be employed when areas prone to dust generation, soil erosion and weed incursion cannot be permanently rehabilitated.	The audit found the progressive rehabilitation was being undertaken as soon as reasonably practicable following disturbance.	Compliant													

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	^a <i>This condition does not prevent further disturbance at some later stage of the development of areas that have been rehabilitated.</i>			
B88	Rehabilitation Strategy The Applicant must prepare a Rehabilitation Strategy for all land disturbed by the development to the satisfaction of the Planning Secretary. This strategy must: - be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; - be prepared in consultation with the Resources Regulator and Council; - build upon the Rehabilitation and Mine Closure Objectives in Table 9, describe the overall rehabilitation outcomes for the site, and address all aspects of rehabilitation including mine closure, final landform (including final voids), post-mining land use/s, water management and management of any offset areas within the site; - align with strategic rehabilitation and mine closure objectives (Table 9); - address the principles of the <i>Strategic Framework for Mine Closure</i> (ANZMEC and MCA, 2000); - describe how the rehabilitation measures would be integrated with the measures in the Biodiversity Management Plan referred to in condition B57 and the Visual Impact Management Plan referred to in condition B76; - describe how rehabilitation will be integrated with the mine planning process, including a plan to address premature or temporary mine closure; - include indicative mine plans and scheduling for life-of mine rehabilitation showing each rehabilitation domain; - include details of target vegetation communities and species to be established within the proposed revegetation areas; - investigate opportunities to refine and improve the final landform and final void outcomes over time; - include a risks and opportunities assessment and risk register; - include a post-mining land use strategy to investigate and facilitate post-mining beneficial land uses for the site (including the final void), that: - align with regional and local strategic land use planning objectives and outcomes; - support a sustainable future for the local community;	As part of the MCCO project management plan approach assessment it was determined that the Rehabilitation Strategy was not required for construction and is to be prepared prior to the commencement of mining north of Wybong Road under SSD8642 B88. The existing MOP covers the below items. - MOP prepared by Mangoola in consultation with various government departments. - Section 1.4 - Sections 4.0, 6.0-10.0 - Section 6.0 - Section 1 - Section 7.0 - Section 2.3.11 - Section 2.0, 5.0, 7.0 - Section 3.3.2.7, Plan 4 - Final void plans included in MOP, and annual BBRA includes opportunities for improving void outcomes, evidence of discussions supplied. - Included. - Section 4 covers Post Mining Land Use. - Stakeholder Engagement Plan referenced in MOP. - Annual BBRA for mine closure	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	iii. utilise existing mining infrastructure, where practicable; and iv. avoid disturbing self-sustaining native ecosystems, where practicable; m. include a stakeholder engagement plan to guide rehabilitation and mine closure planning processes and outcomes; n. investigate ways to minimise adverse socio-economic effects associated with rehabilitation and mine closure; and o. include a program to periodically review and update this strategy at least every three years.	o. MOP reviewed annually at a minimum, triggered by submission on AR.		
B89	Rehabilitation Strategy The Applicant must not commence mining operations north of Wybong Road until the Rehabilitation Strategy is approved by the Planning Secretary.	Mining has not commenced north of Wybong Road.	Not triggered	
B90	Rehabilitation Strategy The Applicant must implement the Rehabilitation Strategy approved by the Planning Secretary.	Mining has not commenced north of Wybong Road.	Not triggered	
B91	Rehabilitation Management Plan The Applicant must prepare a Rehabilitation Management Plan for the development, in accordance with the conditions imposed on the mining lease(s) associated with the development under the <i>Mining Act 1992</i> . This plan must: a. be prepared in consultation with the Department and Council; b. be prepared in accordance with any relevant Resources Regulator Guidelines; c. include detailed performance indicators and completion criteria for each rehabilitation domain, and triggers for remedial actions; d. include an overview of the identified risks to achieving successful rehabilitation; e. describe the measures to be implemented on the site to achieve the Rehabilitation and Mine Closure Objectives in Table 9, the requirements of the Rehabilitation Strategy referred to in condition B88 and the criteria in paragraph (c); f. include a program to monitor, independently audit and report on progress against the criteria in paragraph (c) and the effectiveness of the measures in paragraph (d);	Rehabilitation Management Plan (RMP) has been prepared in accordance with the NSW Resources Regulator (NSW RR) Form and Way - Rehabilitation Management Plan for Large Mines (NSW RR, July 2021). This RMP has been developed to satisfy the requirements of Condition B91 of Development Consent State Significant Development (SSD) 8642 and Mining Lease (ML) conditions for ML 1815 and ML 1817. A separate Mining Operations Plan (MOP) (Mangoola Coal Mine Operations Plan, January 2021 – December 2021) was prepared in accordance with relevant conditions associated with the existing ML1626 and ML1747. The MOP prevailed as the governing document for ML1626 and ML1747 rehabilitation	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	g. describe any further studies, work, research or consultation that will be undertaken to expand the site-specific rehabilitation knowledge base, reduce uncertainty and improve rehabilitation outcomes; and h. outline intervention and adaptive management techniques to ensure rehabilitation remains on a trajectory of achieving the Rehabilitation and Mine Closure Objectives, Rehabilitation Completion Criteria and the Final Landform in the Rehabilitation Management Plan as soon as reasonably practical.	requirements until the expiry of the transitional period on 2 July 2022, at which point the MOP was superseded the RMP and supporting Annual Rehabilitation Report and Forward Program (ARRFP).		
TRANSPORT				
B92	Monitoring of Coal Transport The Applicant must: a. keep accurate records of the: i. amount of coal transported from the site (on a daily basis); and ii. date and time of each train movement generated by the development; and b. publish these results in the Annual Review.	Coal transport and haulage records are contained in Appendix F of each Annual Review during the audit period.	Compliant	
B93	Train Movements and Refuelling The Applicant must: a. restrict train movements to/from site to a maximum of 20 train movements a day (i.e. 10 trains in; 10 trains out); b. use reasonable endeavours to ensure that its rail spur is only accessed by locomotives that are approved to operate on the NSW rail network in accordance with relevant noise limits imposed in any relevant rolling stock operator's EPL; and c. only refuel trains on site that are directly associated with the coal transport operations of the development.	Review of the train movements to/from site were restricted to a maximum of 20 train movements a day during the audit period. Review email from Aurizon indicating that: • The Aurizon locomotives that are operating in NSW are certified to operate in NSW by ARTC and Transport for NSW (exception being the 5000 class due to the axle load in the TfNSW network). • Aurizon currently do not fuel locomotives at Mangoola, however if we needed to the only trains that would fuel is an empty coal train that was scheduled to load coal at Mangoola. No other commodity	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		service would be planned to fuel at Mangoola.		
B94	Road Maintenance The Applicant must: a. prepare a pre-dilapidation survey of the road transport routes prior to the commencement of any construction or decommissioning works; b. prepare a post-dilapidation survey of the road transport routes within 1 month of the completion of construction or decommissioning works, or other timeframe agreed by the applicable roads authority; and c. rehabilitate and/or make good any construction and decommissioning related damage identified in the post-dilapidation survey prepared under condition B94(b) within 2 months of completing the post-dilapidation survey, or other timeframe agreed by the applicable roads authority, to the satisfaction of the applicable roads authority.	A pre-dilapidation road survey was undertaken in consultation with MSC prior to the commencement of construction. MCCO Project construction activities in December 2021 were undertaken in accordance with requirements of a separate Part 5 EP&A Act and s138 Roads Act approval with MSC and were limited to the construction of access points and gate installation from Wybong Road to the MCCO Project Area – the associated Review of Environmental Factors for Vehicular Access Points (Umwelt Nov 2021) provided details of these works. Minutes arising from a meeting between MSC and Mangoola dated 25 Nov 2021 describe the separate gate access approval works and also the upcoming dilapidation works conducted on 7th Jan 2022 (inspection completed 10th Jan 2022). Wider construction activities in accordance with SSD 8642 commenced from the 11th January 2022, post completion of the road dilapidation survey conducted on the 7th January 2022, with results documented in the report titled Wybong Road Dilapidation Survey Report (Qualtest 25th March 2022). Construction was occurring during the audit period with post dilapidation and rehab works to occur outside of the audit period.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
B95	Road Maintenance If the construction and/or decommissioning of the development is to be stage, the obligations in this condition apply to each stage.	Noted and acknowledged by Mangoola.	Compliant	
B96	Road Maintenance If there is a dispute about the scope of any remedial works or the implementation of the works, then either party may refer the matter to the Planning Secretary for resolution.	No disputes during the audit period.	Compliant	
B97	Thomas Mitchell Drive After the commencement of construction (as notified under condition A13(b)), the Applicant must contribute to the upgrade and maintenance of Thomas Mitchell Drive, and the upgrade of the Thomas Mitchell Drive/Denman Road intersection, proportionate to its impact (based on usage) on that infrastructure, in accordance with the Thomas Mitchell Drive Contributions Study, unless otherwise agreed with the Planning Secretary. For Thomas Mitchell Drive, the contributions must: a. be paid to Council by the end of the financial year in which construction commences for the upgrade works; and b. be paid to Council in accordance with the maintenance schedule established in accordance with the Thomas Mitchell Drive Contributions Study during the life of the development (commencing from the year construction commences as notified under condition A13(b)), unless otherwise agreed with Council. For the Thomas Mitchell Drive/Denman Road intersection, the contributions must be paid to the relevant road authority undertaking the works (or if another mining company is undertaking the works, to that mining company) within three months of the completion of the intersection upgrade works to the satisfaction of TfNSW and Council, unless otherwise agreed with the Planning Secretary. Notes: • If there is a dispute between the relevant parties about the implementation of this condition, then any party may refer the matter to the Planning Secretary for resolution. • In making a determination about the applicable contribution/s under condition B97, the Planning Secretary shall take into account the contributions already	Extension letter from DPIE to BHP and Invoice from Muswellbrook Shire were sighted during the audit outlining that the Department requests that HVEC engage with the relevant roads authorities about the implementation of the intersection upgrade as soon as possible and with sufficient lead time to ensure that the works are completed to the satisfaction of the relevant roads authorities by no later than 31 December 2022.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	<i>paid and currently required to be paid towards the upgrade and maintenance of the local road network and any associated Voluntary Planning Agreement with Council.</i>			
B98	Restriction on Transport Routes The Applicant must ensure that: a. all over-dimensional vehicle access to and from the site is via Wybong Road east of the mine access road; and b. all heavy vehicle access to and from the site is via Wybong Road east of the mine access road, unless the applicable roads authority agrees otherwise. Note: <i>The Applicant is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of over-dimension vehicles on the road network.</i>	Not triggered during the audit period.	Not triggered	
B99	Restriction on Transport Routes Project related traffic must not use Reedy Creek Road, Mangoola Road, Roxburgh Road or Castlerock Road to get to or from the site, except in an emergency to avoid the loss of lives, property and/or prevent environmental harm.	The road access requirements are outlined in the site TMP and the Local Roads Traffic Policy. Local road access is communicated to all employees through the site induction. Signs are posted on Reedy Creek Rd, Mangoola Rd, Roxburgh Rd and Castlerock Rd reiterating that these are to be used for local traffic only and no project related traffic. No evidence or requirement to use listed roads in the audit period.	Not triggered	
B100	Restriction on Transport Routes Project-related heavy vehicle traffic must not use Wybong Road west of the mine access road (to the intersection with the Golden Highway) to access the site, except during construction and decommissioning, or in any emergency to avoid the loss of lives, property and/or prevent environmental harm.	Construction project-related heavy vehicle traffic have used Wybong Road west of the mine access road during the audit period. No other unauthorised use of the road was noted during the audit period.	Compliant	
B101	Restriction on Transport Routes Condition B99 does not apply to any employees that reside on Reedy Creek Road, Mangoola Road, Roxburgh Road or Castlerock Road, or the infrequent use of the roads for consultation, environmental monitoring, and inspection and maintenance of nearby infrastructure.	Noted and acknowledged by Mangoola.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
B102	Wybong Post Office Road Prior to undertaking mining operations within 200 m of Wybong Post Office Road, unless otherwise agreed to by the Planning Secretary, the Applicant must close the affected section of Wybong Post Office Road and either: a. realign the affected section of Wybong Post Office Road as described in the EIS and shown conceptually in Appendix 2, to the satisfaction of the applicable roads authority; or b. provide a financial contribution to Council at least equivalent to the cost of the works identified in subparagraph that is to be directed towards the implementation of Council's preferred approach to addressing road network issues associated with the closure of the affected section of Wybong Post Office Road. <i>Note: Under the Roads Act 1993, the Applicant may require separate approvals from appropriate roads authorities prior to closure, construction or dedication of public roads.</i>	Mining has not occurred within 200 m of Wybong Post Office Road during the audit period.	Not triggered	
B103	Wybong Post Office Road If there is any dispute between the Applicant and Council in implementing the requirements of condition B102, then either party may refer the matter to the Planning Secretary for resolution.	Mining has not occurred within 200 m of Wybong Post Office Road during the audit period.	Not triggered	
B104	Traffic Management Plan The Applicant must prepare a Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: a. be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary; b. be prepared in consultation with TfNSW and Council; c. include details of all transport routes and traffic types to be used for development-related traffic; d. include details of flood warning signage, including flood depth indicators, in the vicinity of the haul road overpass; e. include a protocol for undertaking pre and post-dilapidation surveys and repairing any roads identified in the dilapidation surveys to have been damaged during construction and/or decommissioning works; f. include details of the measures to be implemented to minimise traffic safety issues and disruption to local road users during the construction, operation and decommissioning phases of the development, including: i. temporary traffic controls, including detours and signage (where relevant);	Traffic Management Plan Version: 1 Effective: 22/11/2021 The TMP was approved by Stephen O'Donoghue as nominee to the Secretary on 22/11/2021. In accordance with Condition B104(a) of SSD 8642, the TMP was prepared by Mark Lucas, a Senior Transport Planner of GHD, who was endorsed by the Planning Secretary as a suitably qualified and experienced person. As required by condition B104(b) of SSD 8642 the TMP was prepared in consultation with TfNSW and MSC as the road authority for the local road network.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	ii. notifying the local community about development-related traffic impacts; iii. minimising potential for conflict with school buses and stock movements; iv. access and car parking arrangements; v. staggering shift changes with other mining operations in the locality, where practicable, to minimise impacts during AM and PM peak traffic periods; vi. responding to any emergency repair requirements or maintenance during construction and/or decommissioning; and vii. a traffic management system for managing over-dimensional vehicles; and g. include a Drivers' Code of Conduct that includes procedures to ensure that drivers: i. adhere to posted speed limits or other required travelling speeds; ii. adhere to the designated transport routes; and iii. implement safe driving practices.	Section 4.2 and Section 6 includes details of all transport routes and traffic types to be used for development-related traffic. Section 10 includes details of flood warning signage, including flood depth indicators, in the vicinity of the haul road overpass. Pre and post-dilapidation surveys and repairing any roads protocols are outlined in Section 11. Details of the measures to be implemented to minimise traffic safety issues and disruption to local road users during the construction, operation and decommissioning phases of the development are also contained within the plan. Drivers' Code of Conduct and applicable procedures are outlined in Section 8.		
B105	Traffic Management Plan If the construction and/or decommissioning of the development is to be staged, the obligations in condition B103 apply to each stage of construction and/or decommissioning.	Noted and acknowledged by Mangoola.	Compliant	
B106	Traffic Management Plan The Applicant must not commence mining operations north of Wybong Road until the Traffic Management Plan is approved by the Planning Secretary.	The TMP was approved by Stephen O'Donoghue as nominee to the Secretary on 22/11/2021.	Compliant	
B107	Traffic Management Plan The Applicant must implement the Traffic Management Plan as approved by the Planning Secretary.	Review of the general site induction, complaints register, and communication between relevant parties indicated that MCO are generally implementing the TMP to	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		reduce impacts to the surrounding road networks. During the site inspection traffic management controls were noted to be implemented for works on/near Wybong and Wybong Post Office Roads.		
B108	Social Impact Management Plan The Applicant must prepare a Social Impact Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: a. be prepared by a suitably qualified and experienced person/s; b. be prepared in consultation with Council, the CCC, local affected communities and other interested stakeholders; c. identify both positive and negative social impacts resulting from the development and following mine closure, both locally and regionally; d. specify adaptive management and mitigation measures to avoid, minimise, and/or mitigate negative social impacts from the development and following mine closure; e. identify opportunities to secure and enhance positive social impacts from the development, including opportunities to assist in maintaining community services and facilities; f. include a stakeholder engagement plan to guide the evaluation and implementation of social impact management and mitigation measures; and g. include a program to monitor, review and report on the effectiveness of these measures, including updating the plan 3 years prior to mine closure.	As part of the MCCO project management plan approach assessment it was determined that the Social Impact Management Plan was not required for construction and is to be prepared prior to the commencement of mining north of Wybong Road under SSD8642 B108.	Not triggered	
B109	Social Impact Management Plan The Applicant must not commence mining operations north of Wybong Road until the Social Impact Management Plan is approved by the Planning Secretary.	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	
B110	Social Impact Management Plan The Applicant must implement the Social Impact Management Plan as approved by the Planning Secretary.	Mining has not occurred north of Wybong Road during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations						
SCHEDULE 2 PART C – ADDITIONAL PROCEDURES										
ACQUISITION UPON REQUEST										
C1	Upon receiving a written request for acquisition from the owner of the privately-owned land^a listed in Table 10, the Applicant must acquire the land in accordance with the procedures in conditions C12 to C19, inclusive. Table 10: Land subject to acquisition upon request <table><tr><th>Acquisition Basis</th><th>Land</th></tr><tr><td>Noise</td><td>R25, R66, R110, R130, R139, R148, R205</td></tr><tr><td>Noise and Air Quality</td><td>R83</td></tr></table> ^aThe location of the land referred to in Table 10 is shown in Appendix 3.	Acquisition Basis	Land	Noise	R25, R66, R110, R130, R139, R148, R205	Noise and Air Quality	R83	There has not been any written request for acquisition from the owner of the privately-owned land^a listed in Table 10 during the audit period.	Not triggered	
Acquisition Basis	Land									
Noise	R25, R66, R110, R130, R139, R148, R205									
Noise and Air Quality	R83									
ADDITIONAL MITIGATION UPON REQUEST										
C2	Upon receiving a written request for mitigation from the owner of any residence on the privately-owned land^a listed in Table 10 or Table 11, the Applicant must implement additional mitigation measures at or in the vicinity of the residence in consultation with the landowner. These measures must be consistent with the measures outlined in the <i>Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Development</i> (NSW Government, 2018). They must also be reasonable and feasible, proportionate to the level of predicted impact and directed towards reducing the noise and/or air quality impacts of the development. The Applicant must also be responsible for the reasonable costs of ongoing maintenance of these additional mitigation measures until the cessation of mining operations. Table 11: Land subject to additional mitigation upon request <table><tr><th>Mitigation Basis</th><th>Land</th></tr><tr><td>Noise</td><td>R128, R144, R154, R171, R176, R193, R261, R263, R109A, R109B, R109C, R109D, R109E, R109F, R125A, R134A, R182B, R164, R177, R251, R174A, R174B</td></tr></table> ^aThe locations of the land referred to in Table 11 are shown in Appendix 3.	Mitigation Basis	Land	Noise	R128, R144, R154, R171, R176, R193, R261, R263, R109A, R109B, R109C, R109D, R109E, R109F, R125A, R134A, R182B, R164, R177, R251, R174A, R174B	Notification letters have been sent out for SSD (first within one month, then reminder letter March 22. Also letters sent to new property owners as several changed hands). R144 requested and postponed until further notice due to covid. R174A+B requested then postponed due to interstate travel. Requested again after reminder. Both inspections now completed. Reports in progress. R128 has been inspected. Mitigation measures agreed to/inspections for quote. Now arranging work to be completed. R263 has been inspected. Awaiting report but property sold at auction. Awaiting notice of new owner.	Compliant			
Mitigation Basis	Land									
Noise	R128, R144, R154, R171, R176, R193, R261, R263, R109A, R109B, R109C, R109D, R109E, R109F, R125A, R134A, R182B, R164, R177, R251, R174A, R174B									

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
C3	If within 3 months of receiving this request from the owner, the Applicant and the owner 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 Planning Secretary for resolution.	Not triggered.	Not triggered	
C4	For the life of the development, the Applicant must continue to contribute to reasonable maintenance and recurrent operating costs associated with the noise mitigation measures installed at privately-owned residences under the Mangoola Coal Project and as described in the documents listed in condition A2(c). The contribution to ongoing maintenance and recurrent operating costs must be consistent with any existing agreement between the Applicant and the relevant landowner.	Noted and acknowledged by Mangoola.	Compliant	
NOTIFICATION OF LANDOWNERS/TENANTS				
C5	Within one month of the date of this consent, the Applicant must: a. notify in writing the owner of: i. the land listed in Table 10 that they have the right to require the Applicant to acquire their land at any stage during the development; ii. the residences on the land listed in Table 10 and Table 11 that they are entitled to ask the Applicant to install additional mitigation measures at the residence; and iii. any privately-owned land within 3 kilometres of the approved open cut mining pit/s that they are entitled to ask the Applicant for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated; b. notify the tenants of any mine-owned land of their rights under this consent; and c. send a copy of the fact sheet entitled “<i>Mine Dust and You</i>” (NSW Health, 2017) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the document/s listed in condition A2(c) identify that dust emissions generated by the development are likely to be greater than the relevant air quality criteria identified in condition B27 at any time during the life of the development.	Notification made on 17 May 2021 which is within one month as per requirement. Evidence of written notification to owners of the land listed in Table 10 and 11 for acquisition, mitigation measures, and baseline condition assessments of privately-owned land within 3 kilometres of the approved open cut mining pit/s is saved in folder.	Compliant	
C6	Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended dust and/or noise criteria, the Applicant must:	There have not been any lease agreements entered during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	a. advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the fact sheet entitled <i>"Mine Dust and You"</i> (NSW Health, 2017); and b. advise the prospective tenants of the rights they would have under this consent. to the satisfaction of the Planning Secretary.			
NOTIFICATION OF EXCEEDANCES				
C7	As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise, blasting or air quality criterion in PART B of this consent, the Applicant must provide the details of the exceedance to any affected landowners, tenants and the CCC.	No noise, blasting or air quality criterion exceedances in PART B of this consent during the audit period.	Not triggered	
C8	For any exceedance of any air quality criterion in PART B of this consent, the Applicant must also provide to any affected land owners and/or tenants a copy of the fact sheet entitled <i>"Mine Dust and You"</i> (NSW Health, 2017).	No noise, blasting or air quality criterion exceedances in PART B of this consent during the audit period.	Not triggered	
INDEPENDENT REVIEW				
C9	If a landowner considers the development to be exceeding any relevant noise, blasting or air quality criterion in PART B of this consent, they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their residence or land.	There have not been any independent reviews requested during the audit period associated with SSD8642.	Not triggered	
C10	If the Planning Secretary is not satisfied that an independent review is warranted, the Planning Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.	There have not been any independent reviews requested during the audit period associated with SSD8642.	Not triggered	
C11	If the Planning Secretary is satisfied that an independent review is warranted, within 3 months of the Planning Secretary's decision, or other timeframe agreed by the Planning Secretary, the Applicant must: a. commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to: i. consult with the landowner to determine their concerns; ii. conduct monitoring to determine whether the development is complying with the relevant criteria in PART B of this consent; and	There have not been any independent reviews requested during the audit period associated with SSD8642.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	iii. if the development is not complying with the relevant criterion, identify measures that could be implemented to ensure compliance with the relevant criterion; and b. give the Planning Secretary and landowner a copy of the independent review; and c. comply with any written requests made by the Planning Secretary to implement any findings of the review.			
LAND ACQUISITION				
C12	Within 3 months of receiving a written request for acquisition from a landowner with acquisition rights, the Applicant must make a binding written offer to the landowner based on: a. the current market value of the landowner's interest in the land at the date of this written request, as if the land was unaffected by the development, having regard to the: i. existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and ii. presence of improvements on the land and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the additional noise and/or air quality mitigation measures in condition C2; b. the reasonable costs associated with: i. relocating within the Muswellbrook local government area, or to any other local government area agreed to by the Planning Secretary; and ii. obtaining independent legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and c. reasonable compensation for any disturbance caused by the land acquisition process.	No request for acquisition during the audit period for SSD8642.	Not triggered	
C13	If, within two months of the binding written offer being made under condition C12, the Applicant and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be	No request for acquisition during the audit period for SSD8642.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	acquired, then either party may refer the matter to the Planning Secretary for resolution.			
C14	Upon receiving a request, under condition C13, the Planning Secretary will request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to: a. consider submissions from both parties; b. determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in condition C12; c. prepare a detailed report setting out the reasons for any determination; and d. provide a copy of the report to both parties.	No request for acquisition during the audit period for SSD8642.	Not triggered	
C15	Within 14 days of receiving the independent valuer's report, the Applicant must make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.	No request for acquisition during the audit period for SSD8642.	Not triggered	
C16	However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, either party may refer the matter to the Planning Secretary for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Planning Secretary will determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in condition C12, the independent valuer's report, the detailed report of the party that disputes the independent valuer's determination and any other relevant submissions.	No request for acquisition during the audit period for SSD8642.	Not triggered	
C17	Within 14 days of this determination, the Applicant must make a binding written offer to the landowner to purchase the land at a price not less than the Planning Secretary's determination.	No request for acquisition during the audit period for SSD8642.	Not triggered	
C18	If the landowner refuses to accept the Applicant's binding written offer under this condition within 6 months of the offer being made, then the Applicant's obligations to acquire the land shall cease, unless the Planning Secretary determines otherwise.	No request for acquisition during the audit period for SSD8642.	Not triggered	
C19	The Applicant must pay all reasonable costs associated with the land acquisition process described in conditions C12 to C18 inclusive, including the costs associated with obtaining Council approval for any plan of	No request for acquisition during the audit period for SSD8642.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.			
SCHEDULE 2 PART D – ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING				
ENVIRONMENTAL MANAGEMENT				
D1	Environmental Management Strategy The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must: a. provide the strategic framework for environmental management of the development; b. identify the statutory approvals that apply to the development; c. set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development; d. set out the procedures to be implemented to: i. keep the local community and relevant agencies informed about the operation and environmental performance of the development; ii. receive record, handle and respond to complaints; iii. resolve any disputes that may arise during the course of the development; iv. respond to any non-compliance and any incident; v. respond to emergencies; and e. include: i. references to any strategies, plans and programs approved under the conditions of this consent; and ii. a clear plan depicting all the monitoring to be carried out under the conditions of this consent.	As part of the MCCO project management plan approach assessment it was determined that a partial plan update was required to facilitate construction with a new EMS will be prepared prior to the commencement of mining north of Wybong Road under SSD8642. The EMS was found to satisfy the relevant requirements of the current consents and has been prepared by suitably qualified and experienced person and was submitted to the Planning Secretary for approval. The EMS provides a range of procedures that are implemented to manage communication, complaints, incidents, and monitoring. Review of the communication, complaints, incidents registers found that MCO was implementing these procedures. The EMS references the various management plans for specific details for plans, programs, and monitoring requirements.	Compliant	
D2	Environmental Management Strategy The Applicant must not commence mining operations north of Wybong Road until the Environmental Management Strategy is approved by the Planning Secretary.	A full update of the EMS will be undertaken prior to mining operations north of Wybong Road	Not triggered	
D3	Environmental Management Strategy	During the site inspection and following review of associated management	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.	plans it was noted that MCO is satisfactorily implementing the EMS.		
D4	Adaptive Management The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and performance measures in this consent. Any exceedance of these criteria or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria or performance measures has occurred, the Applicant must, at the earliest opportunity: - take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur; - consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and - implement reasonable remediation measures as directed by the Planning Secretary.	Adaptive management is outlined in Section 3.7 of the EMS. Review of criteria and performance measure exceedance during the audit period indicated that Mangoola are implementing the adaptive management measures identified.	Compliant	
D5	Management Plan Requirements Management plans required under this consent must be prepared in accordance with relevant guidelines, and include: - summary of relevant background or baseline data; - details of: - the relevant statutory requirements (including any relevant approval, licence or lease conditions); - any relevant limits or performance measures and criteria; and - 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; - any relevant commitments or recommendations identified in the document/s listed in condition A2(c); - a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Review of the applicable management plans under the EMS and approval indicated that they have been prepared in general accordance with the applicable relevant guidelines and included the information outlined in this condition. It is noted that following the approval of SSD8642 and commencement of development/constructions the management plan conditions of SSD8642 prevail to the extent of any inconsistency, ambiguity, or conflict between those of PA06_0014.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	e. a program to monitor and report on the: i. impacts and environmental performance of the development; and ii. effectiveness of the management measures set out pursuant to condition D4(c); f. a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; g. a program to investigate and implement ways to improve the environmental performance of the development over time; h. a protocol for managing and reporting any: i. incident, non-compliance or exceedance of any impact assessment criterion or performance criterion; ii. complaint; or iii. failure to comply with other statutory requirements; i. public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and j. a protocol for periodic review of the plan. <i>Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i>			
D6	Management Plan Requirements The Applicant must ensure that management plans prepared for the development are consistent with the conditions of this consent and any EPL issued for the site.	Review of the applicable management plans indicated that they are consistent with the conditions of this consent and EPL12894. While it was recommended that the management plan reference the requirements of EPL 12894, the WMP was prepared in consultation with the EPA, and was deemed to be consistent with the conditions of consent and any EPL for the site.	Compliant	Ensure all management plans are updated in accordance with the approved MCCO Project Management Plan Approach.
REVISION OF STRATEGIES, PLANS AND PROGRAMS				
D7	Within three months of: a. the submission of an incident report under condition D9; b. the submission of an Annual Review under condition D11;	Evidence cited that the suitability of existing strategies, plans and programs required under this consent were reviewed within 3 months of an	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	c. the submission of an Independent Environmental Audit under condition D12; d. the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or e. notification of a change in development phase under condition A13; the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.	incident, AR, or IEA during the audit period. Mangoola has reviewed applicable Strategies, Plans and Programs as outlined in Section 12.1 of the annual returns for the audit period in accordance with the provisions of this condition.		
D8	If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review. <i>Note: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.</i>	Following the review MCO developed an approach to ensure that construction activities required to be completed as part of the MCO Project were covered by an appropriate suite of management plans. This approach included a combination of relying on some existing management plans (where relevant) as they were currently approved, making a series of relatively minor updates to some existing plans (for example to reference changes in criteria relevant to the Recommended Conditions and revised mapping), and completing some full updates of the plans as required by specific SSD8642 conditions. MCO was issued with a letter from DPE on 16 July 2021 indicating that they had reviewed the approach to updating the management plans and confirmed that they were satisfied the staged approach is appropriate and would ensure compliance with relevant conditions of consent. It was noted that the following management plans under SSD8642 were not triggered to be implemented during the audit period: Visual Impact Management Plan – Schedule 2, Part B, Condition 75	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		- Bushfire Management Plan – Schedule 2, Part B, Condition 82 - Rehabilitation Strategy – Schedule 2, Part B, Condition 87 - Social Impact Management Plan – Schedule 2, Part B, Condition 107 It is noted that the above management plans will be required prior to the commencement of mining north of Wybong Road under SSD8642.		
REVISION OF STRATEGIES, PLANS AND PROGRAMS				
D9	Incident Notification The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.	Evidence supplied that the Department was notified in writing following the MCCO and Sandy Creek Farm Dam discharge events.	Compliant	
D10	Non-Compliance Notification Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing through the Department's Major Projects Website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. <i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i>	Evidence sighted that the Department was notified of all non-compliances in writing through the Major Projects website during the audit period.	Compliant	
D11	Annual Review By the end of March each year after the commencement of development, or other timeframe agreed by the Planning Secretary, a report must be submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary. This review must:	Annual Review 2021 was submitted by 31 March 2022 through the Major Project Portal, and all contained the information required by D11. This was the only Annual Review required to be submitted during the audit period.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	a. describe the development (including any rehabilitation) that was carried out in the previous calendar, 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, including a comparison of these results against the: i. relevant statutory requirements, limits or performance measures/criteria; ii. requirements of any plan or program required under this consent; iii. monitoring results of previous years; and iv. relevant predictions in the documents listed in condition A2(c); c. identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence; d. evaluate and report on: i. the effectiveness of the noise and air quality and greenhouse gas management systems; ii. compliance with the performance measures, criteria and operating conditions of this consent; and iii. the status of translocated plants and vegetation quadrat data from orchid monitoring sites; e. identify any trends in the monitoring data over the life of the development; f. identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and g. describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.			
D12	Annual Review Copies of the Annual Review must be submitted to Council and made available to the CCC and any interested person upon request.	Annual Reviews are available via the Mangoola Project website. Copies of letters and email submissions of the Annual Reviews to MSC were sighted during the audit.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
D13	Independent Environmental Audit Within one year of commencement of development under this consent, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. The audit must: a. be led by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Planning Secretary; b. be conducted by a suitably qualified, experienced and independent team of experts (including any expert in field/s specified by the Planning Secretary) whose appointment has been endorsed by the Planning Secretary; c. be carried out in consultation with the relevant agencies and the CCC; d. assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals); e. review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent; f. recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and g. be conducted and reported to the satisfaction of the Planning Secretary.	This audit has been undertaken within one year of commencement of the development. The audit was led by Ian Richardson and a number of required specialists who were endorsed by DPE on 20 June 2022. Consultation as undertaken as per the DPE audit guidelines with relevant agencies and the CCC as outlined in the audit report. The compliance of this condition will be assessed during the next audit period.	Compliant	
D14	Independent Environmental Audit Within three months of commencing an Independent Environmental Audit, or other timeframe agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.	This is the first audit for SSD8642. This condition will be assessed for compliance during the next audit.	Not triggered	
D15	Monitoring and Environmental Audits Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an	Noted and acknowledged by Mangoola.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit. For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.			
D16	Monitoring and Environmental Audits Noise, blast and/or air quality monitoring under this consent may be undertaken at suitable representative monitoring locations instead of at privately-owned residences or other locations list in Part B, providing that these representative monitoring locations are set out in the respective management plans.	Noted and acknowledged in noise management plan.	Compliant	
ACCESS TO INFORMATION				
D17	Before the commencement of construction until the completion of all rehabilitation required under this consent, the Applicant must: a. make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website: i. the documents referred to in condition A2(c) of this consent; ii. all current statutory approvals for the development; iii. all approved strategies, plans and programs required under the conditions of this consent; iv. the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged; v. minutes of CCC meetings; vi. regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent; vii. a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications	Website reviewed checked 8 July 2022 A copy of the environmental assessments prepared for the eight modifications are available through the Company's website. A copy of the current consolidated Project Approval, EPL, Exploration Lease and Mining Leases available on the Company's website. Copies of the approved strategies, plans and programs required under this condition is provided on the Company's website. A document summarising the monitoring results air quality, surface water, groundwater and noise is provided on the Company's website. Copies of each Annual Review from 2008 are provided. CCC Minutes provided.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	in any conditions of this consent, or any approved plans and programs; viii. a summary of the current phase and progress of the development; ix. contact details to enquire about the development or to make a complaint; x. a complaints register, updated monthly; xi. the Annual Reviews of the development; xii. audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report; xiii. any other matter required by the Planning Secretary; and b. keep such information up to date, to the satisfaction of the Planning Secretary.	Complaints register available. Independent Audit from 2010, 2014, 2016, and 2019 are available. Verified from review of available documents on Mangoola's website and is reported in the AR, which is approved by the Secretary.		

B.3 EPL12894 Audit Checklist

EPL 12894 AUDIT CHECKLIST – MANGOOLA OPEN CUT 2022

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Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations															
SCHEDULE 2 – ADMINISTRATIVE CONDITIONS																			
A1 What the licence authorises and regulates																			
A1.1	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. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition. <table><thead><tr><th>Scheduled Activity</th><th>Fee Based Activity</th><th>Scale</th></tr></thead><tbody><tr><td>Coal works</td><td>Coal works</td><td>> 5000000 T annual handling capacity</td></tr><tr><td>Crushing, grinding or separating</td><td>Crushing, grinding or separating</td><td>> 500000 - 2000000 T annual processing capacity</td></tr><tr><td>Mining for coal</td><td>Mining for coal</td><td>> 5000000 T annual production capacity</td></tr><tr><td>Railway systems activities</td><td>Railway systems activities</td><td>Any capacity</td></tr></tbody></table> Note: In relation to this licence, the licensee must comply with: a. the activity scale limits imposed by this licence; b. the activity scale limits which apply for the reporting period specified in this licence; and c. the activity scale limits imposed by other legal instruments, such as approvals currently in force under the Environmental Planning and Assessment Act 1979.	Scheduled Activity	Fee Based Activity	Scale	Coal works	Coal works	> 5000000 T annual handling capacity	Crushing, grinding or separating	Crushing, grinding or separating	> 500000 - 2000000 T annual processing capacity	Mining for coal	Mining for coal	> 5000000 T annual production capacity	Railway systems activities	Railway systems activities	Any capacity	Mangoola has carried out the scheduled activities listed in A1 at the premises during the audit period.	Compliant	
Scheduled Activity	Fee Based Activity	Scale																	
Coal works	Coal works	> 5000000 T annual handling capacity																	
Crushing, grinding or separating	Crushing, grinding or separating	> 500000 - 2000000 T annual processing capacity																	
Mining for coal	Mining for coal	> 5000000 T annual production capacity																	
Railway systems activities	Railway systems activities	Any capacity																	
A2 Premises or plant to which this licence applies																			
A2.1	The licence applies to the following premises:	Noted. All works within the approved boundary during the audit period.	Compliant																

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	Premises Details MANGOOLA COAL OPERATIONS WYBONG ROAD WYBONG NSW 2333 THE PREMISES IS DEFINED AS "PROPOSED EPL BOUNDARY" IN PLANS TITLED "MANGOOLA COAL EPL 12984 - PREMISES PLAN AND ENVIRONMENTAL MONITORING LOCATIONS (EXCLUDING NOISE) (DATED 11/10/2021)" (EPA REF; DOC21/813044-4); AND SHAPEFILES CONTAINED IN EPA DOC21/813044-6. PUBLIC ROADS ARE NOT PART OF THE PREMISES UNLESS TEMPORARILY OR PERMANENTLY CLOSED IN ACCORDANCE WITH THE ROADS ACT 1993 OR AN AGREEMENT IS IN PLACE WITH THE RELEVANT ROAD AUTHORITY.			
A3 Other activities				
A3.1	This licence applies to all other activities carried on at the premises, including: Ancillary Activity Sewage Treatment	The sewage treatment plant is operated in accordance with the EPL.	Compliant	
A4 Information supplied to the EPA				
A4.1	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: a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.	Works and activities have been carried out generally in accordance with the proposal contained in the licence application during the audit period.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																								
2 Discharges to Air and Water and Applications to Land																												
P1 Location of monitoring/discharge points and areas																												
P1.1	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. <table><tr><th colspan="4">Air</th></tr><tr><th>EPA Identification no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr><tr><td>5</td><td>Meteorological Monitoring</td><td></td><td>Weather Station North (WSN) defined as Monitoring Point 5 in plan titled "Mangoola Coal EPL 12984 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)</td></tr><tr><td>18</td><td>Meteorological Monitoring</td><td></td><td>Weather Station South (WSS), Defined as Monitoring Point 18 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)</td></tr><tr><td>19</td><td>Particulate Matter Monitoring</td><td></td><td>Monitoring Point 19 defined as Monitoring Point 19 in plan titled "Mangoola Coal EPL 12894 -Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)</td></tr><tr><td>20</td><td>Particulate Matter Monitoring</td><td></td><td>Monitoring point 20 defined as Monitoring Point 20 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)</td></tr></table>	Air				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	5	Meteorological Monitoring		Weather Station North (WSN) defined as Monitoring Point 5 in plan titled "Mangoola Coal EPL 12984 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)	18	Meteorological Monitoring		Weather Station South (WSS), Defined as Monitoring Point 18 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)	19	Particulate Matter Monitoring		Monitoring Point 19 defined as Monitoring Point 19 in plan titled "Mangoola Coal EPL 12894 -Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)	20	Particulate Matter Monitoring		Monitoring point 20 defined as Monitoring Point 20 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)	The following points referred to in the table were noted to have been operational during the audit period.	Compliant	
Air																												
EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description																									
5	Meteorological Monitoring		Weather Station North (WSN) defined as Monitoring Point 5 in plan titled "Mangoola Coal EPL 12984 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)																									
18	Meteorological Monitoring		Weather Station South (WSS), Defined as Monitoring Point 18 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)																									
19	Particulate Matter Monitoring		Monitoring Point 19 defined as Monitoring Point 19 in plan titled "Mangoola Coal EPL 12894 -Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)																									
20	Particulate Matter Monitoring		Monitoring point 20 defined as Monitoring Point 20 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)																									
P1.2	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.	The following utilisation areas referred to in the table were noted to have been used for monitoring during the audit period.	Compliant																									
P1.3	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.	The following points referred to in the table were used for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point during the audit period.	Compliant																									

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	<i>Water and land</i>			
	EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
	7	Ambient Surface Water Monitoring		Sandy Creek Defined as Monitoring Point 7 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)
	8	Ambient Surface Water Monitoring		Big Flat Creek Tributary Defined as Monitoring Point 8 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)
	9	Ambient Surface Water Monitoring		Wybong Creek Defined as Monitoring Point 9 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)
	10	Groundwater Monitoring		Big Flat Creek Defined as Monitoring Point 10 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)

Cond No.	Condition			Comments & Evidence	Audit Findings	Recommendations
	11	Groundwater Monitoring		Wybong Creek Defined as Monitoring Point 11 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)		
	12	Discharge of saline water under the Hunter River Salinity Trading Scheme (HRSTS); flow monitoring	Discharge of saline water under the Hunter River Salinity Trading Scheme (HRSTS); flow monitoring	Outlet of HRSTS discharge pipe Defined as Monitoring Point 12 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)		
	13	Ambient Surface Water Monitoring		Hunter River - downstream Defined as Monitoring Point 13 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)		
	14	Ambient Surface Water Monitoring		Hunter River - 1500m upstream from point defined as Monitoring Point 14 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)		
	31	Ambient Surface Water Monitoring		Big Flat Creek Defined as Monitoring Point 31 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)		
	33	Effluent quality monitoring, discharge to utilisation area		STP discharge to utilisation area defined as Monitoring Point 33 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)		
	41	Surface Water Quality		Pit Water Dam		
P1.4	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. <i>noise/weather</i>			The following points referred to in the table were used for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise during the audit period.	Compliant	
	EPA identification no.	Type of monitoring point	Location description			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
16	Air blast overpressure & ground vibration peak particle velocity monitoring	defined as Monitoring Point 16 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)		
21	Air blast overpressure & ground vibration peak particle velocity monitoring	Defined as Monitoring Point 21 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4)		
22	Noise monitoring	Attended noise monitoring - location labelled as "NM15 - EPL Monitoring Point 22" on plan titled "Mangoola Coal EPL 12894 - "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5)		
23	Noise monitoring	Attended noise monitoring - location labelled as "NM4 - EPL Monitoring Point 23" on plan titled "Mangoola Coal EPL 12894 - "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5)		
26	Noise monitoring	Attended noise monitoring - location labelled as "NM8 - EPL Monitoring Point 26" on plan titled "Mangoola Coal EPL 12894 - "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5)		
27	Noise monitoring	Attended noise monitoring - location labelled as "NM10 - EPL Monitoring Point 27" on plan titled "Mangoola Coal EPL 12894 - "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5)		
29	Noise monitoring	Attended noise monitoring - location labelled as "NM13 - EPL Monitoring Point 29" on plan titled "Mangoola Coal EPL 12894 - "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5)		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	30 Noise monitoring Attended noise monitoring - location labelled as "NM14 - EPL Monitoring Point 30" on plan titled "Mangoola Coal EPL 12894 - Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5) 32 Air blast overpressure & ground vibration peak particle velocity monitoring Defined as Monitoring Point 32 in plan titled "Mangoola Coal EPL 12894 - Premises Plan and Environmental Monitoring Locations (excluding noise)", dated 11/10/2021 (EPA Ref; DOC21/813044-4) 34 Noise monitoring Attended noise monitoring - location labelled as "NM16 - EPL Monitoring Point 34" on plan titled "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5) 35 Noise monitoring Attended noise monitoring - location labelled as "NM17 - EPL Monitoring Point 35" on plan titled "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5) 36 Noise monitoring Attended noise monitoring - location labelled as "NM18 - EPL Monitoring Point 36" on plan titled "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5) 37 Noise monitoring Attended noise monitoring - location labelled as "NM19 - EPL Monitoring Point 37" on plan titled "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5) 38 Noise monitoring Attended noise monitoring - location labelled as "NM20 - EPL Monitoring Point 38" on plan titled "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5) 39 Noise monitoring Attended noise monitoring - location labelled as "NM21 - EPL Monitoring Point 39" on plan titled "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5) 40 Noise monitoring Attended noise monitoring - location labelled as "NM22 - EPL Monitoring Point 40" on plan titled "Premises Plan and Noise Monitoring Locations", dated 15/10/2021 (EPA Ref DOC21/813044-5)			
3 Limit Conditions				
L1 Pollution of waters				
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Mangoola has complied with section 120 of the POEO Act during the audit period. No Section 120's has been	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																		
		issued by the regulator during the audit period.																				
L2 Concentration limits																						
L2.1	For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	Pollutant discharge concentrations discharged at that point, or applied to that area, did not exceed the concentration limits specified for the pollutants tabulated.	Compliant																			
L2.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	Grab samples attained daily during discharge were within the percentage of samples must be within the specified ranges.	Compliant																			
L2.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.	Noted and acknowledged by Mangoola.	Compliant																			
L2.4	Water and/or Land Concentration Limits. POINT 41 <table><tr><th>Pollutant</th><th>Units of Measure</th><th>50 Percentile concentration limit</th><th>90 Percentile concentration limit</th><th>3DGM concentration limit</th><th>100 percentile concentration limit</th></tr><tr><td>pH</td><td>pH</td><td></td><td></td><td></td><td>6.5-9.5</td></tr><tr><td>Total suspended solids</td><td>milligrams per litre</td><td></td><td></td><td></td><td>120</td></tr></table>	Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	pH	pH				6.5-9.5	Total suspended solids	milligrams per litre				120	Pollutant discharge concentrations discharged at that point, did not exceed the concentration limits specified for the pollutants tabulated.	Compliant	
Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																	
pH	pH				6.5-9.5																	
Total suspended solids	milligrams per litre				120																	
L3 Noise limits																						
L3.1	Noise generated at the premises must not exceed the noise limits in dB(A) presented in the table below.	No noise exceedances during the audit period.	Compliant																			

Cond No.	Condition	Comments & Evidence				Audit Findings	Recommendations
	Location	Day LAeq(15min)	Evening LAeq(15min)	Night LAeq(15min)	Night LA1(1min)		
	EPA Point 22 (NM15) in NMG A			34	48		
	EPA Point 23 (NM4) in NMG H			41	54		
	EPA Point 26 (NM8) in NMG G			40	52		
	EPA Point 27 (NM10) in NMG B			35	51		
	EPA Point 29 (NM13) in NMG C			38	50		
	EPA Point 30 (NM14) in NMG D			37	53		
	EPA Point 34 (NM16) in NMG E			37	52		
	EPA Point 35 (NM17) in NMG F			36	51		
	EPA Point 36 (NM18) in NMG I			39	52		
	EPA Point 37 (NM19) in NMG J			35	51		
	EPA Point 38 (NM20) in NMG K			38	51		
	EPA Point 39 (NM21) in NMG L			40	49		
	EPA Point 40 (NM22) in NMG M			46	58		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																																																							
	<table> <tr> <td>Residence 171, 176, 144</td><td>40</td><td>40</td><td>40</td><td>52</td></tr> <tr> <td>Residence 25, 128, 154, 193, 125A, 182B</td><td>40</td><td>38</td><td>38</td><td>52</td></tr> <tr> <td>Residence 261</td><td>Years 1 & 2 - 42 Year 3 Onward - 40</td><td>38</td><td>38</td><td>52</td></tr> <tr> <td>Residence 54, 79, 114, 141, 151, 192, 206, 321, 125C, 182A, 241A, 241C, 190, 157</td><td>40</td><td>37</td><td>37</td><td>52</td></tr> <tr> <td>Residence 165, 177, 106B, 104, 166, 178, 251, 253, 260, 112B, 183C, 184A, 147, 112A, 112C, 240, 241B</td><td>40</td><td>36</td><td>36</td><td>52</td></tr> <tr> <td>Residence 134A</td><td>Years 1 and 2 - 44 Year 3 onward 40</td><td>39</td><td>39</td><td>52</td></tr> <tr> <td>Residence 109A - F</td><td>Years 1 and 2 - 43 Year 3 onward - 40</td><td>39</td><td>39</td><td>52</td></tr> <tr> <td>Residence 263</td><td>Years 1 and 2 - 42 Year 3 onward - 40</td><td>39</td><td>39</td><td>52</td></tr> <tr> <td>Residence 164</td><td>40</td><td>35</td><td>39</td><td>52</td></tr> <tr> <td>All other privately owned residences</td><td>40</td><td>35</td><td>35</td><td>52</td></tr> <tr> <td>Wybong Hall and Anglican Church</td><td>48</td><td>48</td><td>48</td><td>-</td></tr> </table>	Residence 171, 176, 144	40	40	40	52	Residence 25, 128, 154, 193, 125A, 182B	40	38	38	52	Residence 261	Years 1 & 2 - 42 Year 3 Onward - 40	38	38	52	Residence 54, 79, 114, 141, 151, 192, 206, 321, 125C, 182A, 241A, 241C, 190, 157	40	37	37	52	Residence 165, 177, 106B, 104, 166, 178, 251, 253, 260, 112B, 183C, 184A, 147, 112A, 112C, 240, 241B	40	36	36	52	Residence 134A	Years 1 and 2 - 44 Year 3 onward 40	39	39	52	Residence 109A - F	Years 1 and 2 - 43 Year 3 onward - 40	39	39	52	Residence 263	Years 1 and 2 - 42 Year 3 onward - 40	39	39	52	Residence 164	40	35	39	52	All other privately owned residences	40	35	35	52	Wybong Hall and Anglican Church	48	48	48	-			
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Wybong Hall and Anglican Church	48	48	48	-																																																							
L3.2	For the purposes of condition L3.1: a) Residences referenced in this table are from consent SSD-8642 Mangoola Coal Continued Operations Project dated 26 April 2021 EPA Reference DOC21/754113; and b) Noise Monitoring Groups (NMG) in this table are referenced in the document titled "Justification for limits at noise monitoring points" dated 12 November 2021 by EMM Consulting, EPA Reference DOC21/813044-7.	Noted and acknowledged by Mangoola.	Compliant																																																								
L3.3	For the purposes of Condition L3.1: a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays, b) Evening is defined as the period from 6pm to 10pm, and c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.	Noted and acknowledged by Mangoola.	Compliant																																																								
L3.4	The noise limits set out in this licence apply under all meteorological conditions except for the following:	Noted, noise monitoring and assessments have been undertaken in	Compliant																																																								

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or c) Stability category G temperature inversion conditions. For the purposes of this condition: i) Data recorded by the meteorological stations within licence condition P1.1 must be used to determine meteorological conditions; and ii) Temperature inversion conditions (stability category) are to be determined by the methods referred to in Fact Sheet D of the Noise Policy for Industry (EPA 2017).	accordance with the specified meteorological conditions.		
L3.5	The noise limits in condition L3.1 do not apply if the licensee has a written agreement with the relevant landowner to exceed the noise limit and the licensee has advised the EPA in writing. The noise limits in condition L3.1 do not apply to mine owned residences.	Negotiated agreement in place with R164 which was signed on 13/8/2018 and DPIE were subsequently notified. Negotiated agreement in place with R132 which was signed on 17/11/2021 and DPIE were subsequently notified.	Compliant	
L4 Blasting				
L4.1	The airblast overpressure level from blasting operations in or on the premises must not exceed: 115 dB (Lin Peak) for more than 5% of the total number of blasts during each reporting period; at either monitoring point 16, 21 or 32 in Condition P1.4.	The airblast overpressure level from blasting operations did not exceed: 115 dB (Lin Peak) for more than 5% of the total number of blasts during each reporting period during the audit period.	Compliant	
L4.2	The airblast overpressure level from blasting operations in or on the premises must not exceed: 120 dB (Lin Peak) at any time; at either monitoring point 16, 21 or 32 in Condition P1.4.	Blast #1200 was fired at 12.21pm in Main Pit West and an overpressure reading of 120.9dB was recorded at Blast Monitor 07 (BM07/ EPL Monitoring point 21). This reading is above the 120dB impact assessment criteria outlined in Schedule 3, Condition 10 of PA 06_0014 and EPL 12894, Condition L4.2. Notifications were made to both DPE and the EPA following the blast with	Non-compliant	Review of actions following incident determined that mitigation measures developed are sufficient. No further recommendations required.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		the follow up incident investigation reports required under Schedule 5, Condition 4 of PA 06_0014 and Condition R2.2 of EPL 12984 submitted to the relevant departments on 11 March 2020. A formal warning letter was received from DPE on 24 March 2020.		
L4.3	The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: 5 mm/second for more than 5% of the total number of blasts during each reporting period; at either monitoring point 16, 21 or 32 in Condition P1.4.	Ground vibration peak particle velocity from blasting operations within specified limits.	Compliant	
L4.4	The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: 10 mm/second at any time; at either monitoring point 16, 21 or 32 in Condition P1.4.	Ground vibration peak particle velocity from blasting operations within specified limits.	Compliant	
L4.5	Blasting in or on the premises must only be carried out between 09:00 hours and 17:00 hours, Monday to Saturday. Blasting in or on the premises must not take place on Sundays or Public Holidays without the prior approval of the EPA.	Blasting has only occurred during the specified times during the audit period.	Compliant	
L4.6	Offensive blast fume must not be emitted from the premises. <i>Definition:</i> <i>Offensive blast fume means post-blast gases from the detonation of explosives at the premises that by reason of their nature, duration, character or quality, or the time at which they are emitted, or any other circumstances:</i> <i>1. are harmful to (or likely to be harmful to) a person that is outside the premises from which it is emitted, or</i> <i>2. interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted.</i>	A blast odour complaint was received on 12 June 2020 at 12:42PM. Complaint received via Hotline. Complainant stated they smelt the blast. Two blasts were fired in Main Pit West (MPW) in quick succession. The Mangoola E&C Officer reviewed the meteorological conditions at the time of the blast, as well as the daily dust summary. The video footage was reviewed at the time of the blast by the Environment and Community Manager (ECM) and both blasts dissipated within the pit, not leaving the site boundary. The ECM called the complainant back at 18:45 to discuss the complaint, the	Compliant	Consider including a link to the NSW Health - Mine blast fume and you factsheet https://www.health.nsw.gov.au/environment/factsheets/Pages/mine-blast-fumes.aspx in the Community Newsletter to better educate the community on what blast fumes are.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		complainant stated that sometime after the blast they were able to smell something similar to a diesel truck. The ECM explained that a blast usually smells like gun powder and the complainant also mentioned that no dust was visible from the blast. The pre-blast permit identified the blast as being low risk for fume generation and all pre-blast assessments indicated that the conditions were suitable for blasting. Review of the incident suggests that the odour was not blast fume.		
4 Operating Conditions				
O1 Activities must be carried out in a competent manner				
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	All staff and contractors are required to complete the Glencore and site specific induction that provides a general overview of the management of materials and waste on the site. Mangoola also has procedures to outline how to undertake specific tasks in a competent manor. A waste management plan is also implemented for the site that outlines the management of waste on site. Waste Management Plan MANOC-1772150304-1693 Version: 5.0 Effective: 18/10/2018	Compliant	
O2 Maintenance of plant and equipment				
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and	Mangoola undertakes regular schedule and reactive maintenance activities for all plant and equipment used on site.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	b) must be operated in a proper and efficient manner.	Operators of plant and equipment are required to be inducted, trained, and found competent to operate plant and equipment prior to use. Pre-start checks are undertaken on all plant and equipment prior to use. Monthly inspections of key areas onsite are conducted by the E&C team to ensure plant and equipment is being maintained and operated in a proper and efficient manner, including but not limited to, workshops, construction areas, hydrocarbon and waste handling and storage areas. A management system/schedule is in place Maintenance Plans and Work Orders through SAP. These maintenance schedules also include details of any repairs that are required outside of the planned maintenance schedules. This information is then used to monitor other plant and machinery for similar breakdown issues.		
O2.2	The licensee is responsible for the correct operation of the sewage treatment system on their premises.	Mangoola Coal holds an approval to operate an onsite sewerage management system (licence number WTA5/2010) in accordance with the requirements of the Muswellbrook Shire Council and EPL 12894. The licence expires on 29 July 2026. All monitoring results required under EPL 12894 are published on the Mangoola Coal website.	Compliant	
O2.3	Correct operation of the sewage treatment system involves regular supervision and system maintenance. The licensee must be aware of the system management requirements and must ensure that the necessary service contracts are in place.	Review of monitoring reports during the audit period indicates that Mangoola managing on-site sewage	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
		treatment and disposal in accordance with the requirements of Council.		
O2.4	The sewage treatment system must be serviced by a suitably qualified and experienced wastewater technician at least once in each quarterly period and a minimum of four times per year.	Evidence supplied that All Septic Services have undertaken services as a suitably qualified and experienced wastewater technician at least once in each quarterly period and a minimum of four times per year during the audit period.	Compliant	
O2.5	The licensee must record each inspection and any actions required or recommended by the technician including date, time, all results of tests performed on the sewage treatment system by the technician.	Sewage Treatment Plant Reports have been prepared for each Annual Return during the audit period by Gauge Industrial and Environmental consultants. The reports record each inspection and any actions required or recommended by the technician including date, time, all results of tests performed on the sewage treatment system by the technician.	Compliant	
O3 Dust				
O3.1	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Section 3.0 of the AQMP outlines the air quality management controls and mitigation practices that have been developed to minimise the impact of Mangoola Open Cut's operations. During the site inspection and following review of available data, it was noted that Mnagoola is generally maintaining the site in a condition which minimises or prevents the emission of dust from the premises.	Compliant	
O3.2	Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.	As per 3.1.	Compliant	
O3.3	All trafficable areas, coal storage areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will	As per 3.1.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.			
O4 Effluent application to land				
O4.1	Effluent application must not occur in a manner that causes surface runoff.	Not triggered, no effluent application to land during the audit period.	Not triggered	
O4.2	Spray from effluent application must not drift beyond the boundary of the premises.	Not triggered, no effluent application to land during the audit period.	Not triggered	
O4.3	The quantity of effluent/solids applied to the utilisation area must not exceed the capacity of the area to effectively utilise the effluent/solids. For the purpose of this condition, 'effectively utilise' include the use of the effluent/solids for pasture or crop production, as well as the ability of the soil to absorb the nutrient, salt, hydraulic load and organic material.	Not triggered, no effluent application to land during the audit period.	Not triggered	
O5 Other operating conditions				
O5.1	A saline water management system must be established for the containment of any water that has come into contact with coal or coal tailings, including saline groundwater seepage, coal stockpile runoff and runoff from coal haul roads.	The saline water system is defined in Section 3.2 of the WMP and consist of: • groundwater inflows; • rainfall/runoff into the mine pit; • runoff from coal haul roads; • runoff from ROM pads; • tailings decant water; and • dirty water runoff from the CHPP, MIA, stockpiles and rail load out area which is pumped back to the Pit Water Dam. The Pit Water Dam has been constructed primarily for the storage of saline water.	Compliant	
O5.2	Water from the saline water management system must not be discharged from the site unless authorised by this licence and must not be used in areas that drain to the site's non-saline water management systems.	Runoff from within the saline water management system is used for dust suppression within the saline water management system and CHPP operations.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations								
		Discharge from site to Hunter River is only undertake in accordance with the HRSTS.										
5 Monitoring and Recording Conditions												
M1 Monitoring records												
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Records sighted during the site inspection for load calculations and monitoring results.	Compliant									
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Records sighted during the site inspection were all in a legible form, with evidence of records being kept for at least 4 years. No request by an authorised officer of The EPA was noted during the audit period.	Compliant									
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Sighted monitoring field sheets that contained all information required under this condition.	Compliant									
M2 Requirement to monitor concentration of pollutants discharged												
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Each monitoring/discharge point or utilisation area has been sampled using the specified sampling method, units of measure, and sample at the frequency required.	Compliant									
M2.2	Air Monitoring Requirements POINT 19,20 <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>PM10</td><td>micrograms per cubic metre</td><td>Continuous</td><td>Special Method 1</td></tr></table> Note: Special Method 1 requires the Licensee to undertake the monitoring of PM10 concentration in strict accordance with the manufacturer's	Pollutant	Units of measure	Frequency	Sampling Method	PM10	micrograms per cubic metre	Continuous	Special Method 1	Between 20-23 February 2021, the monitoring unit malfunctioned at Monitoring Point 20 (D8-DC), as outlined in Table 4.3 of the approved AQMP. This was a non-compliance in accordance with Sampling Method – Special Method 1. Field maintenance	Non-compliant	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.
Pollutant	Units of measure	Frequency	Sampling Method									
PM10	micrograms per cubic metre	Continuous	Special Method 1									

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																																																				
	operating manual supplied with the continuous monitoring equipment and titled "E-Sampler-9800 Particulate Monitor Operation Manual Revision K", or any updated version as published by the manufacturer.	was undertaken on the E-Sampler at the earliest time to attempt to repair, however the unit could not be fixed in the field and was taken offsite for repairs. A replacement unit was installed, however the stabilising period resulted in a loss of three days data. This was reported in the EPL 12894 Annual Return in 2021.																																																						
M2.3	Water and/ or Land Monitoring Requirements POINT 7,8,9,31 <table><thead><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr></thead><tbody><tr><td>Conductivity</td><td>microsiemens per centimetre</td><td>Once a month (min. of 4 weeks)</td><td>Grab sample</td></tr><tr><td>pH</td><td>pH</td><td>Once a month (min. of 4 weeks)</td><td>Grab sample</td></tr><tr><td>Total suspended solids</td><td>milligrams per litre</td><td>Once a month (min. of 4 weeks)</td><td>Grab sample</td></tr></tbody></table> POINT 10,11 <table><thead><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr></thead><tbody><tr><td>Conductivity</td><td>microsiemens per centimetre</td><td>Quarterly</td><td>A probe designed to measure the range 0 to 10,000 uS/cm</td></tr><tr><td>pH</td><td>pH</td><td>Quarterly</td><td>Grab sample</td></tr></tbody></table> POINT 12 <table><thead><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr></thead><tbody><tr><td>Volumetric flowrate</td><td>megalitres per day</td><td>Continuous during discharge</td><td>Flow meter and continuous logger</td></tr></tbody></table> POINT 13,14 <table><thead><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr></thead><tbody><tr><td>Conductivity</td><td>microsiemens per metre</td><td>Daily during any discharge</td><td>Grab sample</td></tr><tr><td>pH</td><td>pH</td><td>Daily during any discharge</td><td>Grab sample</td></tr><tr><td>Total suspended solids</td><td>milligrams per litre</td><td>Daily during any discharge</td><td>Grab sample</td></tr></tbody></table>	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per centimetre	Once a month (min. of 4 weeks)	Grab sample	pH	pH	Once a month (min. of 4 weeks)	Grab sample	Total suspended solids	milligrams per litre	Once a month (min. of 4 weeks)	Grab sample	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per centimetre	Quarterly	A probe designed to measure the range 0 to 10,000 uS/cm	pH	pH	Quarterly	Grab sample	Pollutant	Units of measure	Frequency	Sampling Method	Volumetric flowrate	megalitres per day	Continuous during discharge	Flow meter and continuous logger	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per metre	Daily during any discharge	Grab sample	pH	pH	Daily during any discharge	Grab sample	Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample	Sample locations noted in each applicable management plan and are being monitored and reported in accordance with this condition.	Compliant	
Pollutant	Units of measure	Frequency	Sampling Method																																																					
Conductivity	microsiemens per centimetre	Once a month (min. of 4 weeks)	Grab sample																																																					
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Total suspended solids	milligrams per litre	Once a month (min. of 4 weeks)	Grab sample																																																					
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Conductivity	microsiemens per centimetre	Quarterly	A probe designed to measure the range 0 to 10,000 uS/cm																																																					
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Pollutant	Units of measure	Frequency	Sampling Method																																																					
Volumetric flowrate	megalitres per day	Continuous during discharge	Flow meter and continuous logger																																																					
Pollutant	Units of measure	Frequency	Sampling Method																																																					
Conductivity	microsiemens per metre	Daily during any discharge	Grab sample																																																					
pH	pH	Daily during any discharge	Grab sample																																																					
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample																																																					

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations																												
	POINT 33 <table><thead><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr></thead><tbody><tr><td>Faecal Coliforms</td><td>colony forming units per 100 millilitres</td><td>Quarterly</td><td>Grab sample</td></tr><tr><td>pH</td><td>pH</td><td>Quarterly</td><td>Grab sample</td></tr></tbody></table> POINT 41 <table><thead><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr></thead><tbody><tr><td>Conductivity</td><td>microsiemens per centimetre</td><td>Continuous during discharge</td><td>A probe designed to measure the range 0 to 10,000 uS/cm</td></tr><tr><td>pH</td><td>pH</td><td>Daily during any discharge</td><td>Grab sample</td></tr><tr><td>Total suspended solids</td><td>milligrams per litre</td><td>Daily during any discharge</td><td>Grab sample</td></tr></tbody></table>	Pollutant	Units of measure	Frequency	Sampling Method	Faecal Coliforms	colony forming units per 100 millilitres	Quarterly	Grab sample	pH	pH	Quarterly	Grab sample	Pollutant	Units of measure	Frequency	Sampling Method	Conductivity	microsiemens per centimetre	Continuous during discharge	A probe designed to measure the range 0 to 10,000 uS/cm	pH	pH	Daily during any discharge	Grab sample	Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample			
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M3 Testing methods - concentration limits																																
M3.1	Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place. Note: The Protection of the Environment Operations (Clean Air) Regulation 2021 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".	Air monitoring undertaken in accordance with the relevant approved methods during the audit period.	Compliant																													
M3.2	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.	Pollutant discharged to waters monitoring in accordance with the approved methods during the audit period.	Compliant																													
M4 Weather monitoring																																

M4.1	For each monitoring point specified in the table below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns: Point 5; and Point 18 <table border="1"> <thead> <tr> <th>Parameter</th><th>Units of Measure</th><th>Frequency</th><th>Averaging Period</th><th>Sampling Method</th></tr> </thead> <tbody> <tr> <td>Rainfall</td><td>mm</td><td>Continuous</td><td>1 hour</td><td>AM-4</td></tr> <tr> <td>Wind speed @ 10 metres</td><td>m/s</td><td>Continuous</td><td>15 minutes</td><td>AM-2 & AM-4</td></tr> <tr> <td>Wind direction @ 10 metres</td><td>0</td><td>Continuous</td><td>15 minutes</td><td>AM-2 & AM-4</td></tr> <tr> <td>Temperature @ 2 metres</td><td>0C</td><td>Continuous</td><td>15 minutes</td><td>AM-4</td></tr> <tr> <td>Temperature @ 10 metres</td><td>0C</td><td>Continuous</td><td>15 minutes</td><td>AM-4</td></tr> <tr> <td>Sigma theta @ 10 metres</td><td>0</td><td>Continuous</td><td>15 minutes</td><td>AM-2 & AM-4</td></tr> <tr> <td>Solar radiation</td><td>W/m2</td><td>Continuous</td><td>15 minutes</td><td>AM-4</td></tr> <tr> <td>Additional requirements - siting - measurement</td><td></td><td></td><td></td><td>AM-2 & AM-4 AM-2 & AM-4</td></tr> </tbody> </table>	Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method	Rainfall	mm	Continuous	1 hour	AM-4	Wind speed @ 10 metres	m/s	Continuous	15 minutes	AM-2 & AM-4	Wind direction @ 10 metres	0	Continuous	15 minutes	AM-2 & AM-4	Temperature @ 2 metres	0C	Continuous	15 minutes	AM-4	Temperature @ 10 metres	0C	Continuous	15 minutes	AM-4	Sigma theta @ 10 metres	0	Continuous	15 minutes	AM-2 & AM-4	Solar radiation	W/m2	Continuous	15 minutes	AM-4	Additional requirements - siting - measurement				AM-2 & AM-4 AM-2 & AM-4	Failure to monitor continuously monitor weather at Monitoring Point 5 and Monitoring Point 18: Monitoring Point 5: • Rainfall: 16 x 15 min averaging (av) periods; • Temperature (2m): 2 x 15 min av periods; and • Solar Radiation: 18 x 15 minute av periods. Monitoring Point 18: • Rainfall: 345 x 15 min av periods; • Wind speed: 299 x 15 min av periods; • Wind direction: 299 x 15 min av periods; • Temperature (2m): 343 x 15 min av periods; • Temperature (10m) 299 x 15 min av periods; • Sigma theta: 299 x 15 min av periods; and • Solar radiation: 341 x 15 min av periods. Monthly data validation checks have been implemented, along with changes to contactor arrangements. The non-compliance was reporting the EPL Annual Return, dated 12 August 2021	Non-compliant	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.
Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method																																													
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Additional requirements - siting - measurement				AM-2 & AM-4 AM-2 & AM-4																																													
M5 Recording of pollution complaints																																																	
M5.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Sighted legible records of all complaints made to the licensee or any employee or agent of the licensee. A detailed internal register is maintained along with monthly summaries provided on the public project website.	Compliant																																														

M5.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	Complaints are entered into CMO, a report is issued following close out of the complaint and is then uploaded into the internal complaint's registers. The Community Complaints and Dispute Resolution procedure is outlined in Section 4.4 of the EMS.	Compliant													
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Complaint records were observed to be recorded for 4 years	Compliant													
M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.	No request by an authorised officer of the EPA during the audit period.	Not triggered													
M6 Telephone complaints line																
M6.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	A telephone complaints line is operated 24/7 – 1800 014 339.	Compliant													
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.	Advertised in the local paper, project website, and in the community newsletter.	Compliant													
M6.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.	Noted and confirmed.	Compliant													
M7 Blasting																
M7.1	To determine compliance with conditions L4.1, L4.2, L4.3 and L4.4: a) Airblast overpressure and ground vibration levels must be measured and electronically recorded for monitoring points 16, 21 and 32 for the parameters specified in Column 1 of the table below; and b) The licensee must use the units of measure, sampling method, and sample at the frequency specified opposite in the other columns. <table><tr><td>Parameter</td><td>Units of Measure</td><td>Frequency</td><td>Sampling Method</td></tr><tr><td>Airblast Overpressure</td><td>Decibels (Linear Peak)</td><td>All Blasts</td><td>Australian Standard AS 2187.2-2006</td></tr><tr><td>Ground Vibration Peak Particle Velocity</td><td>millimetres/second</td><td>All Blasts</td><td>Australian Standard AS 2187.2-2006</td></tr></table>	Parameter	Units of Measure	Frequency	Sampling Method	Airblast Overpressure	Decibels (Linear Peak)	All Blasts	Australian Standard AS 2187.2-2006	Ground Vibration Peak Particle Velocity	millimetres/second	All Blasts	Australian Standard AS 2187.2-2006	On 1 October 2021 Blast monitor at BM07 (Point 21) failed to record a result. An internal investigation was conducted and identified that although the blast monitor was online, data could not be downloaded due to memory card corruption.	Non-compliant	Continue to implement regular maintenance and equipment inspections by trained and competent technicians. Review equipment lifespan estimates as part of regular inspections.
Parameter	Units of Measure	Frequency	Sampling Method													
Airblast Overpressure	Decibels (Linear Peak)	All Blasts	Australian Standard AS 2187.2-2006													
Ground Vibration Peak Particle Velocity	millimetres/second	All Blasts	Australian Standard AS 2187.2-2006													

M8 Other monitoring and recording conditions				
M8.1	Hunter River Salinity Trading Scheme (HRSTS) Monitoring The licensee must continuously operate and maintain communication equipment which makes the conductivity and flow measurements, taken at Point 12 available to the "Services Coordinator" within one hour of those measurements being taken and makes them available in the format specified in the "Hunter River Salinity Trading Scheme Discharge Point Telemetry Specification - Rev V1.0" released 4 October 2018 and as published by Water NSW.	Evidence sighted that Mangoola continuously operate and maintain communication equipment which makes the conductivity and flow measurements, taken at Point 12 available to the "Services Coordinator" within one hour of those measurements being taken.	Compliant	
M8.2	The licensee must ensure that the results of the measurements it takes for conductivity at monitoring point 41 and flow at monitoring point 12 are available to the regional water quality monitoring network operated by the NSW Office of Water (or other service provider as advised by the EPA) within 1 hour of its recording.	Evidence sighted that the results of the measurements it takes for conductivity at monitoring point 41 and flow at monitoring point 12 are available to the regional water quality monitoring network operated by the NSW Office of Water within 1 hour of its recording.	Compliant	
M8.3	The licensee must ensure that all monitoring data is within a margin of error of 5% for conductivity measurements and 10% for discharge flow measurement.	VeriMaster flow meter verification report sighted during site inspection indicating that the monitoring data is within the specified limits.	Compliant	
M8.4	The licensee must mark monitoring point(s) 12, 13, 14 with a sign which clearly indicates the name of the licensee, whether the monitoring point is up or down stream of the discharge point(s) and that it is a monitoring point for the Hunter River Salinity Trading Scheme.	Photographic evidence provided indicating the name of the licensee, the monitoring point location (up or down stream of the discharge point) and that it is a monitoring point for the HRSTS.	Compliant	
M8.5	Requirement to Monitor Particulate Matter The Licensee must record the average PM10 concentration at Monitoring Points 19 and 20 at intervals of 10 minutes. This data must be made available upon request by any Authorised Officer of the EPA who asks to see them.	Data collected in 5 min intervals. No request made.	Compliant	
M9 Noise monitoring				
M9.1	To assess compliance with condition L3.1, attended noise monitoring must be undertaken in accordance with Conditions L3.2 to L3.5: a) at the EPA points 22, 23, 26, 27, 29, 30, 34, 35, 36, 37, 38, 39, and 40 identified in P1.4; and b) occur every calendar month in a reporting period; and	Attended noise monitoring was undertaken in accordance with Conditions L3.2 to L3.5 and M9.1 during the audit period.	Compliant	

	c) occur during one night time period as defined in the Noise Policy for Industry (EPA 2017) for a minimum of 15 minutes at each location listed above, and when relevant during the night.			
M9.2	For the purposes of compliance monitoring and determining the noise generated at the premises the modification factors in the EPA's Fact Sheet C of the Noise Policy for Industry (EPA 2017) must be applied, as appropriate, to the noise levels measured by noise monitoring equipment. <i>Definitions</i> Noise refers to 'sound pressure levels' for the purpose of conditions L3.1 to L3.4 and condition M9.	Evidence sighted that the modification factors in the EPA's Fact Sheet C of the Noise Policy for Industry (EPA 2017) have been applied during the audit period.	Compliant	
M9.3	Where required in writing by the EPA, the Licensee must carry out attended monitoring at sensitive receivers in addition to the monitoring required by Condition M9.1.	No request received during the audit period.	Not triggered	
6 Reporting Conditions				
R1 Annual return documents				
R1.1	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 notification that the Annual Return is due.	Annual reviews have been completed and supplied to the EPA for the audit period that complies with the information required in R1.1.	Compliant	
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	Annual reviews have been completed and supplied to the EPA for the audit period.	Compliant	

	Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.			
R1.3	Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period. Note: An application to transfer a licence must be made in the approved form for this purpose.	No transfer during the audit period.	Not triggered	
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval 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 licence has not been surrenders during the audit period.	Not triggered	
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	The Annual Returns for the audit period have been supplied to the EPA via eConnect EPA with 60days.	Compliant	
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Evidence of Annual Return retention for at least 4 years sighted.	Compliant	
R1.7	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.	Within the Annual Returns, the Statements of Compliances have been certified and the Monitoring and Complaints Summary's have been signed by the required persons during the audit period.	Compliant	

R2 Notification of environmental harm				
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	Email correspondence with the EPA confirmed that notifications have been made via the Environment Line service on 131 555 during the audit period.	Compliant	
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident. Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	Written details of the notification to the EPA within 7 days of the date on which Mangoola became aware of incidents was observed during the site inspection.	Compliant	
R3 Written report				
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	There have not been any requests for a written report to be produced by the EPA during the audit period.	Not triggered	
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.	There have not been any requests for a written report to be produced by the EPA during the audit period.	Not triggered	
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	There have not been any requests for a written report to be produced by the EPA during the audit period.	Not triggered	

	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.			
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.	There have not been any requests for a written report to be produced by the EPA during the audit period.	Not triggered	
R4 Other notifications				
R4.1	Noise Exceedance Notification and Reporting The Licensee must report any exceedance of Licence noise limits to EPA by email to info@epa.nsw.gov.au as soon as practicable after the exceedance becomes known to the Licensee or to one of the Licensee's employees or agents.	No exceedances during audit period.	Not triggered	
R4.2	Within seven days of notifying the EPA of an exceedance of Licence noise limits, the Licensee must provide the EPA a report in writing that explains the cause of the exceedance and the actions taken to prevent future exceedances of noise limits.	No exceedances during audit period.	Not triggered	
R4.3	An authorised officer of 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 at Condition R4.2. The Licensee must provide such further details to the EPA within the time specified in the request.	No exceedances during audit period.	Not triggered	
R5 Other reporting conditions				
R5.1	Reporting of Blast Monitoring The licensee must supply, with each Annual Return, a Blast Monitoring Report which must include the following information relating to each blast carried out within the premises during the reporting period covered by the Annual Return: (a) the date and time of the blast; (b) the location of the blast on the premises; (c) the blast monitoring results at each blast monitoring station; and	Blast monitoring report attached to each Annual Return during the audit period. The Blast monitoring report contained the applicable information required by this condition.	Compliant	

	(d) an explanation for any missing blast monitoring results.			
R5.2	Reporting exceedence of blasting limits The licensee must report any exceedence of the licence blasting limits to the Environment Line on 131 555 as soon as practicable after the exceedence becomes known to the licensee or to one of the licensee's employees or agents.	Evidence supplied of 4 March 2020 via EPA hotline at 130pm of exceedance.	Compliant	
R5.3	Noise Compliance Assessment Report A report containing the monitoring results of noise compliance monitoring specified in this Licence must be submitted annually with the Annual Return. The report must include, for each monitoring period and monitoring location: a) the contribution noise level from the premises as measured or determined at the monitoring location(s); and b) a description of the method used to determine or estimate the contribution noise level from the premises that is consistent with the Noise Policy for Industry (EPA 2017).	Noise Compliance Assessment Reports attached to each Annual Return during the audit period. Noted that each report included site contribution noise levels for each monitoring location (a), and description of method used to estimate the contribution noise level consistent with the NPfI.	Compliant	
R5.4	HRSTS Reporting The licensee must compile a written report of the activities under the Scheme for each scheme year. The scheme year shall run from 1 July to 30 June each year. The written report must be submitted to the EPA's regional office within 60 days after the end of each scheme year and be in a form and manner approved by the EPA. The information will be used by the EPA to compile an annual scheme report.	Discharging of water from site has only begun in 2021-2022 Annual Return period which the report currently being compiled.	Compliant	
R5.5	Sewage Treatment System A report on the sewage treatment system maintenance program must be submitted annually to the EPA with the Annual Return and must include a) Certification from the system provider that the sewage treatment system is operating within its capacity; b) Date, time and results of all routine maintenance procedures undertaken to the sewage treatment system; and c) Written records of each quarterly inspection.	Sewage Treatment System Report have been provided as attachments to each Annual Return during the audit period. The reports have certification attached from All Septic Services outlining that the sewage treatment system is operating within its capacity.	Compliant	
R5.6	The licensee must retain a copy of each report required by Condition O2.5 for 3 years from the date each record is made.	Evidence of reports being retained for the last three years sighted.	Compliant	

7 General Conditions				
G1 Copy of licence kept at the premises or plant				
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Copy available.	Compliant	
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	No request during the audit period.	Not triggered	
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the Premises.	Copy readily available.	Compliant	
G2 Copy of licence kept at the premises or plant				
G2.1	The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can: a) respond at all times to incidents relating to the premises; and b) contact the licensee's senior employees or agents authorised at all times to: i) speak on behalf of the licensee; and ii) provide any information or document required under this licence.	24/7 hotline is available on 1800 014 339.	Compliant	
G2.2	The licensee is to update the EPA through the eConnect EPA platform of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.	Notification to the eConnect EPA platform of the change in E&C Manager to Sam Palmer was undertaken on 18 January 2022.	Compliant	Record notification of changes in the future or request receipt from the EPA when using eConnect.
8 Pollution Studies and Reduction Programs				
U1 Saline Dispersion Investigation				
U1.1	During the licensee's next discharge under the Hunter River Salinity Trading Scheme (HRSTS) the licensee must monitor salinity levels at least at the following location, provided it is safe to do so: - At the nearest downstream irrigation off-take point. - As far as practicable it should be timed to coincide with the peak flow of discharge water. The results of this monitoring must be reported to the EPA's Manager Hunter Region within 30 days of being collected. The report should detail the exact location, time and method of monitoring.	Mangoola monitored salinity levels at the nearest downstream irrigation off-take point, timed to coincide with the peak flow of discharge water during the 5 March 2022 discharge event. The results of this monitoring were reported to the EPA's Manager Hunter Region within 30 days on 5 March 2022.	Compliant	

	Note: A handheld salinity probe is considered an adequate method of undertaking the monitoring. This monitoring can be carried out in conjunction with other discharging participants in the HRSTS.			
9 Special Conditions				
E1 Hunter River Salinity Trading Scheme				
E1.1	This licence authorises the discharge of saline water into the Hunter River Catchment from an authorised discharge point (or points), in accordance with the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2012.	Register received from WaterNSW that contains total salt tonnes and, credit factor, and window for discharge. Mangoola calculation sheet daily discharge used to calculate requirements. Max flow and volume for period is then communicated to pumping team to set at pump and is then monitored via telemetry.	Compliant	
E1.2	For the purposes of Clauses 23 and 29 of the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002 the licensee must apply the conversion factor of 0.6.	Evidence was sighted that the conversion factor of 0.6 was used.	Compliant	
E1.3	The licensee must not exceed the hourly volume discharge limit calculated using the following formula, at all discharge point(s) on this licence titled "Discharge of saline water under the Hunter River Salinity Trading Scheme (HRSTS)": H = V / RRT Where: H is the hourly volume discharge limit (in megalitres per hour); V is the licence holder's volume discharge limit for the block (in megalitres) calculated in accordance with clause 23 of the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation (2002); and RRT is the difference between the discharge stop and start times shown on the river register for that block (in hours) Note 1: The intent of this condition is to prevent spikes of saline water in the Hunter River as a result of discharges of less than the duration permitted by the river register.	The hourly volume discharge limit calculated using the following formula, at all discharge point(s) on the licence was not exceeded during the audit period.	Compliant	

	Note 2: A river register is issued by the Service Co-ordinator and allows participants of the Hunter River Salinity Trading Scheme (HRSTS) to discharge saline to the Hunter River during a discharge period.			
E1.4	Conditions M2.3 (relevant to monitoring points 13, 14 and 41), M8.2, M8.3, M8.5, R5.4 and E1.1 do not apply until the licensee notifies the EPA in writing that the monitoring and telemetry equipment is installed as per the conditions of this licence. Until the EPA receives notification, this licence does not authorise the discharge of saline water.	Sighted evidence of EPA notifications permitting discharge and compliance with 1.4 for the March and July discharge events.	Compliant	
E2 Disposal of Exploration Waste				
E2.1	Drilling and exploration waste generated onsite may be disposed of in the existing tailings dam (TD4) at the licensed premises.	No drilling or exploration waste generated onsite was disposed of in the existing tailings dam (TD4) during the audit period.	Not triggered	

B.4 Mining and Exploration Lease Audit Checklists

AL9 AUDIT CHECKLIST – MANGOOLA IEA 2022

AL9 RENEWAL AUDIT CHECKLIST – MANGOOLA IEA 2022	1
SCHEDULE 2 – ASSESSMENT LEASE CONDITIONS	2
CONDITIONS	2
Prospecting operations permitted under this assessment lease	2
Prospecting operations requiring further approval	2
Community consultation	3
Access to assessment lease and relevant documents	3
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SCHEDULE 2 – ASSESSMENT LEASE CONDITIONS				
CONDITIONS				
Prospecting operations permitted under this assessment lease				
1	The lease holder may conduct Category 1 prospecting operations on the assessment lease area subject to the conditions of this lease. <i>Note: a. The lease holder must comply with the requirements of the Act and other relevant legislation.</i> <i>b. Category 1 prospecting operations:</i> <i>i. must be of minimal environmental impact.</i> <i>ii. cannot be carried out in critical habitat of an endangered species, population or ecological community (identified under the Threatened Species Conservation Act 1995 or the Fisheries Management Act 1994), and</i> <i>iii. can not be carried out in a wilderness area (identified under the Wilderness Act 1987).</i>	No prospecting works occurred during the audit period.	Not triggered	
Prospecting operations requiring further approval				
2	The lease holder must obtain the Minister's written approval prior to carrying out any of the following prospecting operations on the assessment lease area: a. Category 2 prospecting operations; and b. Category 3 prospecting operations. <i>Note: The information required to be submitted as part of the lease holder's request for written approval under this condition is set out in the "Note" following condition 3 below.</i>	No Category 2 or 3 prospecting has been undertaken during the audit period.	Not triggered	
3	The lease holder must comply with the conditions of an approval under condition 2 when carrying out those prospecting operations. <i>Note: In the case of prospecting operations identified in condition 2 as requiring approval by the Minister, the application for approval must be accompanied by a Surface Disturbance Notice (SDN). A Review of Environmental Factors and Agricultural Impact Statement may be required for Category 2 prospecting operations if the Minister is of the opinion that the prospecting operations may result in more than minimal environmental impact.</i> <i>A Surface Disturbance Notice, Review of Environmental Factors and Agricultural Impact Statement are required for all Category 3 prospecting operations.</i>	No Category 2 or 3 prospecting has been undertaken during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	<i>If the impact of prospecting operations on the environment is determined as likely to significantly affect the environment (including critical habitat) or threatened species, populations or ecological communities, or their habitats, in terms of Part 5 of the EP&A Act, then the lease holder will be required to submit an Environmental Impact Statement (EIS).</i> <i>Applications may also require a Groundwater Monitoring and Modelling Plan (see condition 11)).</i>			
Community consultation				
4	The lease holder must engage with the community in relation to the planning for and conduct of prospecting operations authorised under this assessment lease.	AL9 community consultation strategy plan is implemented with RAPs and CCC notified along with updates in the Project Newsletter.	Compliant	
5	The consultation must be undertaken in accordance with the <i>Guideline for community consultation requirements for the assessment of coal and petroleum, including coal seam gas</i> (NSW Trade & Investment, 2012) as amended from time to time.	Consultation was observed to be generally in accordance with the <i>Guideline for community consultation requirements for exploration 1 March 2016</i> .	Compliant	
6	An annual report on Community Consultation must be submitted to the Department within 28 days of the anniversary of this lease being granted, together with evidence that the consultation has been undertaken in accordance with the Guideline. <i>Note: Copies of the Guideline are available from www.resources.nsw.gov.au</i>	Annual Community Consolation reports were submitted to the Resource Regulator during the audit period within 28 days of the anniversary of this lease being granted.	Compliant	
Access to assessment lease and relevant documents				
7	The lease holder must ensure that a copy of this assessment lease and any relevant documentation relating to the conduct of prospecting operations is: a. accessible on the site of active prospecting operations authorised by this assessment lease; and b. made available to all supervisors or other persons concerned in the day to day management of prospecting operations authorised by this assessment lease. <i>Note: For the purposes of this condition, relevant documentation includes, but is not limited to:</i> a. access arrangements required under Part 8 of the Act;	Not triggered.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	<i>b. exempted area consents required under section 30 of the Act;</i> <i>c. approvals under condition 2 of this assessment lease, and any document specified as forming part of that approval, such as a Review of Environmental Factors; and</i> <i>d. the approved Groundwater Monitoring and Modelling Plan under condition 11 of this assessment lease.</i>			
Environmental harm				
8	The lease holder must implement all reasonably practicable measures to prevent and/or minimise harm to the environment that may result from the conduct of any prospecting operations under this assessment lease.	No prospecting during the audit period.	Not triggered	
Erosion and sediment control				
9	The lease holder must prevent erosion and pollution of watercourses resulting from the conduct of prospecting operations by implementing effective erosion and sediment control measures.	No prospecting during the audit period.	Not triggered	
10	The planning, design and construction of erosion and sediment control measures must be conducted generally in accordance with <i>Managing Urban Stormwater: Soils and Construction</i> (DECC 2007), as amended or replaced from time to time.	No prospecting during the audit period.	Not triggered	
Groundwater Monitoring and Modelling Plan				
11	Prior to conducting prospecting operations involving the construction and use of boreholes, the lease holder must: <i>a. Prepare a Groundwater Monitoring and Modelling Plan in consultation with the NSW Office of Water;</i> <i>b. Ensure that the Groundwater Monitoring and Modelling Plan:</i> <i>i. describes methods for identifying aquifers, their depths, behaviour, containing layers and connectivity with surrounding aquifers or surface water systems;</i> <i>ii. describes methods for collection of data relevant to the type, quantity and quality of water contained within aquifer systems likely to be encountered during prospecting operations;</i> <i>iii. provides for the future development of a conceptual model of regional groundwater behaviour;</i> <i>iv. provides for the future development of a calibrated computer model of regional groundwater behaviour, to enable the impacts of any proposed mining operations to be assessed;</i>	Prospecting operations involving the construction and use of boreholes has not occurred during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	v. describes how records of all data collected will be maintained; vi. describes the staging process for implementation of the plan; and vii. is prepared in accordance with any additional requirements prescribed by the Secretary. e. The Groundwater Monitoring and Modelling Plan must address the requirements identified in b)i) to b)vii) in a level of detail commensurate with the scale, timing and potential impact of proposed operations; f. Have the Groundwater Monitoring and Modelling Plan approved by the Minister; and g. Implement and comply with the approved Groundwater Monitoring and Modelling Plan. <i>Note: The Groundwater Monitoring and Modelling Plan is required to ensure:</i> a. <i>there is sufficient groundwater data available to assess future operations against the Aquifer Interference Policy (NSW Office of Water, 2012), as amended or replaced from time to time; and</i> b. <i>2 years of baseline data is available prior to submitting an application for any future production operations.</i> <i>An application may be made to the Department at any time to vary an approved Groundwater Monitoring and Modelling Plan.</i>			
Use of Chemicals and Fuel				
12	The lease holder must ensure that all chemicals, fuels and oils, excluding those contained within plant and equipment and those for personal use, are: a. stored and handled in accordance with the relevant Material Safety Data Sheet and Australian Standards for the material; b. stored in appropriate containers that are in good condition and labelled to clearly identify the stored product; and c. kept in a facility or area which is capable of containing at least 100% of the largest container capacity stored within that area; unless otherwise approved by the Minister.	All chemicals, fuels and oils were observed to be stored and handled in accordance with the relevant SDS's and AS's and were stored in appropriate containers and bunded areas during the site inspection. There were no prospecting activities during the audit period requiring the use of chemicals, fuels or oils.	Not triggered	
13	The lease holder must ensure that adequate spill prevention and oil absorbent materials required to manage spills and leaks for all chemicals, fuels and oils on site are readily available at all times where prospecting operations are being carried out. Equipment and/or materials to capture drips and spills must be used during transfer of chemicals, fuels and oils, and when maintaining oil or fuel filled components.	No prospecting during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Noise				
14	The lease holder must carry out operations in accordance with the requirements of the <i>Interim Construction Noise Guidelines</i> (DECC, 2009), as amended or replaced from time to time. Unless otherwise approved by the Minister, the lease holder must ensure that: a. noise levels during standard working hours do not exceed the Rating Background Level (RBL) +10dB at any residence or other sensitive receiver (as defined in the Interim Construction Noise Guidelines). b. noise levels outside of standard working hours do not exceed the RBL +5dB.	No prospecting during the audit period.	Not triggered	
15	The noise limits identified in condition 14 will not apply where the lease holder has negotiated a written agreement with: a. the relevant landholder; or b. in the case of a prospecting operation that will result in an exceedance of the criteria at a dwelling or other sensitive receiver, the resident of that dwelling or occupier of the sensitive receiver; c. to allow different limits and the lease holder complies with those limits.	No prospecting during the audit period.	Not triggered	
Vegetation Clearing				
16	Vegetation clearing and vegetation disturbance must be limited to the minimum extent necessary to facilitate the conduct of prospecting operations authorised by this assessment lease. <i>Note: Any clearing of native vegetation which is not authorised under the Mining Act 1992 is subject to the Native Vegetation Act 2003.</i> <i>Additional approvals may also be required before using timber from Crown land.</i>	No prospecting during the audit period.	Not triggered	
Fire prevention				
17	The lease holder must take all reasonably practicable precautions against causing an outbreak of fire.	No prospecting during the audit period.	Not triggered	
18	The lease holder must not burn off any grass, foliage or herbage without the consent of the landholder and the local fire authority.	No prospecting during the audit period.	Not triggered	
Infrastructure				
19	The lease holder must ensure that prospecting operations do not interfere with or impair the stability or efficiency of any transmission line,	No prospecting during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	communication line, pipeline or any other utility without the prior written approval of the infrastructure owner and subject to any conditions that may be stipulated by the infrastructure owner.			
Passage of stock				
20	The lease holder must permit the passage of stock through the assessment lease area and must conduct operations in a manner so as not to cause danger to travelling stock.	No request or requirement for the passage of stock through the assessment lease area during the audit period.	Not triggered	
21	The lease holder must not interfere with or prevent the access of stock to any watering places or approaches to such watering places without the approval of the landholder.	No request or requirement for the access of stock to any watering places or approaches to such watering places during the audit period.	Not triggered	
Roads and Tracks				
22	Except where otherwise approved under condition 2, the lease holder must ensure that: a. Existing roads and tracks are used in preference to constructing new roads and tracks; b. The planning, design, construction and maintenance of unsealed roads and tracks is constructed generally in accordance with <i>Managing Urban Stormwater: Soils and Construction, Volume 2C, Unsealed Roads</i> (DECC 2007) as amended or replaced from time to time; and c. All water land and wetland crossing works are constructed in accordance with the requirements of the Policy and Guidelines for Fish Friendly Waterway Crossings (NSW DPI 2003) and Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries 2003) as amended or replaced from time to time.	No new roads or tracks have been constructed during the audit period.	Compliant	
23	The lease holder must restrict the use of any unsealed road or track during wet weather to prevent damage to that road or track unless the road or track has been designed and constructed for use in wet weather.	No prospecting during the audit period.	Not triggered	
Topsoil management				
24	The lease holder must ensure that all topsoil removed in the course of prospecting operations is stockpiled for later use in rehabilitating those operations.	No prospecting during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Drilling				
25	The lease holder must: a. Construct, maintain and decommission all boreholes and petroleum wells in accordance with standards equivalent to or exceeding the <i>Minimum Construction Requirements for Water Bores in Australia</i> (NUDLC 2012), as amended or replaced from time to time. Where this condition is inconsistent with other conditions set out in this assessment lease, those conditions prevail to the extent of that inconsistency. b. Ensure that the construction, operation, maintenance and decommissioning of boreholes does not cause or enhance: i. collapse of the surrounding surface; or ii. hazards to persons, stock and wildlife c. Ensure any borehole that encounters natural or noxious gases is plugged or sealed as soon as practicable once completed so as to prevent their escape; d. Ensure that any borehole that encounters an artesian or sub-artesian flow is effectively sealed as soon as practicable once completed to prevent: i. hydraulic connection between aquifers; ii. contamination or cross-contamination of aquifers; iii. the uncontrolled surface discharge of ground waters	No prospecting during the audit period.	Not triggered	
26	The lease holder must report any blowout associated with prospecting operations to the Department: a. immediately; and b. provide a written report within 24 hours. <i>Note: The lease holder should have regard to any Secretary's guidelines related to the drilling, operation and abandonment of boreholes.</i>	No prospecting during the audit period.	Not triggered	
Waste Management				
27	The lease holder must ensure that: a. the sites of prospecting operations are maintained in a clean and tidy condition at all times; b. all waste, including contaminated residues, must be collected, segregated and securely deposited in properly constructed containers and disposed lawfully;	No prospecting during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	c. drilling by-products contaminated by chemicals, oils or fuels must be collected and remediated or disposed lawfully; and d. all drill cuttings and drilling fluids not being reused in drilling operations are disposed lawfully. <i>Note: Alternative reuse of drill cuttings and treated fluids may be approved by the Minister under condition 2 of this assessment lease.</i>			
28	The lease holder must maintain records of: a. all waste generated as a result of prospecting operations under this assessment lease; and b. the means of disposal of all waste. <i>Note: Waste is regulated under the Protection of the Environment Operations Act 1997 and the NSW Waste Regulations. Contact the Local Council or the Environment Protection Authority for details of those requirements.</i>	No prospecting during the audit period.	Not triggered	
Safety				
29	The lease holder must notify the Department at least 7 days prior to the proposed commencement of any prospecting operation involving any drilling, blasting or other potentially hazardous operation. This notification must be made in the form approved by the Secretary.	No prospecting during the audit period.	Not triggered	
30	The lease holder must carry out operations in a manner that ensures the safety of members of the public, stock and wildlife in the vicinity of the operations.	No prospecting during the audit period.	Not triggered	
31	The lease holder must put in place measures to control safety hazards. These measures include, but are not limited to, the development of a Safety Management Plan prepared in accordance with relevant Departmental guidelines. <i>Note: Mining activities in NSW, including exploration, are subject to the Work Health and Safety Act 2011 which is the main Act dealing with the health, safety and welfare of persons at work. The Work Health and Safety Act 2011 is to be read in conjunction with the Coal Mine Health and Safety Act 2002 which deals with health, safety and welfare of people at work at coal operations or related places and puts in place special provisions necessary for the control of particular risks arising from the exploration for coal.</i>	No prospecting during the audit period.	Not triggered	
Technical Manager				
32	The lease holder must ensure that prospecting operations are conducted, or directly supervised, by a Technical Manager, being:	No prospecting during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	a. a person with tertiary qualifications in geoscience, petroleum or mining engineering; or b. a person having other qualifications or exploration experience approved by the Minister.			
33	The lease holder must advise the Minister of the name and contact details of the Technical Manager(s) within ten (10) working days of any changes to the nominated Technical Manager or their contact details.	No prospecting during the audit period.	Not triggered	
Cooperation with other title holders				
34	The lease holder must make every reasonable attempt, and be able to demonstrate their attempts, to enter into a cooperation agreement with the holder(s) of any overlapping authorisations under the <i>Mining Act 1992</i> or petroleum title under the <i>Petroleum (Onshore) Act 1991</i>. The cooperation agreement should address but not be limited to: a. access arrangements; b. operational interaction arrangements; c. dispute resolution; d. information exchange; e. location of prospecting operations; f. timing of drilling; g. potential resource extraction conflicts; and h. integrated rehabilitation activities.	Review of DPE's MinView mapping showed no overlaps of authorisations under the Mining Act 1992 or Petroleum (Onshore) Act 1991.	Not triggered	
Minister's approval of change in control				
35	a. It is a condition of this lease that, where the lease-holder is a corporation or a trust, the Minister's prior written approval is required before there occurs: i. any change in the effective control of the lease-holder; or ii. any foreign acquisition of substantial control in the lease-holder. b. Subject to Clause (d), for the purposes of this condition, there is a "change in effective control" where, after the imposition of this condition, any Third Party or Trustee of a Trust Estate: i. acquires the capacity to appoint or control at least 50% of the number of directors of the lease-holder's board;	There has not been any change in the effective control of the lease-holder or any foreign acquisition of substantial control in the lease-holder.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	ii. becomes entitled to exercise (directly or indirectly) greater than 50% of the votes entitled to be cast at any general meeting of the lease-holder; or iii. holds more than 50% of the issued share capital (other than shares issued with no rights other than to receive a specified amount in distribution) of the lease-holder. c. Subject to Clause (d), for the purposes of this condition, there is a "foreign acquisition of substantial control" where, after the imposition of this condition, a Foreign Party: i. acquires the capacity to appoint or control at least 15% of the number of directors of the lease-holder's board; ii. becomes entitled to exercise (directly or indirectly) greater than 15% of the votes entitled to be cast at any general meeting of the lease-holder; or iii. holds more than 15% of the issued share capital (other than shares issued with no rights other than to receive a specified amount in distribution) of the lease-holder; For the purposes of this condition a Foreign Party means: iv. a natural person not ordinarily resident in Australia (foreign person); v. a corporation incorporated outside Australia (foreign corporation); vi. a corporation in which a foreign person or foreign corporation is a shareholder holding more than 15% of issued capital entitled to vote at any general meeting of the lease holder; vii. a corporation in which 2 or more persons, each of whom is either a foreign person or a foreign corporation are shareholders and collectively hold not more than 40% of issued capital entitled to vote at general meetings of the corporation; viii. the trustee of a trust estate, in which a foreign person or a foreign corporation is a beneficiary of the trust estate and holds more than 15% of the beneficial interest in the trust estate; or ix. the trustee of a trust estate in which 2 or more persons, each of whom is either a foreign person or a foreign corporation, are beneficiaries of the trust estate and collectively hold more than 40% of the beneficial interest in the trust estate, provided			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	that a foreign party shall not include a related body corporate of the lease holder. d. Approval under (a) is not required where a change in effective control of the lease holder or a foreign acquisition of substantial control of the lease holder occurs as a result of the acquisition of shares or other securities on a registered stock exchange. e. For the purpose of this condition: i. Related Body Corporate means in relation to a body corporate, a body corporate which is a related body corporate of the first mentioned body corporate for the purposes of the <i>Corporations Act 2001 (Cth)</i>; and ii. Third Party means any person who is not a Related Body Corporate of the lease holder.			
Rehabilitation				
36	All disturbance resulting from prospecting operations carried out under this assessment lease must be rehabilitated by the lease holder to the satisfaction of the Minister.	No prospecting during the audit period.	Not triggered	
37	In rehabilitating the disturbance resulting from prospecting operations, the lease holder must ensure that: a. all machinery, buildings and other infrastructure is removed from the area; b. the area is left in a clean, tidy and stable condition c. there is no adverse environmental effect outside the disturbed area; d. the land is properly drained and protected from soil erosion; e. the land is not a potential source of pollution; f. the land is compatible with the surrounding land and land use requirements; g. the landforms, soils, hydrology and flora require no greater maintenance than that in, or on, the surrounding land; h. the land does not pose a threat to public safety; and i. in cases where vegetation has been removed or damaged: i. where the previous vegetation was native, species used for revegetation are endemic to the area; or ii. where the previous vegetation was not native, species used for revegetation are appropriate to the area; and	No prospecting during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	iii. any revegetation is of an appropriate density and diversity.			
38	The lease holder must ensure that all water land and wetland crossings that are disturbed during prospecting operations are rehabilitated such that the natural flow of water is unimpeded and bank stability is maintained to prevent erosion.	No prospecting during the audit period.	Not triggered	
39	The lease holder must comply with any relevant guidelines issued by the Secretary in the rehabilitation of disturbance resulting from prospecting operations under this assessment lease.	No prospecting during the audit period.	Not triggered	
40	All rehabilitation of disturbance resulting from prospecting operations under this assessment lease must be completed before the expiry of this assessment lease or as soon as practicable following cancellation of this assessment lease, unless otherwise approved by the Minister.	No prospecting during the audit period.	Not triggered	
41	Boreholes that have been abandoned as a result of previous mining or prospecting operations, and which have been opened up or used by the lease holder are subject to the conditions of this assessment lease as if the boreholes were constructed by the holder of this assessment lease.	No prospecting during the audit period.	Not triggered	
REPORTING				
Environmental Management Report				
42	The lease holder must submit an Environmental Management Report to the Department in the following circumstances: a. where the lease holder is seeking to renew this assessment lease, an Environmental Management Report must accompany an assessment lease renewal application; or b. where the lease holder is seeking to cancel or part cancel this assessment lease, an Environmental Management Report must accompany an assessment lease cancellation application; c. where the lease holder is not seeking to renew or cancel this assessment lease, an Environmental Management Report must be submitted prior to the expiry of this assessment lease.	Environmental and Rehabilitation Compliance Report for AL9 renewal was prepared and submitted on 1 November 2019.	Compliant	
43	The report must be prepared in accordance with any Secretary's requirements for environmental and rehabilitation reporting on assessment leases and include information on all disturbance resulting from prospecting operations and rehabilitation carried out within the assessment lease area. The report must be prepared to the satisfaction of the Secretary.	The report was prepared in accordance with the Secretary's requirements for environmental and rehabilitation reporting on assessment leases and contained the required information.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Environmental Incident and Complaint Reporting				
44	The lease holder must, in addition to the requirements under section 148 of the <i>Protection of the Environment Operations Act 1997</i>: a. Notify the Department of all: i. pollution incidents causing or threatening material harm to the environment; ii. breaches of the conditions of this assessment lease; and iii. breaches of environment protection legislation (as defined in the <i>Protection of the Environment Administration Act 1991</i>), arising in connection with prospecting operations under this assessment lease. b. The notification must be given immediately, i.e. promptly and without delay, after the lease holder becomes aware of the incident, breach or complaint. Note: Refer to www.resources.nsw.gov.au/environment for notification contact details. c. Submit an Environmental Incident and Complaints Report to the Department within seven (7) days of all: i. pollution incidents causing or threatening material harm to the environment; ii. breaches of the conditions of this assessment lease; iii. breaches of environment protection legislation (as defined in the <i>Protection of the Environment Administration Act 1991</i>); and iv. complaints from landholders or the public alleging environmental harm or a breach of conditions of this assessment lease or of environment protection legislation, arising in connection with prospecting operations under this assessment lease. d. The Environmental Incident and Complaints Report must include: i. the details of the assessment lease; ii. contact details for the lease holder, complainant and landholder; iii. a map showing the area of concern; iv. a description of the nature of the incident or complaint, likely causes and consequences;	A Sediment Water Discharge on 07 March 2022 in the MCCO (ID2022030897.2) was reported to DPE and the NSW EPA in accordance with this condition and the required timings.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	v. a timetable showing actions taken or planned to address the incident or complaint; and vi. a summary of all previous incidents or complaints relating to prospecting operations under this assessment lease. Note: The lease holder should have regard to any relevant Secretary's guidelines in the preparation of an Environment Incident and Complaints Report. Refer to www.resources.nsw.gov.au/environment for further details.			
SECURITY				
Security				
45	This authorisation is subject to a condition that the holder of the authorisation is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations of all or any kind under the authorisation, including obligations of all or any kind under the authorisation that may arise in the future.	Evidence that Mangoola to provide and maintain a security deposit was sighted during the site inspection.	Compliant	
46	The amount of the security deposit to be provided has been assessed by the Secretary at \$50,000 .	Mangoola hold a security deposit for \$50,000 for AL9.	Compliant	
Group Security				
47	NOT USED	Not used.	Not triggered	
48	NOT USED	Not used.	Not triggered	
EXPLORATION MANAGEMENT				
Samples				
49	The lease holder must: a. if using non-core drilling methods, retain representative cuttings at least every three (3) metres of formation drilled, or change of formation. Such samples must be stored appropriately and securely labelled with at least the hole name, company name and depth or depth limits; and b. if using core drilling methods, retain the cores (other than material required from the cores for the purpose of assay) in standard modular durable core boxes. Core boxes must be stored appropriately and securely labelled with at least the hole name, company name and depth intervals.	No prospecting during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
50	Cores and samples must be made available for examination and/or sampling by officers of the Department for the purpose of analysis or other testing upon request.	No prospecting during the audit period.	Not triggered	
51	The lease holder must not dispose of the cores or samples referred to in Condition 50 without approval of the Minister and without first offering them to the Department for archival storage. If so directed, the lease holder must lodge selected core and samples with one of the Department's Core Libraries. Selected core must be lodged with the Department in standard modular core boxes. Information on the borehole and drilling depths must be clearly and permanently indicated on both the inside and outside of each box. <i>Note: Conditions 49 and 51 do not apply to boreholes or sections of boreholes sunk in surface gravel or alluvial ground.</i> <i>Specifications for standard modular core boxes can be obtained by contacting the Department.</i>	No prospecting during the audit period.	Not triggered	
52	The lease holder must undertake analyses and tests on any or all coal seams intersected in boreholes if directed to do so by the Minister.	No prospecting during the audit period.	Not triggered	
Work Program				
53	Unless otherwise approved by the Minister, the lease holder must implement and complete the work program specified in the renewal application for this assessment lease.	No prospecting during the audit period.	Not triggered	
Landholder Liaison Program and Property Acquisition Strategy				
54	Upon the grant of the lease, the lease holder must establish a landholder liaison program. This program must have procedures for addressing all landholder inquiries. Where it is proposed that the lease area will be used in future for the development of open cut mining operations, the lease holder shall establish a strategy for the acquisition of property within the lease area. Details of both the liaison program and the property acquisition strategy are to be forwarded to all landholders within the lease area and to the Director Operations & Programs at the Department. The property acquisition strategy must make provision for the purchase of land which is within the lease area from any land owners who can demonstrate hardship and despite bona fide efforts, have been unable to	The landholder liaison program was sighted during the audit with evidence of ongoing consultation and applicable commitments.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	sell for Rural Land Value as a consequence of the proposed open cut mining. Where such hardship and bona fide efforts to sell are established under the terms of this condition or agreed between the parties, the lease holder must be prepared to purchase the land at a price which is in accordance with Rural Land Value. <i>Hardship and bona fide attempts to sell</i> <u>Definitions:</u> <i>Hardship:</i> - conditions that are difficult to endure. Hardship may be caused by illness, age, financial stress or adverse personal circumstances. <i>Bona fide attempts to sell:</i> - listing of the property, which is within the lease area, with a local Real Estate or Stock and Station Agent, for a period of at least six months at a price which is in line with the Rural Land Value for the property. The listing must have occurred during the term of the assessment lease or during a twelve month period immediately prior to the grant of the assessment lease. <i>Rural Land Value:</i> - means that value were the land not affected by potential open cut mining within the lease area. Where agreement cannot be reached as to the demonstration of hardship and bona fide efforts to sell, either the lease holder or the landowner may refer the matter to the Secretary for resolution. Upon receiving such a referral, the Secretary shall appoint an independent arbitrator from the Minister's panel of arbitrators appointed under the <i>Mining Act</i> to: • consider submissions from both parties, • determine whether hardship exists and bona fide attempts to sell have been made and • prepare a report for the Secretary. The arbitrator's costs are to be borne by the lease holder. <i>Land acquisition</i> Within three months of receiving a written request from a landowner within the lease area, or within three months of receiving a copy of an arbitrator's report confirming hardship and bona fide attempts to sell, the lease holder shall make a binding written offer to the landowner based on: a. the current Rural Land Value of the landowner's interest in the property, which is within the lease area, at the date of this written			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	request, as if the property was unaffected by the potential development of open cut mining operations within the lease area, having regard to the: - existing and permissible use and amenity of the land - presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date. b. the reasonable costs associated with land owner obtaining legal and expert advice for determining the acquisition price of the land. If, within 28 days of the lease holder making this offer, the lease holder and landowner cannot agree on the acquisition price and/or the terms upon which the property is to be acquired, then either party may refer the matter to the Secretary for resolution. Upon receiving such a referral, the Secretary shall request the President of the NSW Division of the Australian Property Institute (API) to appoint a qualified independent valuer to: - consider submissions from both parties, - establish a fair Rural Land Value for the property and determine reasonable costs and compensation for the acquisition, in accordance with paragraphs (a)-(b) above, and - recommend appropriate fair and reasonable terms of acquisition. The appointed valuer is to provide a full report and explanation of their valuation, determinations and proposed terms of acquisition to the Secretary, the lease holder and the landowner. The Secretary shall consider the report and decide whether the valuation, determinations and any proposed terms of acquisition are fair and reasonable and advise the parties accordingly. Within fourteen days of receiving the Secretary's decision that the independent valuer's report is fair and reasonable, the lease holder shall make a written offer to purchase the land in according to terms set out in the independent valuer's report and at a price no less than that set in the report. If the Secretary is of the opinion that the valuation and/or determination is not fair and/or reasonable, the Secretary shall give notice to the parties that a further independent valuation and determination will be undertaken			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	in accordance with this condition and duly request a further appointment by the API. If after six months of receiving a written offer duly made by the lease holder under this condition, the landowner has not accepted the offer, the lease holder's obligations to acquire the property shall cease, unless otherwise agreed by the Secretary. The lease holder shall bear the full costs of any independent valuer's valuation, determination and report. If the lease holder and landowner agree that only part of the land shall be acquired, then the lease holder shall 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.			
SPECIAL CONDITIONS				
Aboriginal Land Council Notification				
55	NOT USED	Not triggered/used.	Not triggered	

EL5552 AUDIT CHECKLIST – MANGOOLA IEA 2022

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Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
SCHEDULE 2 – GENERAL CONDITIONS				
Work Program				
1	The licence holder must carry out the operations, and any other activities, described in the Work Program and comply with any commitments in relation to the conduct of operations specified in the Work Program, as for the time being in force, in respect of this licence.	No exploration occurred in AL9 during the audit period.	Not triggered	
Native Title				
2	The licence holder must not prospect on any land or waters within the exploration area on which Native Title has not been extinguished under the <i>Native Title Act 1993 (Cth)</i> without the prior written consent of the Minister.	No prospecting occurred during the audit period.	Not triggered	
Community Consultation				
3	The licence holder must carry out community consultation in relation to the planning and conduct of activities under this licence in accordance with the <i>Exploration Code of Practice: Community Consultation</i> (March 2016).	Exploration consultation is conducted via the CCC and the Mangoola Community Newsletter.	Compliant	
Protection of the Environment				
4	The licence holder must prevent, or if that is not reasonably practicable, minimise so far as is reasonably practicable, any harm to the environment arising from activities carried out under this licence.	No harm to the environment arising from activities carried out under this licence was noted during the audit period.	Compliant	
Security				
5	The licence holder must provide a security deposit to secure funding for the fulfilment of obligations under this licence (including obligations that may arise in the future) as follows: a. Amount: \$13,000 b. Licence holder's entitlement to interest: none.	ANZ Bank Guarantee No.: DG477573418 provided for \$13,000 dated 21 December 2015.	Compliant	
Rehabilitation				
6	The licence holder must carry out rehabilitation of all disturbance caused by activities carried out under this licence in accordance with the requirements in Part B of the <i>Exploration Code of Practice - Rehabilitation</i> (July 2015) to the satisfaction of the Minister.	No disturbance caused during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Environmental Incident Reporting				
7	The licence holder must provide environmental incident notifications and reports to the Secretary no later than seven days after those notifications and reports are provided to relevant authorities under the <i>Protection of the Environment Operations Act 1997</i> .	No incidents recorded for EL5552 during the audit period.	Compliant	
Annual Activity Reporting				
8	Unless otherwise approved by the Secretary, the licence holder must submit annual activity reports prepared in accordance with the Exploration Guideline: Annual Activity Reporting for Prospecting Titles (July 2015) at the following times: a. Annually, within one calendar month following the grant anniversary date of this licence; b. On any other date or dates directed by the Secretary in writing; and c. Within one calendar month following the cancellation or expiry of this licence.	Annual Activity Reports have been prepared submitted during the audit period.	Compliant	
Change in Control				
9	If the licence holder is a corporation or a trust, the Minister's prior written approval is required before any: a. Change in effective control of the licence holder; or b. Foreign acquisition of substantial control in the licence holder. The Minister's approval is not required where a change in effective control of the licence holder, or a foreign acquisition of substantial control of the licence holder, occurs as a result of the acquisition of shares or other securities on a registered stock exchange.	No change in licence holder or foreign acquisition of substantial control in the licence holder.	Not triggered	
SCHEDULE 3 – ADDITIONAL CONDITIONS				
Activity Approvals Issued Prior To 1 March 2016				
10	Any prospecting operations the subject of an activity approval granted pursuant to this exploration licence before 1 March 2016 must, in addition to any requirements of that approval, be carried out in accordance with the following Codes of Practice: a. Part B of the <i>Exploration Code of Practice: Environmental Management</i> b. Part B of the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i>	Not within the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	and these codes prevail to the extent of any inconsistency with a requirement of such an activity approval.			

ML1626 AUDIT CHECKLIST – MANGOOLA IEA 2022

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Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
MINING LEASE CONDITIONS 2008				
Notice to Landholders				
1	Within a period of three months from the date of grant/renewal of this lease or within such further time as the Minister may allow, the lease holder must serve on each landholder of the land a notice in writing indicating that this lease has been granted/renewed and whether the lease includes the surface. An adequate plan and description of the lease area must accompany the notice. If there are ten or more landholders affected, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this lease has been granted/renewed; state whether the lease includes the surface and must contain an adequate plan and description of the lease area.	Lease not due for renewal until 20 November 2029.	Not triggered	
Environmental Harm				
2	The proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of the development.	Observed that all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of the development occurred during the audit period.	Compliant	
Mining Operations Plan				
3	a. Mining operations must not be carried out otherwise than in accordance with: a Mining Operations Plan (MOP) which has been approved by the Director-General of the Department of Primary Industries. b. The MOP must: i. identify areas that will be disturbed by mining operations; ii. detail the staging of specific mining operations; iii. identify how the mine will be managed to allow mine closure; iv. identify how mining operations will be carried out on site in order to prevent and or minimise harm to the environment; v. reflect the conditions of approval under: – the <i>Environmental Planning and Assessment Act 1979</i> – the <i>Protection of the Environment Operations Act 1997</i>	Document Number: MANOC-1772150304-6271 Version: 1.0 Effective: 24/03/2021 The Resources Regulator granted an extension to the current approved MOP, under delegation from the Minister for Regional NSW, until 2 July 2022 being the commencement date for the new Mining Amendment (Standard Conditions of Mining Leases - Rehabilitation) Regulation 2021.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	– and any other approvals relevant to the development including the conditions of this lease; and vi. have regard to any relevant guidelines adopted by the Director-General. c. The titleholder may apply to the Director-General to amend an approved MOP at any time. d. It is not a breach of this condition if: i. the operations constituting the breach were necessary to comply with a lawful order or direction given under the <i>Mining Act 1992</i>, the <i>Environmental Planning and Assessment Act 1979</i>, <i>Protection of the Environment Operations Act 1997</i> or the <i>Occupational Health and Safety Act 2000</i>; and ii. the Director-General had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out. e. A MOP ceases to have affect 7 years after date of approval or other such period as identified by the Director-General. An approved amendment to the MOP under condition 5 does not constitute an approval for the purpose of this paragraph unless otherwise identified by the Director-General.	The MOP was found to contain the applicable information required by this condition.		
Environment Management Reporting				
4	The lease holder must lodge Environmental Management Reports (EMR) with the Director-General annually or at dates otherwise directed by the Director-General.	Annual Reviews prepared during the audit period submitted on 31 March of each year.	Compliant	
The EMR must:				
5	a. report against compliance with the MOP; b. report on progress in respect of rehabilitation completion criteria; c. report on the extent of compliance with regulatory requirements; and d. have regard to any relevant guidelines adopted by the Director-General;	Annual Reviews prepared during the audit period provide updates on compliance with the MOP, progress in respect of rehabilitation completion criteria, and any relevant guidelines adopted by the Director-General.	Compliant	
6	Additional environmental reports may be required on specific surface disturbing operations or environmental incidents from time to time as directed in writing by the Director-General and must be lodged as instructed.	No additional environmental reports required during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Rehabilitation				
7	Disturbed land must be rehabilitated to a sustainable/agreed end land use to the satisfaction of the Director-General.	Ongoing rehabilitation works were evident during the audit period.	Compliant	
Subsidence Management				
8	a. The lease holder shall prepare a Subsidence Management Plan prior to commencing any underground mining operations which will potentially lead to subsidence of the land surface. b. Underground mining operations which will potentially lead to subsidence include secondary extraction panels such as longwalls or miniwalls, associated first workings (gateroads, installation roads and associated main headings, etc), and pillar extractions, and are otherwise defined by the <i>Applications for Subsidence Management Approvals guidelines</i> (EDG17) c. The lease holder must not commence or undertake underground mining operations that will potentially lead to subsidence other than in accordance with a Subsidence Management Plan approved by the Director-General, an approval under the <i>Mine Health & Safety Act 2004</i>, or the document <i>New Subsidence Management Plan Approval Process - Transitional Provisions</i> (EDP09). d. Subsidence Management Plans are to be prepared in accordance with the <i>Guideline for Applications for Subsidence Management Approvals</i>. e. Subsidence Management Plans as approved shall form part of the Mining Operations Plan required under Condition 3 and will be subject to the Annual Environmental Management Report process as set out under Condition 4. The SMP is also subject to the requirements for subsidence monitoring and reporting set out in the document <i>New Approval Process for Management of Coal Mining Subsidence - Policy</i>.	No underground mining undertaken on site during the audit period.	Not triggered	
Working Requirement				
9	The lease holder must: a. ensure that at least 143 competent people are efficiently employed on the lease area on each week day except Sunday or any week day that is a public holiday, OR b. expend on operations carried out in the course of prospecting or mining the lease area, an amount of not less than \$2,502,500 per annum whilst the lease is in force.	Condition 9 of ML1626 was removed as approved by the regulator.	Not triggered	OF1 – Provide updated record of change to Mining Lease on project website.

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	The Minister may at any time or times, by instrument in writing served on the lease holder, increase or decrease the expenditure required or the number of people to be employed.			
Control of Operations				
10	a. If an Environmental Officer of the Department believes that the lease holder is not complying with any provision of the Act or any condition of this lease relating to the working of the lease, he may direct the lease holder to:- i. cease working the lease; or ii. cease that part of the operation not complying with the Act or conditions; until in the opinion of the Environmental Officer the situation is rectified. b. The lease holder must comply with any direction given. The Director-General may confirm, vary or revoke any such direction. c. A direction referred to in this condition may be served on the Mine Manager.	There has been no direction to cease part or all operations from an EO during the audit period.	Not triggered	
Reports				
11	The lease holder must provide an exploration report, within a period of twenty-eight days after each anniversary of the date this lease has effect or at such other date as the Director-General may stipulate, of each year. The report must be to the satisfaction of the Director-General and contain the following: a. Full particulars, including results, interpretation and conclusions, of all exploration conducted during the twelve months period; b. Details of expenditure incurred in conducting that exploration; c. A summary of all geological findings acquired through mining or development evaluation activities; d. Particulars of exploration proposed to be conducted in the next twelve months period; e. All plans, maps, sections and other data necessary to satisfactorily interpret the report.	Exploration reports have been prepared for the audit period.	Compliant	
Licence to Use Reports				
12	a. The lease holder grants to the Minister, by way of a non-exclusive licence, the right in copyright to publish, print, adapt and reproduce all	Noted and agreed by Mangoola.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	exploration reports lodged in any form and for the full duration of copyright. b. The non-exclusive licence will operate as a consent for the purposes of section 365 of the Mining Act 1992.			
Confidentiality				
13	a. All exploration reports submitted in accordance with the conditions of this lease will be kept confidential while the lease is in force, except in cases where: i. the lease holder has agreed that specified reports may be made non-confidential. ii. reports deal with exploration conducted exclusively on areas that have ceased to be part of the lease. b. Confidentiality will be continued beyond the termination of a lease where an application for a flow-on title was lodged during the currency of the lease. The confidentiality will last until that flow-on title or any subsequent flow-on title, has terminated. c. The Director-General may extend the period of confidentiality.	Noted and agreed by Mangoola.	Compliant	
Terms of the non-exclusive licence				
14	The terms of the non-exclusive copyright licence granted under condition 12 are: a. the Minister may sub-licence others to publish, print, adapt and reproduce but not on-licence reports. b. the Minister and any sub- licensee will acknowledge the lease holder's and any identifiable consultant's ownership of copyright in any reproduction of the reports, including storage of reports onto an electronic database. c. the lease holder does not warrant ownership of all copyright works in any report and, the lease holder will use best endeavours to identify those parts of the report for which the lease holder owns the copyright. d. there is no royalty payable by the Minister for the licence. e. if the lease holder has reasonable grounds to believe that the Minister has exercised his rights under the non-exclusive copyright licence in a manner which adversely affects the operations of the lease holder, that licence is revocable on the giving of a period of not less than three months notice.	Noted and agreed by Mangoola.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Blasting				
15	a. <u>Ground Vibration</u> The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the lease area does not exceed 10 mm/second and does not exceed 5 mm/second in more than 5% of the total number of blasts over a period of 12 months at any dwelling or occupied premises as the case may be, unless determined otherwise by the Department of Environment and Climate Change. b. <u>Blast Overpressure</u> The lease holder must ensure that the blast overpressure noise level generated by any blasting within the lease area does not exceed 120 dB (linear) and does not exceed 115 dB (linear) in more than 5% of the total number of blasts over a period of 12 months, at any dwelling or occupied premises, as the case may be, unless determined otherwise by the Department of Environment and Climate Change.	On 4 March 2020 there was an exceedance of overpressure criteria. The blast was located in Main Pit West and recorded an overpressure result at BM07 (EPL monitoring point 21) of 120.9dB (exceedance of 120dB threshold). DPE and EPA were notified.	Non-compliant	Continue to implement the Blast Management Plan to minimise the dust and fume emissions of any blasting.
Safety				
16	Operations must be carried out in a manner that ensures the safety of persons or stock in the vicinity of the operations. All drill holes shafts and excavations must be appropriately protected, to the satisfaction of the Director-General, to ensure that access to them by persons and stock is restricted. Abandoned shafts and excavations opened up or used by the lease holder must be filled in or otherwise rendered safe to a standard acceptable to the Director-General.	Secure access to site was observed during the audit period with the project adequately fenced. the site has a site security plan that outlined controls and procedures implemented to ensure the safety of persons or stock in the vicinity of the operations. All blasts are undertaken in accordance with the Blast Management Plan.	Compliant	
Exploratory Drilling				
17	a. At least twenty eight days prior to commencement of drilling operations the lease holder must notify the relevant Department of Water and Energy Regional Hydrologist of the intention to drill exploratory drill holes together with information on the location of the proposed holes. b. If the lease holder drills exploratory drill holes he must satisfy the Director-General that:- i. all cored holes are accurately surveyed and permanently marked in accordance with Departmental guidelines so that their location can be easily established;	No exploratory drilling operations undertaken during the audit period.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	ii. all holes cored or otherwise are sealed to prevent the collapse of the surrounding surface; iii. all drill holes are permanently sealed with cement plugs to prevent surface discharge of groundwaters; iv. if any drill hole meets natural or noxious gases it is plugged or sealed to prevent their escape; v. if any drill hole meets an artesian or sub-artesian flow it is effectively sealed to prevent contamination of aquifers. vi. once any drill hole ceases to be used the hole must be sealed in accordance with Departmental guidelines. Alternatively, the hole must be sealed as instructed by the Director-General. once any drill hole ceases to be used the land and its immediate vicinity is left in a clean, tidy and stable condition.			
Prevention of Soil Erosion and Pollution				
18	Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, waterbody or groundwaters. The lease holder must observe and perform any instructions given by the Director-General in this regard.	Sandy Creek Farm Dams - Saline Water Discharges - 17/02/2020, 26/11/2021, and 8/12/2021. PIRMP was enacted in accordance with Section 147 of the POEO Act. DPIE and EPA were notified in accordance with applicable statutory requirements. An investigation was completed where the analysis had indicated that the predominant source of water discharged was runoff from the 25.7 ha clean water catchment caused by excessive rainfall. Discharge results show that there was no environmental harm caused based on the chemistry of the water discharged when compared to the receiving environment. The PIRMP was enacted	Non-compliant	Continue to implement the WMP, ensuring mitigation measures are implemented and maintained. Where possible review dewater procedure for areas considered to be high risk prior to predicted excessive rainfall events.
Transmission lines, Communication lines and Pipelines				
19	Operations must not interfere with or impair the stability or efficiency of any transmission line, communication line, pipeline or any other utility on the	GDP's are used for all works within the project area with dial before you digs	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	lease area without the prior written approval of the Director-General and subject to any conditions he may stipulate.	and work authorisations for all other works. There has been no interference with or impairment to the stability or efficiency of any transmission line, communication line, pipeline or any other utility on the lease area during the audit period.		
Fences, Gates				
20	a. Activities on the lease must not interfere with or damage fences without the prior written approval of the owner thereof or the Minister and subject to any conditions the Minister may stipulate_ b. Gates within the lease area must be closed or left open in accordance with the requirements of the landholder.	No issues raised during the audit period.	Not triggered	
Roads and Tracks				
21	a. Operations must not affect any road unless in accordance with an accepted Mining Operations Plan or with the prior written approval of the Director-General and subject to any conditions he may stipulate. b. The lease holder must pay to the designated authority in control of the road (generally the local council or the Roads and Traffic Authority) the cost incurred in fixing any damage to roads caused by operations carried out under the lease, less any amount paid or payable from the Mine Subsidence Compensation Fund.	No impacts or changes to roads during the audit period.	Compliant	
22	Access tracks must be kept to a minimum and be positioned so that they do not cause any unnecessary damage to the land. Temporary access tracks must be ripped, topsoiled and revegetated as soon as possible after they are no longer required for mining operations. The design and construction of access tracks must be in accordance with specifications fixed by the Department of Environment and Climate Change.	Access tracks were kept to a minimum during the audit period.	Compliant	
Trees and Timber				
23	a. The lease holder must not fell trees, strip bark or cut timber on the lease without the consent of the landholder who is entitled to the use of the timber, or if such a landholder refuses consent or attaches unreasonable conditions to the consent, without the approval of a warden. b. The lease holder must not cut, destroy, ring bark or remove any timber or other vegetative cover on the lease area except such as directly	Mangoola are the lease holders.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	obstructs or prevents the carrying on of operations. Any clearing not authorised under the Mining Act 1992 must comply with the provisions of the <i>Native Vegetation Act 2003</i>. c. The lease holder must obtain all necessary approvals or licences before using timber from any Crown land within the lease area.			
Resource Recovery				
25	a. Notwithstanding any description of mining methods and their sequence or of proposed resource recovery contained within the Mining Operations Plan, if at any time the Director-General is of the opinion that minerals which the lease entitles the lease holder to mine and which are economically recoverable at the time are not being recovered from the lease area, or that any such minerals which are being recovered are not being recovered to the extent which should be economically possible or which for environmental reasons are necessary to be recovered, he may give notice in writing to the lease holder requiring the holder to recover such minerals. b. The notice shall specify the minerals to be recovered and the extent to which they are to be recovered, or the objectives in regard to resource recovery, but shall not specify the processes the lease holder shall use to achieve the specified recovery. c. The lease holder must, when requested by the Director-General, provide such information as the Director-General may specify about the recovery of the mineral resources of the lease area. d. The Director-General shall issue no such notice unless the matter has firstly been thoroughly discussed with and a report to the Director-General has incorporated the views of the lease holder. e. The lease holder may object to the requirements of any notice issued under this condition and on receipt of such an objection the Minister shall refer it to a Warden for inquiry and report under Section 334 of the <i>Mining Act, 1992</i>. f. After considering the Warden's report the Minister shall decide whether to withdraw, modify or maintain the requirements specified in the original notice and shall give the lease holder written notice of the decision. The lease holder must comply with the requirements of this notice.	Reported in annual reviews and have been generally in accordance with this condition.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Indemnity				
26	The lease holder must indemnify and keep indemnified the Crown from and against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses which may be brought against the lease holder or which the lease holder may incur in respect of any accident or injury to any person or property which may arise out of the construction, maintenance or working of any workings now existing or to be made by the lease holder within the lease area or in connection with any of the operations notwithstanding that all other conditions of this lease shall in all respects have been observed by the lease holder or that any such accident or injury shall arise from any act or thing which the lease holder may be licensed or compelled to do.	Mangoola has acknowledged and accepts this condition.	Compliant	
Security				
27	a. A security in the sum of \$100,000 must be given and maintained with the Minister by the lease holder for the purpose of ensuring the fulfilment by the lease holder of obligations under this lease. If the lease holder fails to fulfil any one or more of such obligations the said sum may be applied at the discretion of the Minister towards the cost of fulfilling such obligations. For the purpose of this clause the lease holder shall be deemed to have failed to fulfil the obligations of this lease if the lease holder fails to comply with any condition or provision hereof, any provision of the Act or regulations made. thereunder or any condition or direction imposed or given pursuant to a condition or provision hereof or of any provision of the Act or regulations made thereunder. b. The lease holder must provide the security required by sub-clause (a) in one of the following forms: i. cash, ii. a security certificate in a form approved by the Minister and issued by an authorised deposit-taking institution.	On 2 June 2021, pursuant to section 261B(3) and clause 12(1) of Schedule 1B of the Mining Act 1992, a delegate for the Minister for administering the Mining Act 1992 varied the security deposit condition to change the required amount of the deposit from \$64,574,000 to \$63,501,000 a decrease of \$1,073,000. A Group Security for ML1626 and ML1747 has been secured.	Compliant	
Prescribed Dam				
29	a. Notwithstanding any Mining Operations Plan, the lease holder must not mine within any part of the lease area which is within the notification area of the Anvil Hill Main Water Dam, Anvil Hill South In-Pit Tailings Storage Facility, and Anvil Hill Start-Up Tailings Storage Facility without	Mining has occurred in the Main Pit and South Pit during the audit period outside of the notification area of the Anvil Hill Main Water Dam, Anvil Hill South In-Pit Tailings Storage Facility,	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	the prior written approval of the Minister and subject to any conditions he may stipulate. b. Where the lease holder desires to mine within the notification area he must: i. at least twelve (12) months before mining is to commence or such lesser time as the Minister may permit, notify the Minister of the desire to do so. A plan of the mining system to be implemented must accompany the notice; and ii. provide such information as the Minister may direct. c. The Minister must not, except in the circumstances set out in sub-paragraph (ii), grant approval unless sub-paragraph (i) of this paragraph has been complied with. This sub-paragraph is complied with if: i. the Dams Safety Committee as constituted by Section 7 of the <i>Dams Safety Act 1978</i> and the owner of the dam have been notified in writing of the desire to mine referred to in paragraph (b). ii. the notifications referred to in clause (a) are accompanied by a description or plan of the area to be mined. iii. the Director-General has complied with any reasonable request made by the Dams Safety Committee or the owner of the dam for further information in connection with the mining proposal. iv. the Dams Safety Committee has made its recommendations concerning the mining proposal or has informed the Minister in writing that it does not propose to make any such recommendations; and v. where the Dams Safety Committee has made recommendations the approval is in terms that are: – in accordance with those recommendations; or – where the Minister does not accept those recommendations or any of them - in accordance with a determination under sub-paragraph (ii) of this paragraph. vi. Where the Minister does not accept the recommendations of the Dams Safety Committee or where the Dams Safety Committee has failed to make any recommendations and has not informed the Minister in writing that it does not propose to	and Anvil Hill Start-Up Tailings Storage Facility.		

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	make any recommendations, the approval shall be in terms that are, in relation to matters dealing with the safety of the dam: – as determined by agreement between the Minister and the Minister administering the Dams Safety Act 1978; or – in the event of failure to reach such agreement - as determined by the Premier. d. The Minister, on notice from the Dams Safety Committee, may at any time or times: i. cancel any approval given where a notice pursuant to Section 18 of the <i>Dams Safety Act 1978</i> is given. ii. suspend for a period of time, alter, omit from or add to any approval given or conditions imposed.			
Cooperation Agreement				
31	The lease holder must make every reasonable attempt, and be able to demonstrate their attempts, to enter into a cooperation agreement with the holder(s) of any overlapping petroleum title(s). The cooperation agreement should address but not be limited to issues such as: • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts and • rehabilitation issues.	No overlapping of lease.	Not triggered	

ML1747 (MLA-473) AUDIT CHECKLIST – MANGOOLA IEA 2022

ML1747 (MLA-473) AUDIT CHECKLIST – MANGOOLA IEA 2022.....	1
MINING LEASE CONDITIONS 2013	2
Notice to Landholders	2
Rehabilitation	2
Mining Operations Plan and Annual Rehabilitation Report.....	2
Compliance Report	4
Environmental Incident Report.....	5
Extraction Plan	6
Resource Recovery	6
Group Security	6
Cooperation Agreement	6
Exploration Reporting.....	7
SPECIAL CONDITIONS.....	7

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
MINING LEASE CONDITIONS 2013				
Notice to Landholders				
1	a. Within a period of three months from the date of grant/renewal of this mining lease, the lease holder must serve on each landholder a notice in writing indicating that this mining lease has been granted/renewed and whether the lease includes the surface. A plan identifying each landholder and individual land parcel subject to the lease area, and a description of the lease area must accompany the notice. b. If there are ten or more landholders, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this mining lease has been granted/renewed; state whether the lease includes the surface and must contain a plan and description of the lease area. If a notice is made under condition 1(b), compliance with condition 1(a) is not required.	Lease not due for renewal until 5 December 2037	Not triggered	
Rehabilitation				
2	Any disturbance resulting from the activities carried out under this mining lease must be rehabilitated to the satisfaction of the Minister.	All relevant disturbances have been rehabilitated during the audit period.	Compliant	
Mining Operations Plan and Annual Rehabilitation Report				
3	a. The lease holder must comply with an approved Mining Operations Plan (MOP) in carrying out any significant surface disturbing activities, including mining operations, mining purposes and prospecting. The lease holder must apply to the Minister for approval of a MOP. An approved MOP must be in place prior to commencing any significant surface disturbing activities, including mining operations, mining purposes and prospecting. b. The MOP must identify the post mining land use and set out a detailed rehabilitation strategy which: i. identifies areas that will be disturbed; ii. details the staging of specific mining operations, mining purposes and prospecting; iii. identifies how the mine will be managed and rehabilitated to achieve the post mining land use;	Document Number: MANOC-1772150304-6271 Version: 1.0 Effective: 24/03/2021 The Resources Regulator granted an extension to the current approved MOP, under delegation from the Minister for Regional NSW, until 2 July 2022 being the commencement date for the new Mining Amendment (Standard Conditions of Mining Leases - Rehabilitation) Regulation 2021. The MOP was found to contain the applicable information required by this condition.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	iv. identifies how mining operations, mining purposes and prospecting will be carried out in order to prevent and or minimise harm to the environment; and v. reflects the conditions of approval under: • the <i>Environmental Planning and Assessment Act 1979</i>; • the <i>Protection of the Environment Operations Act 1997</i>; and • any other approvals relevant to the development including the conditions of this mining lease. c. The MOP must be prepared in accordance with the ESG3: Mining Operations Plan (MOP) Guidelines September 2013 published on the Department's website at www.resourcesandenergy.nsw.gov.au/miners-and-explorers/rules-and-forms/pgf/environmental-guidelines d. The lease holder may apply to the Minister to amend an approved MOP at any time. e. It is not a breach of this condition if: i. the operations which, but for this condition 3(e) would be a breach of condition 3(a), were necessary to comply with a lawful order or direction given under the <i>Environmental Planning and Assessment Act 1979</i>, the <i>Protection of the Environment Operations Act 1997</i>, the <i>Work Health and Safety (Mines and Petroleum Sites) Act 2013</i> and <i>Work Health and Safety (Mines and Petroleum Sites) Regulation 2014</i> or the <i>Work Health and Safety Act 2011</i>; and <i>Work Health and Safety Regulation 2011</i> ii. the Minister had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out. f. The lease holder must prepare a Rehabilitation Report to the satisfaction of the Minister. The report must: i. provide a detailed review of the progress of rehabilitation against the performance measures and criteria established in the approved MOP; ii. be submitted annually on the grant anniversary date (or at such other times as agreed by the Minister); and iii. be prepared in accordance with any relevant annual reporting guidelines published on the Department's website at			

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	www.resourcesandenergy.nsw.gov.au/miners-and-explorers/rules-and-forms/pgf/environmental-guidelines <i>Note: The Rehabilitation Report replaces the Annual Environmental Management Report.</i>			
Compliance Report				
4	a. The lease holder must submit a Compliance Report to the satisfaction of the Minister. The report must be prepared in accordance with any relevant guidelines or requirements published by the Minister for compliance reporting. b. The Compliance Report must include: i. the extent to which the conditions of this mining lease or any provisions of the Act or the regulations applicable to activities under this mining lease, have or have not been complied with; ii. particulars of any non-compliance with any such conditions or provisions, iii. the reasons for any such non-compliance; iv. any action taken, or to be taken, to prevent any recurrence, or to mitigate the effects, of that non-compliance. c. The Compliance Report must be lodged with the Department annually on the grant anniversary date for the life of this mining lease. d. In addition to annual lodgement under condition 4(c) above, a Compliance Report: i. must accompany any application to renew this mining lease under the Act; ii. must accompany any application to transfer this mining lease under the Act; and iii. must accompany any application to cancel, or to partially cancel, this mining lease under the Act. e. Despite the submission of any Compliance Report under (c) or (d) above, the titleholder must lodge a Compliance Report with the Department at any date or dates otherwise required by the Minister. f. A Compliance Report must be submitted one month prior to the expiry of this mining lease, where the licence holder is not seeking to renew or cancel this mining lease.	Compliance Report is included as part of the Annual Reviews submitted 31 March each year.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Environmental Incident Report				
5	a. The lease holder must notify the Department of all: i. breaches of the conditions of this mining lease or breaches of the Act causing or threatening material harm to the environment; and ii. breaches of environmental protection legislation causing or threatening material harm to the environment (as defined in the <i>Protection of the Environment Operations Act 1997</i>), arising in connection with significant surface disturbing activities, including mining operations, mining purposes and prospecting operations, under this mining lease. The notification must be given immediately after the lease holder becomes aware of the breach. <i>Note. Refer to www.resourcesandenergy.nsw.gov.au/miners-and-explorers/rules-and-forms/pgf/environmental-guidelines for notification contact details.</i> b. The lease holder must submit an Environmental Incident Report to the Department within seven (7) days of all breaches referred to in condition 5(a)(i) and (ii). The Environmental Incident Report must include: i. the details of the mining lease; ii. contact details for the lease holder; iii. a map identifying the location of the incident and where material harm to the environment has or is likely to occur; iv. a description of the nature of the incident or breach, likely causes or consequences; v. a timetable showing actions taken or planned to address the incident and to prevent future incidents or breaches referred to in 5(a). vi. a summary of all previous incidents or breaches which have occurred in the previous 12 months relating to significant surface disturbing activities, including mining operations, mining purposes and prospecting operations under this mining lease. <i>Note: The lease holder should have regard to any relevant Secretary's guidelines in the preparation of an Environmental Incident Report. Refer to www.resourcesandenergy.nsw.gov.au/miners-and-explorers/rules-and-forms/pgf/environmental-guidelines for further details.</i>	No incidents have occurred within the lease during the audit period.	Compliant	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	c. In addition to the requirements set out in conditions 5(a) and (b), the lease holder must immediately advise the Department of any notification made under section 148 of the <i>Protection of the Environment Operations Act 1997</i> arising in connection with significant surface disturbing activities including mining operations, mining purposes and prospecting operations, under this mining lease.			
Extraction Plan				
6	NOT USED	Not triggered/used.	Not triggered	
Resource Recovery				
7	NOT USED	Not triggered/used.	Not triggered	
Group Security				
8	The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations of all or any kind under the mining lease, including obligations of all or any kind under the mining lease that may arise in the future. The amount of the security deposit to be provided as a group security has been assessed by the Minister at \$26,072,000. The leases covered by the group security include: Mining Lease 1626 (Act 1992) This group security is extended to apply to this lease.	On 2 June 2021, pursuant to section 261B(3) and clause 12(1) of Schedule 1B of the Mining Act 1992, a delegate for the Minister for administering the Mining Act 1992 varied the security deposit condition to change the required amount of the deposit from \$64,574,000 to \$63,501,000 a decrease of \$1,073,000. A Group Security for ML1626 and ML1747 has been secured.	Compliant	
Cooperation Agreement				
9	The lease holder must make every reasonable attempt, and be able to demonstrate its attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as: • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts; and	There are no overlapping title(s).	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
	rehabilitation issues.			
Exploration Reporting				
10	<i>Note: <u>Exploration Reports (Geological and Geophysical)</u></i> <i>The lease holder must lodge reports to the satisfaction of the Minister in accordance with section 163C of the Mining Act 1992 and in accordance with clause 57 of the Mining Regulation 2010.</i> <i>Reports must be prepared in accordance with Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales.</i>	Pursuant to an order issued by Deputy Secretary during the audit period that exempts the holder of a mining lease in respect of an ancillary mining activity or activities (AMA) from the reporting requirements of section 163C in the Mining Act 1992 and Clause 59, 60, 61 in the Mining Regulation 2016, geoscientific reporting on ML1747 & ML1815 is no longer required. This applied for reports required under section 163C of the Mining Act 1992, being annual, partial relinquishment and final reports. However please contact Resources Regulator in respect to any rehabilitation and environmental reporting requirements for ML1747 & ML1815.	Not triggered	
SPECIAL CONDITIONS				
11	<i>Note: The standard conditions apply to all mining leases. The Division of Resources & Energy (DRE) reserves the right to impose special conditions, based on individual circumstances, where appropriate.</i>	DRE have not imposed any special conditions for the lease during the audit period.	Not triggered	

ML1815 (MLA600) AUDIT CHECKLIST – MANGOOLA IEA 2022

ML1815 (MLA600) AUDIT CHECKLIST – MANGOOLA IEA 2022	1
MINING LEASE FOR ANCILLIARY MINING ACTIVITIES CONDITIONS-Standard conditions	2
Notice to Landholders	2
Security2	
Cooperation Agreement	2
Exploration Reporting.....	3
Special conditions.....	3

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
MINING LEASE FOR ANCILLIARY MINING ACTIVITIES CONDITIONS-Standard conditions				
Notice to Landholders				
1	a. Within 90 days from the date of grant/renewal of this mining lease, the lease holder must serve on each landholder a notice in writing to notify that this mining lease has been granted/renewed and whether the lease includes the surface. A plan identifying each landholder and individual land parcel subject to the lease area, and a description of the lease area must accompany the notice. b. If there are ten or more landholders, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this mining lease has been granted/renewed; state whether the lease includes the surface and must contain a plan and description of the lease area. If a notice is made under condition 1(b), compliance with condition 1(a) is not required.	Notification to adjacent land holder was complete on 22 December 2021. Crown Lands is the only adjacent landowner relevant to the granting of ML1815.	Compliant	
Security				
2	The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations under the mining lease, including obligations under the mining lease that may arise in the future. The amount of the security deposit to be provided has been assessed by the Minister at \$10,000 .	Deed Of Security Deposit Bond (Bank Guarantee no.: 103339/2022) sighted for Two Hundred and Forty-Eight Thousand Australian Dollars only (AUD248,000) for ML1815.	Compliant	
Cooperation Agreement				
3	The lease holder must make every reasonable attempt, and be able to demonstrate its attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as: • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts; and • rehabilitation issues.	Mangoola and Crowns Lands are the only two adjacent landholders.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Exploration Reporting				
4	<i>Note: <u>Exploration Reports (Geological and Geophysical)</u></i> <i>The lease holder must lodge reports to the satisfaction of the Secretary in accordance with section 163C of the Mining Act 1992 and in accordance with clauses 59, 60 and 61 of the Mining Regulation 2016.</i> <i>Reports must be prepared in accordance with Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales.</i>	Mining Lease 1817 was granted 29 Sept 2021, condition not triggered as there has not be an anniversary of this date within the audit period.	Not triggered	
Special conditions				
5	Nil <i>Note: The standard conditions apply to all mining leases. The Department reserves the right to impose special conditions, based on individual circumstances, where appropriate.</i>	No special conditions imposed during the audit period.	Not triggered	

ML1817 AUDIT CHECKLIST – MANGOOLA IEA 2022

ML1817 AUDIT CHECKLIST – MANGOOLA IEA 2022	1
MINING LEASE CONDITIONS-Standard conditions	2
Notice to Landholders	2
Security	2
Cooperation Agreement	2
Assessable Prospecting Operations	3
Exploration Reporting.....	3
Special conditions.....	3

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
MINING LEASE CONDITIONS-Standard conditions				
Notice to Landholders				
1	a. Within 90 days from the date of grant/renewal of this mining lease, the lease holder must serve on each landholder a notice in writing to notify that this mining lease has been granted/renewed and whether the lease includes the surface. A plan identifying each landholder and individual land parcel subject to the lease area, and a description of the lease area must accompany the notice. b. If there are ten or more landholders, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this mining lease has been granted/renewed; state whether the lease includes the surface and must contain a plan and description of the lease area. If a notice is made under condition 1(b), compliance with condition 1(a) is not required.	Notification to neighbouring landholders regarding granting of ML1817 was provided within 90 days. Example copies of these notifications were provided to the audit team.	Compliant	
Security				
2	The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations under the mining lease, including obligations under the mining lease that may arise in the future. The amount of the security deposit to be provided has been assessed by the Minister at \$10,000 .	Deed Of Security Deposit Bond (Bank Guarantee no.: 103323/2022) sighted for Five Million and Forty-Five Thousand Australian Dollars only (AUD\$045,000.00) for ML1817.	Compliant	
Cooperation Agreement				
3	The lease holder must make every reasonable attempt, and be able to demonstrate its attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as: • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts; and • rehabilitation issues.	Not triggered.	Not triggered	

Cond No.	Condition	Comments & Evidence	Audit Findings	Recommendations
Assessable Prospecting Operations				
4	a. The lease holder must not carry out any assessable prospecting operation on land over which this lease has been granted unless: i. it is carried out in accordance with any necessary development consent; or ii. if development consent is not required, the prior written approval of the Minister has been obtained. b. The lease holder must comply with the approval granted to the holder. c. The Minister may require the lease holder to provide such information as required to assist the Minister consider an application for approval. d. An approval granted under this condition may be granted subject to terms.	Mangoola have been granted approval under SSD 8642 to conduct assessable prospecting operations over the ML 1817 area. There has not been any assessable prospecting operation during the audit period.	Not triggered	
Exploration Reporting				
5	<i>Note: <u>Exploration Reports (Geological and Geophysical)</u></i> <i>The lease holder must lodge reports to the satisfaction of the Secretary in accordance with section 163C of the Mining Act 1992 and in accordance with clauses 59, 60 and 61 of the Mining Regulation 2016.</i> <i>Reports must be prepared in accordance with Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales.</i>	Mining Lease 1817 was granted 27 Oct 2021, condition not triggered as there has not be an anniversary of this date during the audit period.	Not triggered	
Special conditions				
6	<i>Note: The standard conditions apply to all mining leases. The Department reserves the right to impose special conditions, based on individual circumstances, where appropriate.</i> Nil	No special conditions imposed during the audit period.	Not triggered	

A large, light grey abstract shape with rounded corners and a maroon-colored cutout on its right side. The cutout is a rounded rectangle with a diagonal line through it, creating a sense of depth and movement.

Appendix C

Stakeholder Consultation

REGULATOR CONSULTATION CHECKLIST – MANGOOLA COAL IEA 2022

REGULATOR CONSULTATION CHECKLIST – MANGOOLA COAL IEA 2022.....	1
NSW Resources Regulator	2
Muswellbrook Shire Council	3

IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
NSW Resources Regulator			
SC01	Review relevant mining leases and exploration licences as agreed with Resources Regulator	The following relevant mining leases and exploration licences as agreed with Resources Regulator: ML 1626 ML 1747 ML 1815 ML 1817 Exploration Lease 5552 Assessment Lease 9	
SC02	Undertake an assessment of compliance against the conditions of title related to environmental management	Assessment undertaken, refer to audit checklist tables.	
SC03	Review the rehabilitation strategy to determine if it is consistent with the Project Approval in terms of progressive rehabilitation schedule; and proposed final land use(s)	The Rehabilitation Strategy is consistent with project approval. The rehabilitation is in line with the approved MOP and proposed final land uses. In particular, the rehabilitation has been shown to be on track towards final criteria, indicating good implementation and management.	
SC04	Review the rehabilitation objectives and completion criteria to determine if they have been developed in accordance with the proposed final land use(s) as outlined in the Project Approval	As above	
SC05	Review the development and implementation of any rehabilitation monitoring programs to assess performance against the nominated objectives and completion criteria – verified by reviewing monitoring reports and rehabilitation inspection records	The monitoring programs undertaken at Mangoola consist of a comprehensive suite of inspections and reports. There was evidence that monitoring reports were included in maintenance decisions (e.g. weed management), provided by the site. Annual rehabilitation monitoring reports are undertaken, and these reports include an assessment of performance compared to performance indicators. The findings of the most recent Rehabilitation Monitoring Report (Umwelt March 2022) were reviewed and confirmed during site inspections.	

IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
SC06	Determine if a rehabilitation care and maintenance program has been developed and implemented based on the outcomes of monitoring program – verified by reviewing Annual Rehabilitation Programs or similar documentation	As above	
SC07	Confirm that rehabilitation progress is consistent with the approved final land use as verified by site plans and a site inspection. This should include an evaluation against rehabilitation targets and whether the final landform is being developed in accordance with conceptual final landform in the Project Approval	Confirmed rehabilitation is on track and in line with approved final land use. Evidence of rehabilitation maintenance in mulching shrubs to enhance targeted grasslands was noted on site as an example of the site working towards targeted land uses.	
SC08	Based on a visual inspection, determine if there are any rehabilitation areas that appear to have failed or that have incurred an issue that may result in a delay in achieving the successful rehabilitation outcomes.	Nil noted, however there were historical areas of rill erosion that the site had repaired. Also, the site is aware of succession processes in the formation of woodland, species diversity and density. Consideration is given to allowing higher stem density tree areas to naturally thin into a woodland, therefore these areas are closely monitored.	
SC09	In addition to the above, the audit should note observations where rehabilitation procedures, practices and outcomes represent best industry practice.	Commendations for designing into the landform, water retention areas 'frog ponds' and depressed areas. Historically these have been undesirable due to risk of tunnelling and blow outs, however trialling these on lower profile landforms is worth the effort. Ecologically these are great additions.	
Muswellbrook Shire Council			
SC10	Air Quality Review method for investigating occasions when air quality results are above the criteria and determined to be "non-mining related". Include a high-level description of the methodology.	Mangoola implements the Incremental Contribution Calculation Procedure Number: MANOC-1772150304-5929. The procedure describes the processes to review air quality monitoring compliance data when an exceedance of the short-term impact assessment criteria is identified. The purpose of the procedure is to quantify the incremental impacts of mining activities to the total impacts (when investigating an exceedance of short-term criteria) and assist in informing whether	

IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
		control measures have been successful in not causing (or not significantly contributing to) the exceedance. Mangoola engaged Novecom to build an incremental contribution calculation into the daily reporting platform in Sentinex to carry out an automatic calculation to determine site specific (or incremental) contribution. The calculation is based on using TEOM monitor pairings, split along wind axis to give an upwind and downwind location for each pairing. The calculations have also undergone a validation check of the meteorological conditions to ensure that the calculations are made for valid results only (e.g. when the wind direction is within the defined 'upwind-downwind' arcs). Mangoola also relies on regulator correspondence to determine when extraordinary weather events are declared. Mangoola. Mangoola has an obligation to not contribute to these weather events and was observed to be implementing the controls outlined in the AQMP and followed the applicable TARP.	
SC11	Noise Provide a description including date for when Mangoola used "meteorological forecasting to plan activities in advance of potentially adverse conditions and ongoing day to day planning of mining operations to reduce noise."	Site visit included a visit to real-time monitoring devices (blast monitor BM03 and multiple noise monitoring (SentinelX) devices) and an inspection of the meteorological monitoring station at Point 18 (Weather Station South). Satisfied that monitoring equipment is appropriate under the requirements of the EPL and NMP. During site visit, discussed proactive noise management measures including daily forecast of expected weather conditions (wind speed, wind direction and inversion conditions) and risk of noise enhancing conditions (viewed example of daily report).	

IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
		Details provided regarding the dissemination of forecast information to operations staff and discussion at daily operations meeting to inform modifications to planned mining operations.	
SC12	Access View induction (or similar communication) of site access requirements under conditions B98 and B99	The road access requirements are outlined in the site TMP and the Local Roads Traffic Policy. Local road access is communicated to all employees through the site induction. Signs are posted on Reedy Creek Rd, Mangoola Rd, Roxburgh Rd and Castlerock Rd reiterating that these are to be used for local traffic only and no project related traffic.	
SC13	Complaints Actions taken to reduce the number of repeat complainants.	It is noted that complaints have progressively reduced during the audit period with majority of complaints related to noise: • 2019 – 191 total complaints, 172 related to noise • 2020 – 133 total complaints, 122 related to noise • 2021 – 62 total complaints, 58 related to noise Mangoola were observed to be implementing the Noise Management Plan an EMS during the audit period. Anecdotal evidence suggested that increased consultation during the MCCO approval process resulted in a significant reduction of complaints in 2021.	
SC14	In-pit tyre disposal Section 6.21.1 of the Mangoola Coal Environmental Impact Statement states that “used large tyres... will be buried in controlled areas within mining areas with the approval of the EPA”. EPL 12894 does not permit disposal of used off-the-road tyres (OTR) in-pit. Confirm if the practise of disposal of OTR tyres in-pit is occurring and if so whether approval from the EPA has been sought.	The audit team observed the sites tyre tracking register that is managed by Bridgestone. The information noted is recorded for each tyre with tyre burial undertaken approximately every two weeks. There is currently no requirement for the requested tyre information to be recorded in the Annual Reviews. Further discussion can	

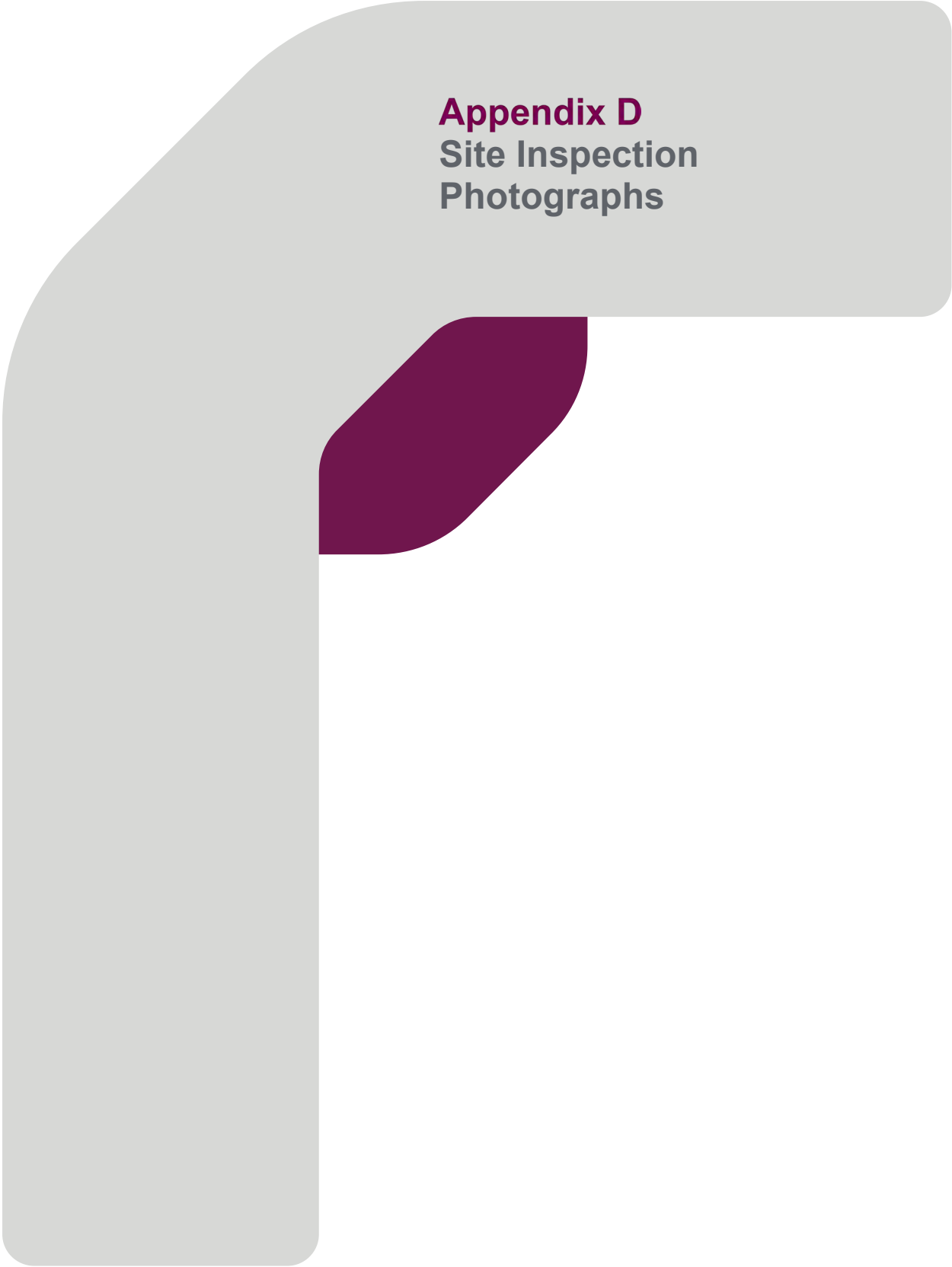
IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
	Furthermore, please confirm as much of the following information for each waste tyre: • The size and type; • Disposal date; • Cumulative tonnage of waste tyres disposed of in each disposal area; • GPS coordinates (easting and northing) of the disposal location; • The Real Level (RL) in metres of the burial depth; • Where reasonably available the purchase date, supplier and serial number. Regarding audit recommendations, Council staff requests the following; • The above information is provided in the Annual Review; • The EPL is varied to include limits and management for waste tyre disposal and the requirement to prepare a Heavy Plant Tyre Disposal Report.	be undertaken between DPE and Mangoola to determine if the information requested is suitable/relevant for inclusion in the Annual Review. In August 2021 Mangoola applied to the EPA for a variation to EPL 12894. This variation included a new condition outlining the requirements for disposing of tyres onsite. In response to this variation the EPA required the site to demonstrate a number of criteria prior to approving the variation. Mangoola is currently working on an amended EPL variation to satisfy EPA requirements. Discussions are currently occurring between Glencore and the NSW EPA regarding the need for an annual Heavy Plant Tyre Disposal Report to be required under the EPL.	
SC15	Social Provide a discussion / status update on the following Mitigation and Enhancement Measures outlined in Table 8.2 of the Social Impact Assessment for SSD 8642. "Private landowners living within a 4 km radius of the active mining area will be offered an inspection and if deemed required, cleaning of residential rainwater tanks once per year, upon written request." "Private landowners living within a 4 – 6 km radius of active mining operations will be offered an inspection and if deemed required, cleaning of residential rainwater tanks every two years, upon written request." "Mangoola, in consultation or conjunction with Glencore, would consider supporting a traineeship or work experience program through a third-party provider in the area of cultural heritage management, biodiversity or land management, ecology, rehabilitation or other appropriately related field." Note that comments in the RTS stated "Through the ACHAR and SIA programs undertaken for a number of operations in the Hunter Valley, Glencore has responded to community requests for the	The Social Impact Management Plan is currently under review by council the CCC, local affected communities and other interested stakeholders. The SIMP is not required for approval and implementation as commencement of mining operations north of Wybong Road have not occurred yet. Mangoola have notified surrounding landowners of their rights for cleaning of residential rainwater tanks at the specified rates, upon written request. As noted in the Draft SIMP, Mangoola will continue to operate Glencore's entry-level opportunities programs: • graduate programs • apprenticeships • vacation program • school leavers program	

IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
	development of a work experience program for local Aboriginal youth, with the program to be rolled out across in 2020.” d. On-site facility used to store artefacts. e. Status of whether a regional Keeping Place has been determined to be required. f. Confirm timing of commencement of Stage 1 of the Community Enhancement Program for the Wybong Locality (see Section 8.1.1.2 of the SIA) If written requests have not been received for a) and b), recommend a newsletter is provided to relevant landowners.	- Indigenous Employment Pathways Program - traineeships. All salvaged artefacts were returned to Mangoola in November 2019. Mangoola Open Cut implements a Cultural Heritage Artefact Access Procedure (MANOC-1772150304-5652) to provide a structured process to access the cultural heritage artefacts held for safekeeping in Mangoola’s Care and Control. The salvaged artefacts are securely stored in a shipping container adjacent to the HEO-1 offset area in accordance with Care Agreement C0003885. Mangoola acknowledges the desire for a regional Wonnarua Keeping Place. Mangoola also acknowledged the MCCO Project lies on the overlapping boundary to the Gomeroi Native Title Claim. However, this facility does not currently exist. SIMP in final draft with MSC comments received. CEP will commence on approval of SIMP.	
SC16	Rehabilitation a. MOP Commitment – “In preparation for the walkover inspection aerial photography, LIDAR and field observations from site staff may be considered to target any areas where adverse rehabilitation outcomes may be potentially occurring.” Confirm if this has been undertaken. b. Topsoil Management - A recent aerial (May 2022) shows clearing of vegetation north of Wybong Road. If topsoil is being stripped, ensure adequate stockpile maintenance commitments are being adhered to including seeding of stockpiles with cover crops to stabilise material, and that a topsoil stockpile inventory is being kept and updated.	Discussions with E&C team indicates that preparation for site walkover inspections relies on a number of data sources to target any areas where adverse rehabilitation outcomes may be potentially occurring. The most recent walkthrough rehabilitation inspection audit was undertaken in October 2021 and was completed by a specialist consultant to review and report on the condition of mine rehabilitation and highlight areas where maintenance action is required. Due to the size of the area under rehabilitation, since 2020 the annual walkover inspection has been moved to a biennial schedule, with six rehabilitation blocks totalling	

IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
		202ha in the southern rehabilitation area inspected during 2021. Following the site inspection and review of available documentation associated with the MCCO it was determined that Mangoola is managing topsoil in accordance with Section 3.3.2 of the Erosion and Sediment Control Plan (MANOC-1772150304-6266, version 8, Effective: 10/03/2021).	
SC17	Visual Confirm status of planting/seeding of tree screens Wybong Road (see Section 6.14.4 of the EIS), including photos showing whether screening is reducing the availability of direct views.	Photos included in audit report, planting/seeding of tree screens Wybong Road appeared to be well established and trending to conformance.	
SC18	Heritage a. How Mangoola are proceeding with protection of Aboriginal heritage, including monitoring of impacts of blasting on rock shelters etc. Please provide specific reference to commitments in Section 3.6.3 of the ACHMP. b. Confirm the following sites are fenced and signposted (as per Section 3.4.1.3 and Figure 9 of the ACHMP): Manobalai-Castle Rock 5, BFC118, MCO001, MN OS5 c. Confirm the MCCO Cultural Heritage Management Area is fenced and signed (see Section 3.6.1.1 of the ACHMP)	Annual inspections of the ACHMP areas mentioned are undertaken with a suitably qualified archaeologist and representatives from the Aboriginal Community (RAPs). Annual monitoring inspections and reports placed in CMO with any actions raised also entered in CMO for tracking and close out. Following the site inspection and review of photographic evidence the following sites were confirmed to be fenced and signposted (as per Section 3.4.1.3 and Figure 9 of the ACHMP): Manobalai-Castle Rock 5, BFC118, MCO001, MN OS5. It was confirmed during the site inspection and review of photographic evidence that the MCCO Cultural Heritage Management Area is fenced and signed. Annual rock shelter monitoring is completed in line with section 3.6.3 of ACHMP, and reports were observed during the audit. No mining related impacts on the structures have been identified during the reporting period.	
SC19	Translocation Plan for Orchids and Other Threatened Flora (Sept 2012)	It was noted in the 2021 AR that based on 11 years of monitoring, Eastcoast Flora Survey, recommend a revised monitoring program for	

IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
	- Confirm the status of the following actions from the 2021 Annual Review (see Section 6.6.2.6) - Control outbreak of Coolatai grass near translocation #3 (Wybong PO Road) as well as the gate to the offset area containing translocations #6 and #7 - Repair gap mesh in translocation #6. "Changes to the monitoring regime are recommended for the 2022 season onwards, including replacing annual brush cutting with ecological burning, introducing post-fire orchid survey rather than monitoring all plots annually and discontinuing all monitoring in some selected plots." - Confirm whether the above actions were put into an internal compliance management database to track actions / sign off and provide evidence. - Confirm the status of translocation of orchids i.e. has all work under Section 3.3, 3.4 and 3.5 of the Translocation Management Plan been completed. Only monitoring is being undertaken.	the terrestrial orchids, which continues annual monitoring of selected recipient plots (those in mine rehabilitation, controls, and some Prasophyllum-dominated plots in offsets), introduces cyclical post-fire monitoring of most other plots for two consecutive years after burns, and discontinues all monitoring of other poorly performed plots (Translocation # 1, and all tuber translocations) (Bell, 2021). Following the submission of the AR and these recommendations, a review of the plans was completed. It was determined that no changes were required to the monitoring program at that time. This was communicated to DPE in a letter from Sam Palmer (E&C Manager) dated 27 May 2022. Ongoing monitoring of translocation is included in the most recent monitoring report (Eastcoast Flora Survey, Feb 2022).	
SC20	Sustainable Agriculture Offset Area There is a portion of land identified in Figure 14 of the 2021 Annual Review labelled as "Sustainable Agriculture Offset Area". Please provide a discussion on what makes it "sustainable". Is this site being compared to an analogue site, and if so, what are some of the methods being used to compare the sites.	SSD8642 Condition B85 states "The Applicant must rehabilitate the site in accordance with the conditions imposed on the mining lease(s) associated with the development under the Mining Act 1992. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the documents listed in condition A2(c) and shown in Appendix 9 and must comply with the objectives in Table 9". Table 9 outlines provisions for "area proposed for agricultural land". As defined in the EIS the intention is to provide a final rehabilitated landform of native vegetation woodlands and grassland. A key objective of the progressive rehabilitation at Mangoola is to return much of the MCCO Project Area to a mixture of woodland habitat generally consistent with ecological communities that would have historically	Change land label from "Sustainable Agriculture Offset Area" to a more suitable description of the intended land use to reduce confusion in future Annual Reviews.

IEA No.	Stakeholder Comment	Comments & Evidence	Recommendations
		occurred in the area and grassland areas that will provide future opportunity for appropriately managed grazing. The potential future grazing opportunities would be based on future land use decisions and approvals, and hence grazing is not a primary consideration for current rehabilitation, or a planned land use a described in the EIS.	

A large, light grey abstract shape with rounded corners and a maroon-colored cutout on its right side. The cutout is a rounded rectangle with a diagonal line through it, creating a maroon shape that fits into the grey one.

Appendix D

Site Inspection Photographs



Plate 1 – Active mining area during site inspection 5 July 2022.



Plate 2 – Active mining area during site inspection 5 July 2022, Anvil Rock (left).



Plate 3 – Signposted bioremediation area



Plate 4 – Covered conveyor belts observed on site during site inspection 5 July



Plate 5 – CHPP and anvil creek storage dam during site inspection 5 July



Plate 6 – CHPP during site inspection 5 July



Plate 7 – Oily water separator near workshop during site inspection 5 July



Plate 8 – Light vehicle car wash in operation during site inspection on 5 July 2022.



Plate 9 – Workshop area during the site inspection on 5 July 2022.



Plate 10 – Heavy vehicle waste tyre storage bay



Plate 11 – MCCO sediment controls in place during site inspection on 5 July 2022.

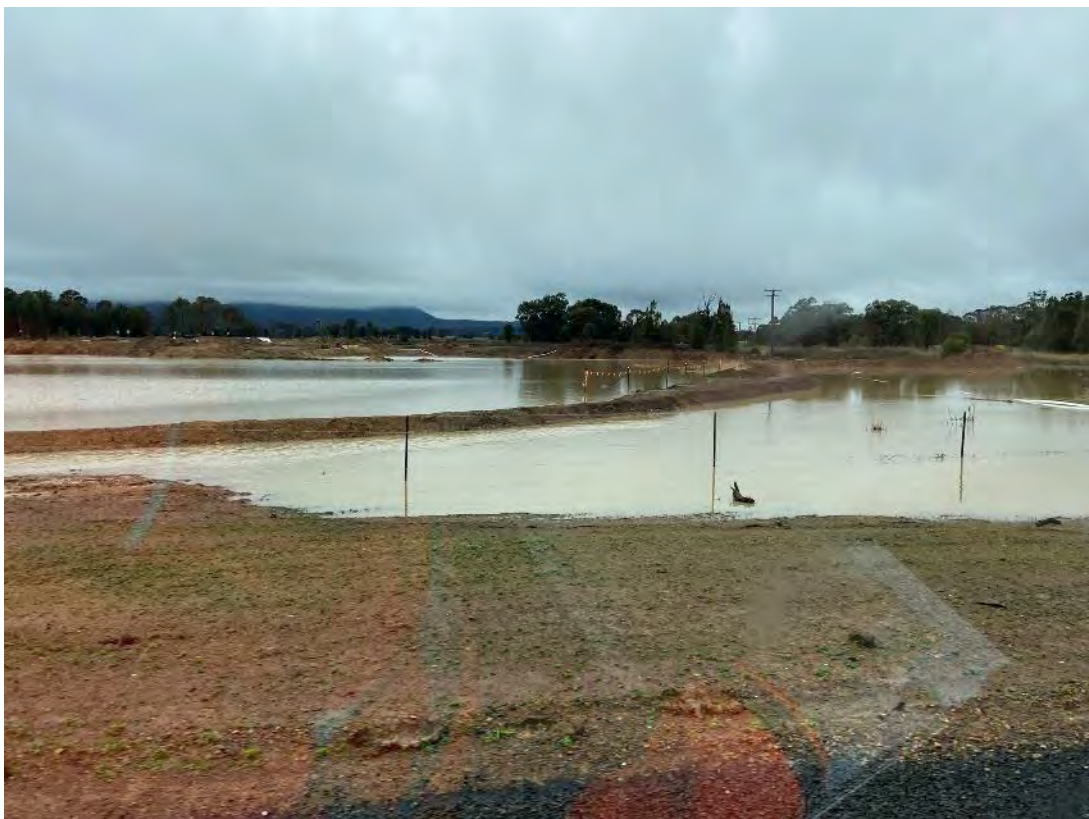


Plate 12 – MCCO Sed 2 Dam during site inspection on 5 July 2022



Plate 13 – Truck 204 in for scheduled maintenance



Plate 14 – Mobile bunded trollies utilised in workshop area



Plate 15 – Bins utilised around workshop generally showing accurate waste segregation practises



Plate 16 – Waste chemicals stored on bunded structures



Plate 17 – Minor volume hydrocarbon contaminated waste bin observed to not be watertight.



Plate 18 – Chemical storage on adequately bunded areas.



Plate 19 – Fuel fill up bunded area observed to have build-up of sediment during site inspection on 5 July 2022



Plate 20 – Hazardous materials/liquid storage cabinets.



Plate 21 – MCCO Sed dam 2 embankment construction 22 July 2022



Plate 22 – MCCO Sed dam 2 construction 22 July 2022



Plate 23 – MCCO fenced cultural heritage site 22 July 2022.



Plate 24 – South Pit South Sediment Dam with eroding banks creating turbid water. Runoff from the upslope catchment has been monitored and is of a good quality. Hence recommendation is to rehabilitate dams to allow for potential offsite release of water to reduce the mine water generation during wet periods (currently pumped back into the mine water system).



Plate 25 – South Pit North Sediment Dam – Same as the South Dam. Batters need to be rehabilitated.



Plate 26 – Temporary clean water diversion in place for the MCCO project



Plate 27 – Big Flat Creek Clean Water Diversion – Good example of Best Practice



Plate 28 – Sand Creek Farm Dam Automatic Level Sensor Monitoring Equipment



Plate 29 – Big flat creek permanent (life of project) drainage diversions pipes



Plate 30 – Blast viewed during 22 July 2022 site inspection



Plate 31 – Low profile geomorphic landform being constructed.



Plate 32 – Deep ripping on contour surface prep prior to seeding.



Plate 33 – Old Erosion gully repaired, ripped and seeded.



Plate 34 – Areas targeted for grasslands, mulched shrubs to promote grass species and cover.



Plate 35 – Rehabilitation signage and example of translocation.



Plate 36 – Depressed 'wet' area example.



Plate 37 – Temporary erosion control to minimise rilling on temporary rehabilitation area.



Plate 38 – *Cymbidium canaliculatum* orchid translocation in rehab



Plate 39 – Pomaderris reperta translocation in rehab



Plate 40 – Pomaderris translocation plot



Plate 41 – Recent planting in eastern offset area



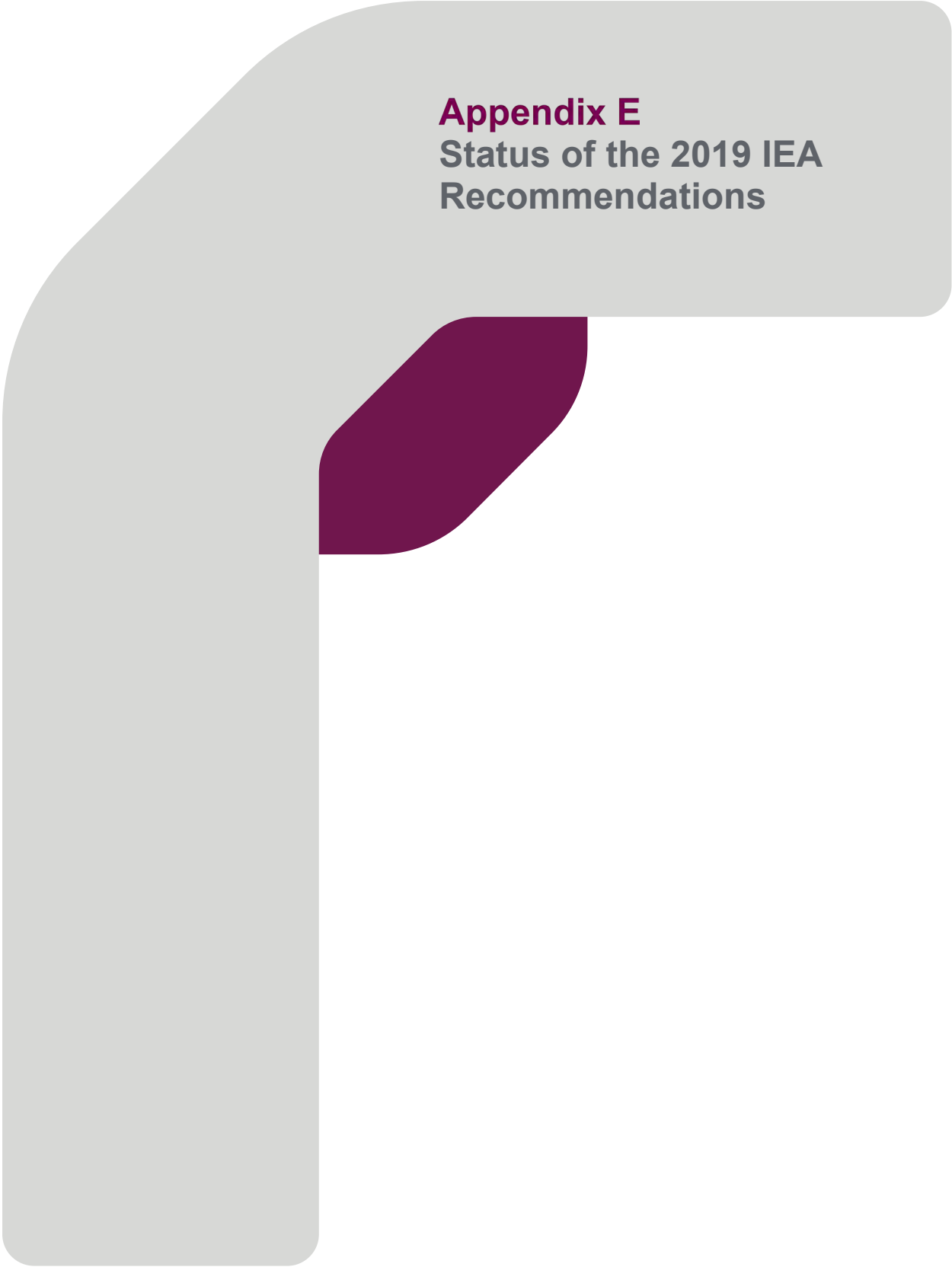
Plate 42 – Recent plantings in southern offset area



Plate 43 – Air quality monitoring station



Plate 44 – MET Station



Appendix E

Status of the 2019 IEA Recommendations

RESPONSE TO 2019 AUDIT RECOMMENDATIONS

RESPONSE TO 2019 AUDIT RECOMMENDATIONS.....	1
Project Approval PA 06_0014	2
General Recommendation	4

IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
Project Approval PA 06_0014					
RAR_01	Sch. 2, C. 2(a)	2A. The proponent must carry out the project in accordance with the conditions of this approval.	Although a high level of compliance was identified, some non compliances were identified with the conditions of this approval. Not Compliant Administrative	Noted	Noted.
RAR_02	Sch. 2, C. 2(a)	2A. The proponent must carry out the project in accordance with the conditions of this approval.	The 2017 Annual Review indicates noise criteria exceedances in March (by 2 dBA) and May (by 1 dBA) at Location NM4. Follow-up monitoring after adjustments to mine operations indicated compliance with criteria in both cases. Although these results are within the 2-dBA allowed under the INP and were promptly managed, these minor exceedances are a noncompliance against the specific criteria in Table 2. Not Compliant Low Risk	Noted and previously reported.	Noted.
RAR_03	Sch.3. C 14(b)	If the owner of any privately-owned land within 2km of the site (or on any other land where the Secretary agrees that a property investigation is warranted) claims that buildings and/or structures on his/her land have been damaged as a result of blasting on the site, then within 2 months of receiving this claim the Proponent must: (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and	A property investigation was requested by Property ID 200 with results to be sent to the landholder within two months of request. As a copy of the property investigation report was not given to the landholder within two months of receiving this claim this condition is deemed non-compliant. Not Compliant Administrative	As reported to DPIE 11 June 2019, no further action is proposed for this matter. A further process has been put in place where by actions are generated in the sites compliance database when claims are received to avoid this reoccurring.	Completed

IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
		(b) give the landowner a copy of the property investigation report.			
RAR_04	Sch. 3, Cond. 19	The Proponent must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not cause exceedances of the criteria listed in Tables 5, 6 and 7 at any residence on privately-owned land (excluding the dust affected properties listed in Table 1).	2017 DG21 was sampled only 4 times (out of 12) due to being on private property and the landholder refusing entry. Due to this ongoing issue, the AQMP was revised and DG21 was removed. Strictly a non-compliance as monitoring was not conducted in a representative location for 8 months (although out of Mangoola's control). Not Compliant Low Risk	The site Air Quality Management Plan was updated at the time of the non compliance and approved by DPIE in December 2017. No further action required.	Completed
RAR_05		The Proponent must: (a) keep records of the: - amount of coal transported from the site each year; and - number of coal haulage train movements generated by the project (on a daily basis); and (b) (b) include these records in the Annual Review.	Reported 11/6/19 of missing 'on a daily basis' information. The train movements have since been added to the Appendix of each annual review. Not Compliant Administrative	As reported to DPIE 11 June 2019, Mangoola Coal has now amended and included train records with Annual Review. These are available on the company website. No further action required.	Completed
RAR_06	Appendix 8, Condition 5	Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the NSW Industrial Noise Policy (as amended from time to time), in particular the requirements relating to: (a) monitoring locations for the collection of representative noise data; (b) meteorological conditions during which collection of noise data is not appropriate;	Noise monitoring reports do not assess "mine-related tonal noise" as defined by the INP or the later Noise Policy for Industry as required by Section 4.1.3 of the Noise Management Plan. Audit Recommendation Recommend noise monitoring reports assess mine-related tonal noise as defined by the INP.	Mangoola Coal has consulted with its Independent Acoustic Consultant regarding tonal noise. The consultant confirmed that tonal noise has not been detected during operator-attended noise monitoring at Mangoola. This will be acknowledged and considered future monthly noise monitoring reports from 30 November 2019 onwards for clarification.	Completed – tonal noise noted in attended noise monitoring reports from 2020 onwards.

IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
		(c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and (d) modifications to noise data collected including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.			
General Recommendation					
RAR_07	PA 06_0014, Sch. 3, Cond. 1	General recommendation	Recommend updating acquisition table at next scheduled modification to only show relevant properties.	Mangoola Coal is currently seeking approval for the Mangoola Coal Continued Operations Project SSD-8642 and is seeking a new approval which will reflect current land ownership, should this be granted approval.	SSD-8642 was approved on 26 April 2021 and commenced development and construction on 6 December 2021. SSD-8642 includes an updated acquisition table. PA06_0014 is due for relinquishment on 6 December 2022.
RAR_08	PA 06_0014, Sch 3, Condition 2(a) and 9	General recommendation	Report all noise exceedances of criteria specified in consent (including those within the 2 dBA allowed under the INP) in Annual Review's. Recommend that discussion with DPIE occur and if amendable, an amendment to Noise Management Plan be undertaken at Section 4.5.1 that reporting of potential exceedances within 2 dB not be reported in accordance with INP Section 11.1.3	Mangoola will continue to report as per the approved Noise Management Plan. Section 11.1.3 of the Industrial Noise Policy (INP) states the following: "A development will be deemed to be in non-compliance with a noise consent or licence condition if the monitored noise level is more than 2 dB above the statutory noise limit specified in the consent or licence condition." This methodology continues are per Point 8 of the Implementation and Transitional Arrangements for the Noise Policy for Industry 2017. Consultation will be undertaken with DPIE regarding section 4.5.3 of the approved Noise Management Plan and if required, A	Completed – latest Noise Management Plan Number: MANOC-1772150304-4345 Effective: 22/11/2021 Version: 23

IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
				revised Noise Management Plan will be submitted to DPIE by 18 January 2020.	
RAR_09	PA 06_0014, Sch. 3, Cond. 11	General recommendation	At next Modification, recommend that the condition is amended to reflect approved updated blasting hours within Condition L4.5 of EPL 12894.	Mangoola Coal is currently seeking approval for the Mangoola Coal Continued Operations Project SSD-8642. Current approved blasting hours have been included in the Environment Impact Statement which will be considered within conditioning, should approval be granted.	SSD-8642 was approved on 26 April 2021 with blasting hours reflecting Condition L4.5 of EPL 12894.
RAR_10	PA 06_0014 Sch.3, C.14	General recommendation	At next Modification, recommend making wording consistent with Condition 13.	Mangoola Coal is currently seeking approval for the Mangoola Coal Continued Operations Project SSD-8642. Consistent wording between property inspection and property investigation will likely be included consistent with current conditioning, should the project be approved.	SSD-8642 was approved on 26 April 2021. PA06_0014 is due for relinquishment on 6 December 2022.
RAR_11	PA 06_0014, Sch. 3, Cond. 16	General recommendation	At next modification, recommend the Appendix 1 of PA 06_0014 be updated to reflect recent landownership data.	Mangoola Coal is currently seeking approval for the Mangoola Coal Continued Operations SSD-8642 and is seeking a new approval which will reflect current land ownership.	SSD-8642 was approved on 26 April 2021. PA06_0014 is due for relinquishment on 6 December 2022.
RAR_12	PA 06_0014, Sch. 3, Cond. 18	General recommendation	Annual Reviews could include a discussion on odour within 'air quality' section.	Further information on odour will be reported in the air quality section of the Annual Review which will be furnished to DPIE 30 March 2020.	Completed
RAR_13	PA 06_0014, Sch.3, C. 19	General recommendation	Update to be consistent with the industry by referencing Note (b) with the Criterion to allow for any exceedances be based of mine related activities and not include background concentrations.	Mangoola Coal is currently seeking approval for the Mangoola Coal Continued Operations Project SSD-8642. Mangoola Coal will comply with any changes to conditions, should the proposed project be granted approval.	SSD-8642 was approved on 26 April 2021. PA06_0014 is due for relinquishment on 6 December 2022.
RAR_14	PA 06_0014, Sch. 3, Cond. 20	General recommendation	Update to be consistent with the industry by referencing Note (b) with the Criterion to allow for any exceedances be based of mine related activities and not include background concentrations.	Mangoola Coal is currently seeking approval for the Mangoola Coal Continued Operations SSD-8642. Mangoola Coal will comply with any changes to conditions, should the proposed project be granted approval.	SSD-8642 was approved on 26 April 2021. PA06_0014 is due for relinquishment on 6 December 2022.

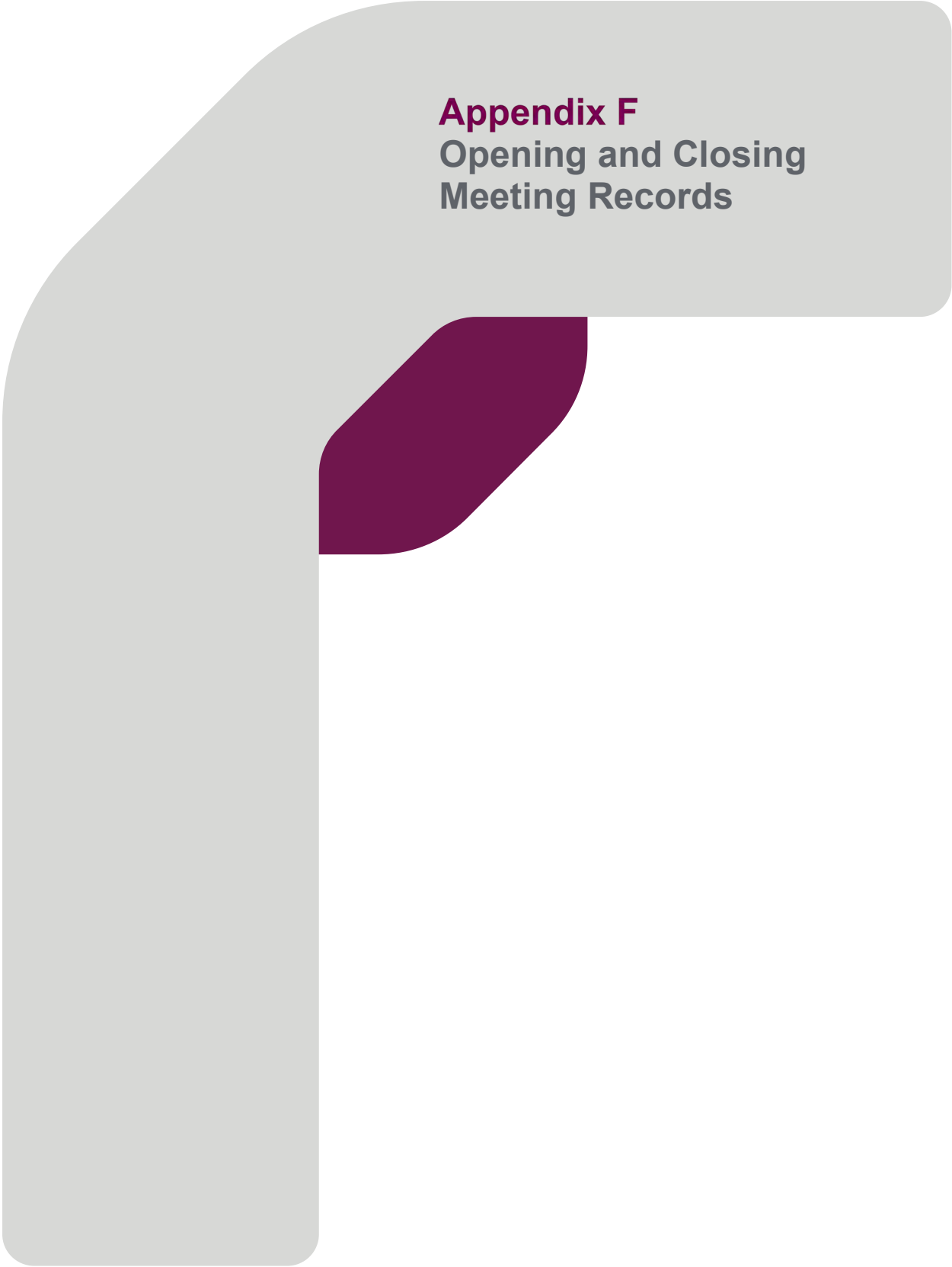
IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
RAR_15	PA 06_0014, Sch. 3, Cond. 24 NOTE	General recommendation	Future versions of the WMP should remove stock and domestic Water Access Licenses.	Mangoola Coal will update the Water Management Plan to provide clear clarification around licence required for the project and submit for consultation with relevant agencies by 18 January 2020.	Completed
RAR_16	PA 06_0014, Sch. 3, Cond. 28	General recommendation	Future versions of the WMP include relevant consultation in an appendix.	Mangoola Coal will include consultation and DPIE approval as an Appendix of the Water Management Plan to be submitted for consultation with relevant agencies by 18 January 2020.	Completed
RAR_17	PA 06_0014, Sch. 3, Cond. 29	General recommendation	Future versions of the WMP should include a cross-reference in Section 4 to any site water balance reporting requirements.	Mangoola Coal include a reference in Section 4 to reflect Water Balance Reporting in the Water Management Plan to be submitted for consultation with relevant agencies by 18 January 2020.	Completed
RAR_18	PA 06_0014, Sch. 3, Cond. 30	General recommendation	Future versions of the ESCP include an up-to-date list of the erosion and sediment control structures at the mine, and a figure showing the locations of these structures.	The site Pollution Incident Response Management Plan includes a plan of erosion and sediment control structures and a table outlining their location, function and capacity. A reference will be included in the sites ESCP and submitted for consultation with relevant agencies by 18 January 2020.	Completed
RAR_19	PA 06_0014, Sch. 3, Cond. 31	General recommendation	Future versions of the SWMP include baseline flow data for relevant creeks.	Mangoola Coal will update the SWMP to include baseline flow data and submit for consultation with relevant agencies by 18 January 2020.	Completed
RAR_20	PA 06_0014, Sch. 3, Cond. 32	General recommendation	Future version of the Groundwater Monitoring Program to include: • Baseline data tables that clearly state the parameter and measurement unit; • Baseline yield for relevant bores; and • A program for accurately delineating the boundary of the Big Flat Creek alluvial aquifer.	Mangoola Coal is currently revising the sites Groundwater Monitoring Program (GWMP) and is responding to comments from the Natural Resource Access Regulator dated 13 August 2019. Further details have been included in the updated GWMP to address the audit recommendation. Mangoola Coal will provide an updated GWMP to NRAR by 13 November 2019. GWMP approval is required by NRAR under 20BL 172598.	Completed – GWMP is currently sitting with DPE Water for approval.

IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
				Following this approved the GWMP will be submitted t DPIE for approval.	
RAR_21	PA 06_0014, Sch. 3, Cond. 33	General recommendation	Recommend the SWGWRP at next revision include a clear protocol specifically for the identification, investigation and mitigation of creek flow loss. It is recommended that SWGWRP Figure 2.7 is updated (or a new SWGWRP figure is added to the SWGWRP). This would need to clearly address the loss of creek flows and specifically provide a reliable means of identifying and investigating the potential loss of flows due to mining, taking into account the alternatives discussed above.	Figure 2.7 of the SWGWRP will be updated and sent for consultation with relevant agencies by 18 January 2020 to acknowledge and clarify loss of creek flow as a Trigger in the TARP.	Completed
RAR_22	PA 06_0014, Sch. 3, Cond. 33	General recommendation	In the next update of the Biodiversity Offset Strategy, a statement should be made clarifying that no areas of Bull Oak Woodland are proposed to be re-established but existing areas will be managed and enhanced.	Section 4.4.1 of the approved Biodiversity Offset Management Plan (BOMP) refers to the monitoring of passive regeneration. Observations to date has shown that Bulloak Woodland passive regeneration has been successful. Mangoola Coal will continue to apply the processes contained in Section 4.4.1 of the BOMP which may include the active regeneration of Bulloak woodland if required. Clarification will be made in the periodic update of the BOMP which will be updated and submitted to relevant Departments for consultation by 30 September 2021.	Action was completed as part of the period update to the BOMPS which were be updated and submitted for consultation by 30 September 2021.
	PA 06_0014, Sch. 3, Cond. 41	General recommendation	Include the newly identified rock shelter (AC58) in the next revision of the ACHMP.	Mangoola Coal will be revising the ACHMP to include this AC 58 and will send out registered Aboriginal Parties from consultation by 31 December 2019. Submission to DPIE will follow consultation feedback.	Completed
	PA 06_0014, Sch. 3, Cond. 43	General recommendation	Remove demolished sites from the main document (Figure 2 and Table 2) to avoid confusion at next review.	Mangoola Coal will make this administrative update in the next periodic review of the Conservation Management	Action was completed as part of the periodic review of the Conservation

IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
				Strategy which is due by 31 December 2020.	Management Strategy which was updated and submitted for consultation by 30 June 2020.
	PA 06_0014, Sch. 3, Cond. 54	General recommendation	Add residence locations to Appendix A to confirm which properties have residences and which are vacant.	Mangoola Coal will update Appendix A of the MANOC-1772150304-138 Lighting Plants Procedure by 31 December 2019 to show locations of residences.	Completed
	PA 06_0014, Sch. 3, Cond. 55	General recommendation	DPI Water should be updated in this condition and/or relevant regulator which is actually responsible for energy in NSW added at next modification.	Mangoola Coal is currently seeking approval for the Mangoola Coal Continued Operations Project SSD-8642. Should approval be granted, current names of relevant agencies would be referenced.	Completed
	PA 06_0014, Sch. 3, Cond. 56	General recommendation	Tables in Annual Review (Table 26, 27) relating to greenhouse gas emissions be combined to easily compare predictions to totals.	Mangoola will update this table in the 2019 Annual Review, due for submission by 30 March 2020.	Completed
	PA 06_0014, Sch. 3, Cond. 57	General recommendation	Add sewage operation criteria to email sent to council in future for easy comparison.	Mangoola will include criteria in the ongoing email of results to Muswellbrook Shire Council by 18 November 2019.	Completed
	PA 06_0014, Sch. 3, Cond. 59	General recommendation	Minesoils recommend continuing current practices as they appear to be providing successful results.	Noted.	Completed
	PA 06_0014, Sch. 4, Cond. 3	General recommendation	Definition of 'affected landholder' is clarified with DPIE as HB would suggest landholder means "private" landholder in this context and Mangoola is assuming this is referring to any landholder, including mine owned with tenants. This should exclude any property where predictions from another mine are predicted to exceed.	Consultation will be undertaken with DPIE regarding the definition of affected landholder and if required, A revised Air Quality Management Plan will be submitted to DPIE by 18 January 2020.	Completed
	PA 06_0014,	General recommendation	Update air quality incident letter template used to report an incident to DPIE to confirm consideration of this condition.	Mangoola Coal will update the template to include this reference by 18 January 2020.	Completed

IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
	Sch. 5, Cond. 9 (c)				
	EPL 12894 ,Cond. A2.1	General recommendation	Update condition for most recent figure version.	Mangoola Coal will consult with the EPA regarding the administrative update of this reference by 18 January 2020 to determine if an update of the Figure reference is required.	Completed
	EPL 12894, Cond. P1	General recommendation	Include location 33 (STP discharge point) on figure. As the EPL IDs and site IDs of required monitoring points, it is recommend including site ID location in table to easily identify the correlation with EPL monitoring points.	Mangoola Coal will consult with the EPA regarding the administrative update of this reference by 18 January 2020 to determine if an update of the Figure reference is required.	Completed
	EPL 12894, Cond. L3	General recommendation	As the EPL IDs and site IDs of required monitoring points, it is recommend including site ID location in table to easily identify the correlation with EPL monitoring points.	Mangoola Coal will consult with the EPA regarding the administrative update of this reference by 18 January 2020 to determine if an update of the Figure reference is required.	Completed
	EPL 12894 Cond. E1	General recommendation	Update condition to correct reference R4.5 rather than R4.4.	Mangoola Coal will consult with the EPA regarding the administrative update of this reference by 18 January 2020 to determine if an update of the Figure reference is required.	Completed
	ML1626 Cond. 4(b)	General recommendation	The addition of a figure and/or discussion comparing MOP predictions with current progress in Annual Review 2019.	Mangoola will update this table in the 2019 Annual Review, due for submission to DPIE by 30 March 2020.	Completed
	Sch 3., C 17.	General recommendation	Blast monitoring in the east is currently not required, however should be reconsidered in the next audit period if required by an appropriate specialist as mining progresses south. Figure 4.1 of the Blast MP should be extended to a 3 km radius from active mining in the next audit period as mining progresses to the south to ensure that blast impacts to receivers in the SW are adequately monitored. Consideration as to	Mangoola Coal will undertake a review with an appropriate specialist and if required, A revised Blast Management Plan will be submitted to DPIE by 18 January 2020.	Completed

IEA No.	Cond No.	Requirement	Finding	Mangoola Response	2022 IEA Comments
			whether an additional blast monitoring in the SW should be installed in the vicinity of receiver 54 or 106B (approximately 4 km from future active blasting).		



Appendix F

Opening and Closing Meeting Records

MEETING ATTENDANCE RECORD

Project: MANAGOLA FEA 2022

Meeting Purpose: OPENING MEETING

Date: 5-7-22

Location:

Time: 0830

Name	Role	Signature
SAM MITCHELL	AUDITOR	
Dale Redwood	Acoustics	
Chris March	Managola CHAP Mgr.	
MARK WILLIAMS	TSM	
SAMUEL PALMER	EBC MANAGER	
Igor Martin	MCCO Approach Manager	
Luke Vaughan	MANAGOLA MAINT MGR.	
JACOB HONDEYMAN	OPERATIONS MANAGER	
DAMIEN RYBA	E&C Coordinator	
IAN RICHARDSON	LEAD AUDITOR	
Arie Zuanic	Auditors Assistant	
Mitchell Green	Ext Coordinator	
Robyn Ellis	EC officer	

MEETING ATTENDANCE RECORD

Project: Mangoola IEA 2022

Meeting Purpose: Close Out Meeting

Date: 27 July 2022

Location: Microsoft Teams Meeting

Time: 1300

[illegible]