

BAAL BONE COLLIERY

INDEPENDENT ENVIRONMENTAL AUDIT REPORT

for
Glencore Coal Assets Australia
February 2020

BAAL BONE COLLIERY

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February 2020

for:

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EXECUTIVE SUMMARY

Hansen Bailey was approved by Department of Planning, Industry & Environment (DPIE) to conduct an Independent Environmental Audit (IEA) against the conditions of Project Approval PA 09_0178 (as modified) for Glencore Coal Assets Australia at the Baal Bone Colliery. The IEA also assessed compliance with other licences and approvals including: Environment Protection Licence (EPL) 765, Consolidated Coal Lease (CCL) 749, CCL 770, MPL 261, Coal Lease (CL) 391, Mining Lease (ML) 1302, ML 1389 and ML 1607.

The IEA was conducted by Dianne Munro (Exemplar Global Certified Auditor 107622) and Theresa Folpp from Hansen Bailey with the field visit component completed between 17 – 18 December 2019. Rehabilitation and surface water expert Clayton Richards from MineSoils also conducted a site visit.

The IEA consisted of a detailed desktop review of documentation, interviews with Baal Bone Colliery staff and a field inspection of relevant activities and processes. The IEA was conducted generally in accordance with the '*Independent Audit Guideline, October 2015*' (Audit Guidelines) (DPIE, 2015).

Key actions and recommendations from the previous Independent Environmental Audit completed for Baal Bone Colliery in 2016 were reviewed and found to have generally been completed as described in **Section 4**.

The IEA identified a high level of compliance with conditions of licences and approvals. Five non-compliances were identified. The identified non-compliances were risk ranked, with no high or medium risks were identified. Three non-compliances were identified as low risk and two issues were classified as administrative in nature. The identified non-compliances are described and recommendations made as shown in **Section 5**.

The field inspection revealed that the site was maintained commensurate with the extended phase of care and maintenance. No new rehabilitation was completed during the audit period, only adit sealing. Rehabilitation of disturbed lands has been completed for some sections of the site with additional rehabilitation still required post closure. Rehabilitation has been completed as per the areas outlined in the Care & Maintenance Mining Operations Plan (MOP).

Significant bushfire activity occurred in the Lithgow Region in the week of the field inspection and in proximity to the site the day of the site inspection.

Two reportable incidents occurred during the audit period. The incidents were in relation to a rock fall events. Each was reported in accordance with requirements and follow-up deemed sufficient by relevant regulators.

The IEA provides recommendations arising from a review of site documentation, identified non-compliances as well as continuous improvement recommendations (see **Section 7**). At the time of the audit, Baal Bone Colliery staff were aware of all identified non-compliances against Development Consent conditions, licences and approvals. The IEA concludes that a Baal Bone Colliery is being managed at a high level of compliance on environmental matters.

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LIMITATIONS OF REPORT

In preparing this IEA report, Hansen Bailey has assessed all activities appropriate and necessary to evaluate the environmental status of the site and operations on it. Hansen Bailey 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 Hansen Bailey's opinion that the potential critical environmental issues associated with the site and operations are those discussed in this report. However, Hansen Bailey 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 Hansen Bailey's visual observations of the site and the immediate site vicinity, and upon Hansen Bailey's interpretations of the documentation reviewed, 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 Hansen Bailey's site visit being 17 – 18 December 2019, and those reasonably foreseeable. They necessarily cannot apply to conditions and features which Hansen Bailey 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 particular circumstances constitute a breach of relevant legislation.

BAAL BONE COLLIERY INDEPENDENT ENVIRONMENTAL AUDIT
for
Glencore Coal Assets Australia

1 INTRODUCTION

1.1 BACKGROUND

Hansen Bailey (HB) was commissioned by Glencore Coal Assets Australia (Glencore) to conduct an Independent Environmental Audit (IEA) against Project Approval (PA) 09_0178 (as modified) for Baal Bone Colliery.

The original supporting documentation for PA 09_0178 is the environmental assessment titled *Baal Bone Colliery Environmental Assessment (Volumes 1-3)*, dated March 2010. Two modifications have been granted to PA 09_0178 with key components outlined in **Section 2.1**.

The timeframe that this report applies to is from 8 December 2016 to 17 December 2019 (auditing period). The IEA was conducted by Dianne Munro (DM) (Lead Auditor – Exemplar Global Certified Auditor 107622) and Theresa Folpp (TF) (Assistant Auditor) from Hansen Bailey. Rehabilitation expert Clayton Richards from MineSoils also assisted with the audit, reviewing Baal Bone operations during the audit period in relation to rehabilitation and soil erosion management performance.

The auditing team was approved by the Department of Planning, Industry and Environment (DPIE) on 21 October 2019 (see **Appendix A**).

The IEA consisted of a detailed desktop review of documentation and interviews with key staff including:

- Mark Bulkeley (MB) – Operations Manager;
- Elizabeth Fishpool (EF) – Environment and Community Coordinator; and
- Greg Peard (GP) - Environment and Community Coordinator.

A field inspection of the mining area and other infrastructure areas was undertaken generally in accordance with 'ISO 14010 - Guidelines and General Principles for Environmental Auditing', and 'ISO 14011 - Procedures for Environmental Auditing'. The field inspection was conducted between 17-18 December 2019 by Hansen Bailey and 28 November 2019 by rehabilitation specialists (Clayton Richards from MineSoils). Photos from the field inspection are shown in **Appendix B**.

An Opening and Closing Meeting was held at site with the Senior Management Team and Environmental staff in attendance. The Audit Itinerary is presented in **Appendix C**.

1.2 REPORT STRUCTURE

Section 1 provides an introduction, background, describes the audit timeframes and provides a guide to the structure of the report;

Section 2 describes approved operations detailed in the EA and modification documents which support PA 09_0178 (MOD2) and provides a site description and layout of Baal Bone Colliery. This section also provides an overview of operations compared to actual operations;

Section 3 outlines audit requirements and applicable auditing guidelines;

Section 4 summarises recommendations made during the previous IEA (2016);

Section 5 outlines the identified non-compliances and the status against PA 09_0178 (MOD2) and its supporting documents, modifications and other licences and approvals including a risk assessment in accordance with the '*Independent Audit Guideline, October 2015*' (Audit Guidelines) (DPIE, 2015);

Section 6 lists required management plans, programs and strategies; and

Section 7 summarises key recommendations from the IEA.

2 SITE DESCRIPTION

2.1 APPROVED OPERATIONS

Baal Bone Colliery is located approximately 25 kilometres (km) northwest of Lithgow, near the township of Cullen Bullen in New South Wales.

Project Approval (PA) 09_0178 for the Baal Bone Colliery was granted on 14 January 2011 under Part 3A of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act) for the following:

- Continued underground mining to extract up to 2.8 million tonnes per annum (Mtpa) from the Lithgow Coal Seam in longwalls 29-31;
- Continued operation of surface infrastructure including the Coal Handling and Processing Plant (CHPP), conveyors, product stockpiles, train loading infrastructure, water management system and reject emplacement areas;
- Continued saleable coal production of up to 2 Mtpa;
- Continued transport of product coal by rail and road; and
- Site rehabilitation and mine close.

PA 09_0178 has since been modified on two occasions as described in the sections below.

2.1.1 Modification 1 – Extension of time

Modification (MOD)1 was determined on 11 February 2015 and allowed a five year extension of time for extraction of the remaining remnant coal for an additional five years until 31 December 2019. MOD1 also approved the PA 09_0178 condition relating to independent environmental auditing of the site, amending the required audit review period from two years to three years.

2.1.2 Modification 2 – Ben Bullen Creek Rehabilitation

MOD2 was determined on 1 December 2015. This Modification allowed for the amendment of the final landform for the site and associated PA 09_0178 conditions to enable the retention of Ben Bullen Creek in its current alignment through 'Reach 2'.

2.2 OPERATIONS – AUDIT PERIOD

2.2.1 Mining Activities

Baal Bone Colliery ceased mining and underground operations and entered into the Care and Maintenance phase in September 2011. The site remained in Care and Maintenance during the audit period.

2.2.2 Mining Operations Plan

The Mining Operations Plan (MOP) relevant to the IEA period is the approved “*Baal Bone Colliery Care and Maintenance MOP February 2016 – December 2019*” (C&M MOP). This MOP also contains the detail of the Rehabilitation Management Plan as required under PA 09_0178.

In preparation for Mine Closure, Baal Bone prepared a draft “*Mine Closure MOP August 2019 – December 2025*” (draft Mine Closure MOP). At the time of the IEA, the draft Mine Closure MOP was not yet approved.

The draft Mine Closure MOP was prepared in accordance with the 'ESG3-MOP Guidelines' (DRE, September 2013) to satisfy Condition 2 of a Notice Under Section 240(1)(d) of the *Mining Act 1992* which also required Glencore to prepare a Project Closure Plan (PCP) to address the rehabilitation of all mining activity at Baal Bone.

3 AUDIT REQUIREMENTS

3.1 PROJECT APPROVAL

This assessment and subsequent report have been compiled pursuant to Schedule 5 Conditions 7 and 8 of PA 09_0178 (MOD2). Each requirement is listed in **Table 1**, along with where each is addressed in this report.

Table 1
PA 09_0178 Audit Requirements

Description	Where Addressed
7. By 31 December 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission at its own cost an Independent Environmental Audit of the project. This audit must:	This audit
(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;	Appendix D
(b) include consultation with the relevant agencies;	Section 3.3 and Appendix A
(c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);	Section 5
(d) review the adequacy of strategies, plans or programs required under these approvals, and if appropriate;	Section 6
(e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals; and	Section 7
(f) be completed within 2 months of the approval of the audit team.	This audit
Note: <ul style="list-style-type: none"> <i>This audit team must be led by a suitably qualified auditor and include experts in any field specified by the Secretary.</i> 	Appendix A, D
8. Within 6 weeks of the completing of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.	Glencore Responsibility

3.2 AUDIT GUIDELINES

This audit report has also been prepared in accordance with the '*Independent Audit Guideline, October 2015*' (Audit Guidelines) (DP&E, 2015). **Table 2** lists key requirements from the Audit Guidelines, the relevant Section of the Guidelines which references the requirement and indicates where each is addressed in this report.

Table 2
Audit Guidelines Requirements

Section	Description	Where Addressed
2	Assess the operator's compliance with the requirements of regulatory approvals, including (as applicable): <ul style="list-style-type: none"> • The Development Consent; • The Environment Protection Licence; • The Mining Lease; and • Water licences and approvals. 	Section 5 and Appendix E
2, 3	The scope of the audit and the audit team (including any technical specialists) to be determined by the lead regulator.	Section 1.1
3.3	The auditor team must be independent of the development being audited and audit findings must be based on verifiable evidence.	Appendix D and Section 5
4.1	The compliance status of each requirement or commitment should be assessed in accordance with the compliance assessment criteria and risk levels in the audit guidelines.	Section 5
4.2	Consultation with key regulatory agencies prior to commencement of the audit site inspection.	Section 3.3
5.1	The audit outcomes to be documented in a thorough, accessible and accurate audit report that is written in a neutral tone reflecting facts gathered by the audit team.	This IEA Report
5.1	The audit report should include the following sections: <ul style="list-style-type: none"> • Introduction, providing a brief overview of the development, audit scope and objectives; • Methodology, describing the audit team, methodology applied, document reviews, site inspections and interviews; • Audit findings, including documentation of consultation, response to actions from the previous audit, assessment of compliance status against the conditions and commitments in relevant documents and a discussion of environmental incidents and performance; and • Recommendations, identifying any opportunities for improvement identified in the audit. 	This IEA Report
5.2	Audit reports submitted to the lead regulator must be certified by the lead auditor on an attached 'Independent Audit Submission Form'	Appendix D
5.3	Copies of the final audit report to be distributed to regulatory agencies within two weeks of finalisation and placed on the development's website.	Glencore Responsibility Appendix A
6	The operator of the development to respond to the lead regulator responding to the audit findings and recommendations with an action plan within four weeks of receiving the final audit report.	Glencore Responsibility

Table 3 reproduces the “risk levels” from Section 4.1 of the Audit Guidelines which were attributed to the non-compliances identified during the audit period as described in **Section 5**.

**Table 3
 Audit Guidelines Risk Levels for Non-Compliances**

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

3.3 CONSULTATION WITH RELEVANT AGENCIES

During the preparation for this IEA, input was sought from regulatory agencies to confirm any areas of compliance or environmental management at Baal Bone Colliery that should be a particular focus.

The following agencies were approached directly by HB for input as part of the scoping phase of this IEA:

- Department of Planning, Industry and Environment (DPIE);
- DPIE – Water;
- DPIE - Resources and Energy;
- Environment and Protection Authority (EPA);
- Baal Bone Community Consultative Committee (CCC); and
- Lithgow City Council (LCC).

Where issues were raised during consultation, these are listed in **Table 4** with a section on where each has been addressed. No response was received from DPI-Water or the DoI - Resources Regulator.

Table 4
Agency Requirements and Where Addressed

Ref	Key Requirement	Where Addressed
DPIE		
1.	The Audit needs to ensure that it addresses all the requirements outlined in Schedule 5 Condition 7 of Project Approval (PA) 09_0178.	Table 1
2.	Could you please address the following aspects as part of your review: - Ben Bullen Creek Rehabilitation Project - Groundwater monitoring - Rehabilitation inspections and monitoring”	Appendix E -Sch 3 Cond 24 & 25 -Sch 3 Cond 21 -Sch 3 Cond 24 & 25
EPA		
3.	The Environment Protection Authority has no specific environmental areas requiring a particular focus on as part of the IEA to be conducted at the Baal Bone Colliery.	N/A
CCC		
4.	Disappointed that the mine is closing and would like to see the mine remain open to provide employment for locals.	N/A
LCC		
5.	Council does not wish to add anything further to be reviewed at this time.	N/A

4 PREVIOUS AUDIT RECOMMENDATIONS & STATUS

The non-compliances and key recommendations from the 2016 IEA and the status of each at the time of this audit are summarised in **Table 5**.

Table 5
Status of 2016 IEA Recommendations

Ref	Recommendation	Status	Evidence
2016 IEA RECOMMENDATIONS FOR NON-COMPLIANCES			
PA 09_0178 (MOD2)			
1.	Sch 3 Cond 12 - Ensure that air quality is assessed for future proposed rehabilitation activities. Implement necessary air quality controls.	Compliant	See response to Sch 3 Cond 12 in App E.
2.	Sch 3 Cond 22 - Ensure consistency with the TARPSs between the Surface and Groundwater Response Plan and the Annual Review. Management and reporting as per the TARPs.	Compliant	See response to Sch 3 Cond 22 in App E.
3.	Sch 5 Cond 1 - Additional details regarding dispute resolution for the projects. A cross referencing table should be developed in the EMS outlining where conditions/requirements have been met in the EMS document.	Compliant	See response to Sch 5 Cond 1 in App E.
4.	Sch 5 Cond 2 - All management plans required under the Project Approval are to have input or be prepared by a qualified expert who has been endorsed by the Secretary of the DP&E. Depending on the management plan the qualified expert could be either a specialist or a qualified Glencore employee. All management plans should have contingency plans as per sub condition e).	Compliant	Viewed endorsement letter from Secretary dated 24/1/18 stating specialists were approved to prepare and update management plans. Recommend for closure, re-approve specialists where required.
5.	Sch 5 Cond 3 - Next Annual Review is to be prepared in accordance with the DP&E guidelines. Additional detail required to assess compliance against the MOP (see recommendation from Condition 5 - MPL 261). Section 8 of the Annual Review Guidelines outlines the requirement for a comparison of reporting during the Annual Review period, including a summary of performance against the rehabilitation targets in the MOP. Include a comparison against key rehabilitation criteria from the MOP in the Annual Review to meet this condition.	Compliant	See response to See Sch 5 Cond 3 and CCL 749 Cond 6 of App E.

Ref	Recommendation	Status	Evidence
6.	Sch 5 Cond 4 - Assess the condition in the Annual Review every year and show that Management Plans have been reviewed. There may not be a requirement to update the management plans annually, however there should be a process documented to meet this condition and identify potential areas of annual improvement. This could include the development of a Management Review Form (component of the Environmental Management System), which would assess key changes to the Environmental Management System every year.	Compliant	Annual Management Plan review documented in Section 9 of the Annual Review. See discussion on management plan updates at condition x.
7.	Sch 5 Cond 5 - Ensure any incidents or exceedances are outlined to the DP&E and EPA and any other government agency as per this condition.	Compliant	See response to Sch 5 Cond 5 in App E.
MPL 261			
8.	Condition 5 - For the next Annual Review the current Annual Review Guidelines should be used. Section 8 of the Annual Review Guidelines outlines the requirement for a comparison of reporting during the Annual Review period, including a summary of performance against the rehabilitation targets in the MOP. Include a comparison against key rehabilitation criteria from the MOP in the Annual Review to meet this condition.	Compliant	See response to See Sch 5 Cond 3 and CCL 749 Cond 6 of App E.
Mining Lease ML (1302), Coal Lease (CL) 391 and Mining Lease (ML) 1607			
9.	Include a comparison against key rehabilitation criteria from the MOP in the Annual Review to meet this condition.	Compliant	See response to See Sch 5 Cond 3 and CCL 749 Cond 6 of App E.
2016 IEA CONTINUAL IMPROVEMENT RECOMMENDATIONS			
10.	6.1a) There is a requirement to continue rehabilitation maintenance in established rehabilitation as well as areas recently rehabilitated. The REA5 area which currently is dominated by weeds will need additional weed management if native species do not start to compete against the exotic species. If weed cover is still very high in April 2017, SLR recommends further weed management work. Where possible, seed for rehabilitation activities should be sourced from site or the local area.	Compliant	See response to Sch 3 Cond 24 in App E. Rehabilitation incorporated into final landform design

Ref	Recommendation	Status	Evidence
11.	6.1b) SLR noted during the site inspection that some topsoil stockpiles are very close to the 3 metre height requirement. SLR recommends that these stockpiles are seeded as material appears to have high erodibility and is dispersive. This material should also be tested prior to use in rehabilitation, with other ameliorants possibly required to treat the topsoil stockpiles.	Compliant	As stated in the 2016 IEA Action Plan, it is unnecessary to seed this material as it will be used for rehabilitation. The 2016 IEA Action Plan was approved by DPE 18/5/17. Recommend stockpiles be seeded as per this recommendation during rehabilitation period if not used within the next three months.
12.	6.2a) Additional detail should be included in the Water Management Plan (WMP) including a figure of the water management system. A delineation between the dirty water management system and clean water management should be outlined in the figure and further defined within the management plan.	Compliant	As stated in the 2016 IEA Action Plan, there is no distinct clean water management system at Baal Bone. All Water on site captured and treated in a similar way (i.e. all water is dirty water). The 2016 IEA Action Plan was approved by DPE 18/5/17.
13.	6.2b) Additional water management could be completed in the area of REA5. Currently water leaves the REA5 area, with most of the water draining into a sediment dam. Eventually this water leaves site via the overshoot weir after traversing the length of Ben Bullen creek on site, including passing through the overshoot dam. SLR recommends making defined drainage line/bank which is long-term stable (eg. shaped and grassed) which flows into the sediment dam. This would assist in reducing sediment flowing into Ben Bullen Creek. It was noted that the haybales which are used for erosion and sediment control have been installed incorrectly and should be installed as per the requirement of the Blue Book.	Compliant	Viewed photos of work around REA5. Hay bales were removed and replaced with a rock channel structure (Appendix B Plate 1 and Plate 2).
14.	6.3a) For future channel stability and stream health monitoring, completion criteria from the Ben Bullen Creek Rehabilitation Plan and the MOP should be used. Review whether these criteria are also relevant for other creeks including monitoring of Cox's River, Baal Bone Creek and Jews Creek. Additional details of monitoring should be included in the Annual Review.	Compliant	Addressed in Section 19.6 of the PCP.

Ref	Recommendation	Status	Evidence
15.	6.3b) SLR recommends that Baal Bone develop a schedule outlining proposed rehabilitation activities for Ben Bullen Creek and provide these details in the Annual Review. Baal Bone to report against these proposed activities in subsequent Annual Reviews.	Compliant	See response to Sch 3 Cond 25A in App E.
16.	6.4a) Subsidence repair of the shallow cover area is required. Additional detail should be provided for subsidence repair based on the issues outlined in the risk assessment. This should include proposed dimensions of impacts eg. length of cracks, area covered, proposed volume to fill cracks. The Review of Environmental Factors (REF) which is to be submitted in 2017 should outline all proposed subsidence remediation areas as per the agreement with DRE and Forests NSW. Subsidence impacts should be repaired unless repair would cause further damage within the area. The cost of these repairs should be calculated prior to commencing works and the rehabilitation cost estimate updated based on these estimated costs. All repairs should be completed in consultation with DRE and Forests NSW.	Compliant	See response to Sch 3 Cond 1 in App E.
17.	6.4d) SLR recommends the subsidence inspections in the future could be designed to assess against performance measures in the Project Approval table (Schedule 3 Condition 1). Some may not be applicable for the site being in care and maintenance, however a review of results against these conditions would assist in determining any unexpected impacts. Additional detail is required in subsidence inspections such as improved figures differentiating between high, low and medium risk subsidence areas.	Compliant	As stated in the 2016 IEA Action Plan, no further subsidence inspections were undertaken as all subsidence areas have been inspected and remediated. The 2016 IEA Action Plan was approved by DPE 18/5/17. This is discussed further in Sch 3 Cond 1, Cond 24 and Cond 25 of App E.
18.	6.4e) Additional detail regarding subsidence impacts and remediation should be outlined within the Annual Review.	Compliant	See Section 7.2.1 of the 2018 Annual Review.
19.	6.5) In future noise reports should identify the source of the meteorological data utilised to confirm the occurrence of temperature inversion conditions.	Compliant	Viewed June 2019 Global Acoustics Annual Noise Monitoring Report which includes temperature inversion conditions.
20.	6.6) There is an opportunity to remove some unwanted equipment on site. This should be identified in an equipment register.	Compliant	Ongoing and part of Mine Closure. Discussed in Section 1.3.4 of the PCP.

Ref	Recommendation	Status	Evidence
21.	6.7a) All management plans should include a table cross referencing the requirements in Schedule 5 Condition 2 of the Project Approval, with the relevant sections of management plans.	Not Compliant	As stated in the 2016 IEA Action Plan, Baal Bone would include this recommendation in the next review of the management plans. The 2018/2019 management plans (11 of 11) do not include a tabulated cross reference of this condition.
22.	6.7b) SLR recommends that one document should be prepared to cover the overall Water Management Plan, with chapters for each component required under Schedule 3 Condition 16 - 22. This would reduce the repetition for each of the component plans required under the overall Water Management Plan. Ensure consultation with NSW Fisheries for the latest update of Water Management Plan.	Compliant	As stated in the 2016 IEA Action Plan, Baal Bone would “ <i>consider amalgamation of Water Management Plan into one document</i> ”. Baal Bone has indicated that an overall Water Management Plan for Schedule 3 Condition 16-22 is not required (EF pers comms).
23.	6.7c) The copy of the Biodiversity Management Plan should be provided to OEH.	Not Compliant	As stated in the 2016 IEA Action Plan, Baal Bone would provide a copy of the Biodiversity Management Plan to OEH. No record of correspondence viewed.
24.	6.8) SLR recommends sending off a copy of the MOP to OEH, DPI Water and Council as they may not currently have a copy of the document. This relates to Schedule 3 Condition 25 of the Project Approval.	Compliant	Viewed correspondence. C&M MOP forwarded 22/5/17.

5 NON-COMPLIANCES AGAINST APPROVALS & LICENCES

This section provides a discussion on the identified non-compliances and status against PA 09_0178 (MOD2) and other licences approvals available for review at the time of the IEA.

Table A of **Appendix E** provides a complete tabulated list of conditions of PA 09_0178 (MOD2) with the compliance status and comments against each. Table C in **Appendix E** provides a list of the other licences and approvals assessed as part of this IEA, with the compliance status and comments against each.

A summary of the non-compliances against each document is summarised below in **Table 6**. Recommendations arising from the non-compliances are shown in **Section 7**.

Table 6
Non-Compliances Identified

Ref	Non-Compliance	Risk
PA 09_0178 (MOD2)		
Sch 2 Cond 11	<ul style="list-style-type: none"> Although a detailed JSA was available which references 'MDG6001 Guidelines for permanent filling and capping of surface entries to coal seams' it does not reference AS 2601-2001. 	Administration
Sch 3 Cond 21	<ul style="list-style-type: none"> Ongoing exceedance of Water Quality Trigger Level for dissolved zinc (0.175mg/L) at BBPB3. No evidence was available to demonstrate that further notifications have been provided to the relevant agencies or no other corrective actions undertaken in relation to the ongoing exceedance of zinc levels. 	Low
Sch 3 Cond 22	<ul style="list-style-type: none"> Sep/Nov 2017 - "Coxs River Swamp Groundwater Level, failure to undertake two monthly water level monitoring" (Section 10, 2017 Annual Review). January 2018 - "Coxs River Swamp: failure to take groundwater chemistry sample at BBPB1 in January 2018 in accordance with Groundwater Monitoring Plan" (Section 10, 2018 Annual Review). 	Low
Environment Protection Licence (EPL) 765		
P1.3	<ul style="list-style-type: none"> Although current monitoring plan appears consistent with the current EPL text, "2008 Licenced Monitoring Sites – Drawing 2" dated 10/01/2008 does not show EPL monitoring sites. 	Administrative
Consolidated Coal Lease (CCL) 749		
Cond 33	<ul style="list-style-type: none"> Consultation with the District Soil Conservationist Lithgow has not occurred at a minimum of six-monthly intervals. Glencore advises that an action has been added to CMO for this to occur on a six-monthly basis. 	Low

6 MANAGEMENT PLANS, PROGRAMS AND STRATEGIES

6.1 OVERVIEW

PA 09_0178 (MOD2) requires preparation of management plans and strategies. All currently approved management plans developed for Baal Bone Colliery were reviewed during this IEA including those prepared to address the requirements of PA 09_0178 (MOD2). Management plans that were reviewed during this IEA included:

- Environmental Management Strategy (EMS) (July, 2019);
- Subsidence Management Plan (SMP) (Expired, see discussion in Sch 3 Cond 1);
- Noise Management Plan (July, 2019);
- Road Haulage Management Plan (Not approved, see discussion in Sch 3 Cond 8);
- Air Quality Management Plan (July, 2019);
- Water Management Plan (July, 2019);
- Surface Water Monitoring Plan (July, 2019);
- Groundwater Monitoring Plan (July, 2019);
- Surface and Groundwater Response Plan (July, 2019);
- Erosion and Sediment Control Plan (July, 2019);
- Biodiversity and Land Management Plan (August, 2019);
- Ben Bullen Creek Rehabilitation Plan (draft as submitted to regulatory agencies in December 2019);
- Waste Management Plan (July, 2019);
- Aboriginal Cultural Heritage Management Plan (ACHMP) (August, 2019);
- Mining Operations Plan (MOP) 2016 – 2019 (latest amendment as approved in September 2019) (C&M MOP);
- Adit Fill-in Management Plan (March, 2017); and
- Pollution Incident Response Management Plan (September, 2019).

The status of each plan and any relevant recommendations in relation to each is provided in **Appendix E** at the relevant condition.

The Environment Protection Licence (EPL) 765 as held for Baal Bone Colliery during the audit period was also reviewed.

7 AUDIT RECOMMENDATIONS

Table 7 includes a consolidated list of recommendations relating to non-compliances identified during this IEA (as shown in **Table 6**). There are no outstanding actions for non-compliances from the 2016 IEA.

Table 7 also includes recommendations that are related to continuous improvement.

Table 7
Audit Recommendations

Ref	Description
NON-COMPLIANCE RECOMMENDATIONS	
Previous IEA	
	No outstanding actions from recommendations.
PA 09_0178 (MOD2)	
Sch 2 Cond 11	Include reference to AS 2601-2001 Standard and summary of requirements for demolition in relevant documentation for Mine Closure phase.
Sch 3 Cond 21	Revisit the zinc trigger levels for BBPB3 in consultation with DPIE for Mine Closure phase.
Environment Protection Licence (EPL) 765	
P1.3	Although current monitoring plan appears consistent with the current EPL text, at next EPL Variation, update 2012 figure for 2019/2020 plan.
Consolidated Coal Lease (CCL 749)	
Cond 33	DSCL is consulted six-monthly for site-wide rehabilitation or written exemption sought from DRG if it can be justified.
CONTINUAL IMPROVEMENT RECOMMENDATIONS	
PA 09_0178 (MOD2)	
Sch 2 Cond 11	Add a note in future Annual Reviews regarding demolition undertaken in the period.
Sch 3 Cond 1	Create a single register for all known existing subsidence repairs and a clear process for sign-off of each occasion and actions to be documented to completion.
Sch 3 Cond 10	Consider reduction in the number of air quality monitoring points during Mine Closure. Potential to relocate monitor DM2 to be representative of closest residence and remove others.

Ref	Description
Sch 3 Cond 16	<ul style="list-style-type: none"> • “By 31 December 2019, the licensee must cease all mine water discharge from licenced discharge point 11 (LDP0011)”. Update water balance in the Water Management Plan to reflect the change in discharge regime. • It is understood that the groundwater model will be updated in early 2020 to incorporate the abovementioned change in discharge. Recommend that following receipt of 2020 report and confirmation of any water take or ongoing discharge required (considered unlikely), confirmation that no security and relinquishment of a relevant groundwater licences under the <i>Water Management Act 2000</i> is required. • Although the Water Management Plan was approved, recommend that for future updates where consultation with other regulators is required, that regulators are offered an opportunity to comment for a duration of at least 30 days prior to submission to DPIE for approval.
Sch 3 Cond 19	<ul style="list-style-type: none"> • Minesoils recommends the site forms a register of water management structures with locations shown on Geographic Information Systems (GIS) and linked to original design drawings and maintenance inspections. This should include drop structures, banks, dams, diversion drains and Ben Bullen creek diversion. • The site visited identified an area requiring bunding between Jews and Baal Bone Creek in the Northern Rehabilitation Area (Plate 10). Recommend this area be urgently reviewed and bunded as required.
Sch 3 Cond 23	<ul style="list-style-type: none"> • Include a discussion within relevant documentation on bushfire management, specifically in and/or near the Wolgan Escarpment.
Sch 3 Cond 24	<ul style="list-style-type: none"> • Surface water structures including banks, drop structures and dams need to be inspected and any failures or high-risk items should be repaired. • It was noted on Thistle Hill, one contour drain was not repaired following a track to the top was installed to bring in and place soil material on the top section. This drain requires immediate attention so water can be transferred to the designed drop structure (Plate 4). • Weeds were evident onsite including blackberry and. It is understood weed maintenance occurs regularly onsite and should continue, an especially high risk period will be following decent rain. • REA5 showed two areas of complete failure. Minesoils recommends soil tests for Electrical Conductivity (EC), pH, Cation Exchange Capacity (CEC) and Exchangeable Sodium Percentage. It appears these two areas have received and pooled saline water from irrigation which has resulted in an area too salty for most vegetation. Some simple soil tests will indicate if this is true. In the event salinity is the limiting factor it is recommended to either leach the salts through the primary root zone via natural rainfall (slow) or irrigate with non saline water. Alternatively, bring in additional material suitable for growth medium, subject to relevant approvals. • REA5: The remainder of REA5 showed no acacia species established (Plate 6). This is believed to have occurred due to the tree seed not being treated prior to sowing. Most acacia species require a mechanism to break the seedcoat such as boiling, scarifying or low heat fire. It is recommended that low depth (<300mm surface ripping be strategically undertaken to avoid areas already establishing with Eucalypts. Additional seed mix (especially Acacia species) should then be treated, brought in and

Ref	Description
	<p>sown in the newly ripped areas. Recommended REA 5 repair mix includes Capertee Stringybark (as per SoC 31).</p> <ul style="list-style-type: none"> Overall the rehabilitation is establishing adequately in most areas (Plate 5,7), however recommend additional intervention is required to meet target species composition (especially the lower storey species) within a timeframe suitable for lease relinquishment. Recommend that the stockpiles identified in the 2016 IEA (Ref 6.1b of the 2016 IEA Action Plan) be seeded as per 2016 IEA recommendation during rehabilitation / closure period if not used within three months.
<p>Sch 3 Cond 31</p>	<ul style="list-style-type: none"> Consistent with previous IEA recommendation, site inspection reviewed significant capacity for ongoing scrap steel recycling and general waste clean-up which should be continued as part of closure, as Glencore indicated is proposed (Plate 15 and Plate 16).
<p>Sch 5 Cond 2</p>	<ul style="list-style-type: none"> Recommend for closure, re-approve specialists where required. Consideration of combining all relevant management plans from this consent into single, reduced Closure Management Plan relevant to closure (Noise, Air Quality, Aboriginal Cultural Heritage, Biodiversity and Land Management, Rehabilitation, Erosion and Sediment Control, Groundwater Monitoring, Surface Water Monitoring, Waste and Water, Road Haulage) (with approval from DPIE) and/or include single document as appendix to draft Mine Closure MOP. In management plan update: <ul style="list-style-type: none"> Tabulate condition showing where each point is addressed; Ensure that all agencies are consulted with during preparation of management plan; and All technical specialists, where required by conditions of consent to be approved by the Secretary.
<p>Sch 5 Cond 3</p>	<ul style="list-style-type: none"> Consider request to DPIE to reduce the content of the Annual Review commensurate with closure status. b) replace “comprehensive” with “relevant” and not address i to iii which hare not included in the EA. d and e) not address as trends during operations cannot be compared to trends during closure.
Consolidated Coal Lease (CCL) 749	
<p>Cond 5</p>	<ul style="list-style-type: none"> Going forward, ensure the Domain’s listed table in Section 7.4.2 of the Annual Review correlate to Section 6 of the draft Closure MOP.
<p>Cond 32</p>	<ul style="list-style-type: none"> Warragamba Outer Catchment Area be shown on a draft Closure MOP figure to ensure that work in relation to rehabilitation is completed before termination of the authority.

Ref	Description
Previous IEA Recommendations	
21	6.7a) Recommend at next review, that all management plans should include a table cross referencing the requirements in Schedule 5 Condition 2 of the Project Approval, with the relevant sections of management plans, consistent with previous audit recommendation.
23	6.7c) The copy of the Biodiversity Management Plan should be provided to OEH for consultation.

* * *

for
HANSEN BAILEY



Theresa Folpp
Environmental Scientist



Dianne Munro
Principal

APPENDIX A
Regulatory Correspondence



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

Mr Mark Bulkeley
Operations Manager – Baal Bone Colliery
The Wallerawang Collieries Limited
Castlereagh Highway
CULLEN BULLEN NSW 2790

Dear Mr Bulkeley

**Baal Bone Coal Project (MP 09_0178)
Independent Environmental Audit 2019**

I refer to your letter email of 21 October 2019 seeking approval of the audit team for the upcoming Baal Bone Coal Project Independent Environmental Audit, in accordance with Schedule 5, Condition 7 of the project approval MP 09_0178, as modified (the approval).

Having considered the qualifications and experience of the Hansen Bailey audit team, namely;

- Dianne Munro – lead auditor;
- Theresa Folpp – assistant auditor; and
- Clayton Richards – technical specialist, water and rehabilitation,

the Secretary endorses the appointment of this team to undertake the audit in accordance with Schedule 5, Condition 7 of the approval. This approval is conditional on the audit team being independent of the development.

The audit is to be conducted in accordance with AS/NZS ISO 19011 Australian/New Zealand Standard: Guidelines for quality and/or environmental management systems auditing and you may wish to consider the Independent Audit Guideline dated October 2015. A copy of this guideline can be located at <http://www.planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/Integrated-Mining-Policy>.

The audit report is to include the following:

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

Within six weeks of the completion of the audit, or as otherwise agreed by the Secretary, Wallerawang Collieries is to submit a copy of the audit report to the Secretary together with its response to any recommendations contained in the audit report and a timetable to implement the recommendations.

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

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

Yours sincerely

A handwritten signature in black ink, followed by the date 29/10/19 written in the same ink.

Georgia Dragicevic
A/Team Leader Compliance
as nominee of the Secretary

Sonya Eather

From: Jennifer Rowe <Jennifer.Rowe@planning.nsw.gov.au>
Sent: Friday, 29 November 2019 9:09 AM
To: Theresa Folpp
Subject: Baal Bone Independent Environmental Audit - Consultation with Regulators Request

To Theresa

Thank you for the email. In relation to your request the Department provides the following in response.

The Audit needs to ensure that it addresses all the requirements outlined in Schedule 5 Condition 7 of Project Approval (PA) 09_0178.

Could you please address the following aspects as part of your review:

- Ben Bullen Creek Rehabilitation Project
- Groundwater monitoring
- Rehabilitation inspections and monitoring

Lastly if are submitting any future compliance documents or requests as required under the conditions of consent or approval, please note that the Department is no longer accepting lodgement via compliance@planning.nsw.gov.au.

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

Should you have any further questions, please don't hesitate to contact me on the details below.

Kind regards,

Jennifer Rowe

Senior Compliance Officer

Compliance | Department of Planning, Industry and Environment

T 02 4247 1851 | **M** 0488 988 641 | **E** jennifer.rowe@planning.nsw.gov.au

PO Box 5475 | Level 2/84 Crown Street Wollongong, NSW 2500

www.dpie.nsw.gov.au



**Planning,
Industry &
Environment**

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

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

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

From: Theresa Folpp <TFolpp@hansenbailey.com.au>
Sent: Monday, 25 November 2019 10:16 AM
To: DPE PSVC Compliance Mailbox <compliance@planning.nsw.gov.au>
Cc: Georgia Dragicevic <Georgia.Dragicevic@planning.nsw.gov.au>; Dianne Munro <dmunro@hansenbailey.com.au>
Subject: Baal Bone Independent Environmental Audit - Consultation with Regulators Request

Good morning,

Hansen Bailey has been approved by the Department of Planning, Industry & Environment to conduct the 2019 Independent Environmental Audit (IEA) for the Baal Bone Colliery in accordance with Schedule 5 Condition 7 of Project Approval (PA) 09_0178 which states:

“By 31 December 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission at its own cost an Independent

Environmental Audit of the project. This audit must:

- (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;*
- (b) include consultation with the relevant agencies;*
- (c) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);*
- (d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate;*
- (e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals; and*
- (f) be completed within 2 months of the approval of the audit team.*

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

In accordance with condition (7b), as part of consultation with key regulators could you please provide any request you have in relation to any specific environmental areas you require any particular focus on as part of the IEA.

Elizabeth Fishpool at Glencore has kindly provided your email address to facilitate this email.

If you could respond by **27 November**, it would be appreciated. Please do not hesitate to call to discuss.

Kind Regards,
Theresa

Theresa Folpp
Environmental Scientist

HANSEN BAILEY
Tel: (02) 6575 2000
Email : tfolpp@hansenbailey.com.au

Please note that our office will be closed over the Christmas period from 21-12-19 to 05-01-19 (inclusive) and will re-open at 8.00am on 06-01-20. The staff of Hansen Bailey wish you a happy and safe holiday season!

Sonya Eather

From: Dianne Munro
Sent: Monday, 25 November 2019 9:49 AM
To: Theresa Folpp
Subject: FW: Baal Bone Independent Environmental Audit - Consultation with Regulators Request. Attention: Matthew Prince

From: Matthew Prince <Matthew.Prince@epa.nsw.gov.au>
Sent: Monday, 11 November 2019 12:51 PM
To: Dianne Munro <DMunro@hansenbailey.com.au>
Cc: EPA RSD Central West Mailbox <central.west@epa.nsw.gov.au>
Subject: RE: Baal Bone Independent Environmental Audit - Consultation with Regulators Request. Attention: Matthew Prince

Hi Dianne,

Thank you for your email.

The Environment Protection Authority has no specific environmental areas requiring a particular focus on as part of the IEA to be conducted at the Baal Bone Colliery.

Regards

Matthew

Matthew Prince

Regional Operations Officer

South West Branch, NSW Environment Protection Authority

p) +61 2 6883 5354 f) +61 2 6883 5330

matthew.prince@epa.nsw.gov.au www.epa.nsw.gov.au [@EPA_NSW](https://twitter.com/EPA_NSW)

Report pollution and environmental incidents 131 555 (NSW only) or +61 2 9995 5555



Please send all official electronic correspondence to central.west@epa.nsw.gov.au

From: Dianne Munro <DMunro@hansenbailey.com.au>
Sent: Friday, 1 November 2019 11:36 AM
To: EPA RSD Central West Mailbox <central.west@epa.nsw.gov.au>
Cc: Theresa Folpp <TFolpp@hansenbailey.com.au>
Subject: Baal Bone Independent Environmental Audit - Consultation with Regulators Request. Attention: Matthew Prince

Good morning Matthew,

Hansen Bailey has been approved by the Department of Planning, Industry & Environment to conduct the 2019 Independent Environmental Audit (IEA) for the Baal Bone Colliery in accordance with Schedule 5 Condition 7 of Project Approval (PA) 09_0178 which states:

“By 31 December 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission at its own cost an Independent Environmental Audit of the project. This audit must:

- (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;*
- (b) include consultation with the relevant agencies;*
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- (e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals; and*
- (f) be completed within 2 months of the approval of the audit team.*

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

In accordance with condition (7b), as part of consultation with key regulators could you please provide any request you have in relation to any specific environmental areas you require any particular focus on as part of the IEA.

Elizabeth Fishpool at Glencore has kindly provided your email address to facilitate this email.

If you could respond by **15 November**, it would be appreciated. Please do not hesitate to call to discuss.

Kind Regards,
Dianne.

Dianne Munro
Principal Environmental Scientist
MEnvLaw BSc

HANSEN BAILEY
Tel: (02) 6575 2000
Mobile: 0428 772 566
Email: dmunro@hansenbailey.com.au

This email is intended for the addressee(s) named and may contain confidential and/or privileged information. If you are not the intended recipient, please notify the sender and then delete it immediately. Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the Environment Protection Authority.

PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

Sonya Eather

From: Paul Cashel <Paul.Cashel@lithgow.nsw.gov.au>
Sent: Thursday, 7 November 2019 2:02 PM
To: Dianne Munro; Jessica Ramsden
Cc: Theresa Folpp; Jim Nichols
Subject: RE: Baal Bone Independent Environmental Audit - Consultation with Regulators Request.

Thank you Dianne,

Council does not wish to add anything further to be reviewed at this time.

Yours faithfully,

Paul Cashel | Development Planning

Economic Development & Environment | [Lithgow City Council](#)
Phone: (02) 6354 9999 | Fax: (02) 6351 4259

From: Dianne Munro [mailto:DMunro@hansenbailey.com.au]
Sent: Friday, 1 November 2019 11:39 AM
To: Jessica Ramsden; Paul Cashel
Cc: Theresa Folpp
Subject: Baal Bone Independent Environmental Audit - Consultation with Regulators Request.

Good morning Jessica and Paul,

Hansen Bailey has been approved by the Department of Planning, Industry & Environment to conduct the 2019 Independent Environmental Audit (IEA) for the **Baal Bone Colliery** in accordance with Schedule 5 Condition 7 of Project Approval (PA) 09_0178 which states:

“By 31 December 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission at its own cost an Independent Environmental Audit of the project. This audit must:

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- (f) be completed within 2 months of the approval of the audit team.*

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

In accordance with condition (7b), as part of consultation with key regulators could you please provide any request you have in relation to any specific environmental areas you require any particular focus on as part of the IEA.

Elizabeth Fishpool at Glencore has kindly provided your email address to facilitate this email.

If you could respond by **15 November**, it would be appreciated. Please do not hesitate to call to discuss.

Kind Regards,
Dianne.

Dianne Munro

Principal Environmental Scientist

MEnvLaw BSc

HANSEN BAILEY

Tel: (02) 6575 2000

Mobile: 0428 772 566

Email: dmunro@hansenbailey.com.au

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Sonya Eather

From: Dianne Munro
Sent: Friday, 1 November 2019 11:38 AM
To: craig.campbell@planning.nsw.gov.au
Cc: Theresa Folpp
Subject: Baal Bone Independent Environmental Audit - Consultation with Regulators Request. Attention: Craig Campbell

Good morning Craig,

Hansen Bailey has been approved by the Department of Planning, Industry & Environment to conduct the 2019 Independent Environmental Audit (IEA) for the **Baal Bone Colliery** in accordance with Schedule 5 Condition 7 of Project Approval (PA) 09_0178 which states:

“By 31 December 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission at its own cost an Independent Environmental Audit of the project. This audit must:

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- (d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate;*
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- (f) be completed within 2 months of the approval of the audit team.*

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

In accordance with condition (7b), as part of consultation with key regulators could you please provide any request you have in relation to any specific environmental areas you require any particular focus on as part of the IEA.

Elizabeth Fishpool at Glencore has kindly provided your email address to facilitate this email.

If you could respond by **15 November**, it would be appreciated. Please do not hesitate to call to discuss.

Kind Regards,
Dianne.

Dianne Munro
Principal Environmental Scientist
MEnvLaw BSc

HANSEN BAILEY
Tel: (02) 6575 2000
Mobile: 0428 772 566
Email: dmunro@hansenbailey.com.au

Sonya Eather

From: Dianne Munro
Sent: Friday, 1 November 2019 11:38 AM
To: tim.baker@water.nsw.gov.au
Cc: Theresa Folpp
Subject: Baal Bone Independent Environmental Audit - Consultation with Regulators Request.

Good morning Tim,

Hansen Bailey has been approved by the Department of Planning, Industry & Environment to conduct the 2019 Independent Environmental Audit (IEA) for the **Baal Bone Colliery** in accordance with Schedule 5 Condition 7 of Project Approval (PA) 09_0178 which states:

“By 31 December 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission at its own cost an Independent Environmental Audit of the project. This audit must:

- (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;*
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- (d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate;*
- (e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals; and*
- (f) be completed within 2 months of the approval of the audit team.*

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

In accordance with condition (7b), as part of consultation with key regulators could you please provide any request you have in relation to any specific environmental areas you require any particular focus on as part of the IEA.

Elizabeth Fishpool at Glencore has kindly provided your email address to facilitate this email.

If you could respond by **15 November**, it would be appreciated. Please do not hesitate to call to discuss.

Kind Regards,
Dianne.

Dianne Munro
Principal Environmental Scientist
MEnvLaw BSc

HANSEN BAILEY
Tel: (02) 6575 2000
Mobile: 0428 772 566
Email: dmunro@hansenbailey.com.au

APPENDIX B
Plates from Site Inspection



Plate 1
Water management built structure upslope of REA5 (Source: Baal Bone)



Plate 2
Water management built structure downslope of REA5 (Source: Baal Bone)



Plate 3
Example of repaired adit entry site (Source: Minesoils, 2020)



Plate 4
Contour drainage bank breached by access track on Thistle Hill, requires repair (Source: Minesoils, 2020)



Plate 5

Vegetation establishment successful and on track towards rehabilitation outcomes on Thistle Hill (Source: Minesoils, 2020)



Plate 6

REA5 bare areas to be repaired – Soil tests and re-sown with treated seed (Source: Minesoils, 2020)



Plate 7

REA5 – Some patches of successful Eucalypt establishment – maintain these areas and reseed unsuccessful areas only. Supplement these areas with treated acacia species.



Plate 8

Surface water structures (permeable rock weirs upstream of mining area) working effectively to reduce high velocity flows on diversion (Source: Minesoils, 2020)



Plate 9

Some areas of rehabilitation require soil erosion repair. (Source: Minesoils, 2020)



Plate 10

Bunding in Northern Rehabilitation area requiring repair



Plate 11
Baal Bone car parking and workshop



Plate 12
Baal Bone CHPP in Care and Maintenance



Plate 13
Licensed Discharge Point (LDP1 / EPA11)



Plate 14
On-site Sewage Treatment Plant



Plate 15
General waste located near the CHPP requiring clean-up



Plate 16
Scrap steel located near Dirty Water Dam requiring re-cycling

APPENDIX C
Audit Itinerary

Baal Bone Colliery
Department of Planning, Industry & Environment
Independent Environmental Audit

ITINERARY

Site Component to be held from
Tuesday, 17 December to Wednesday, 18 December 2019

INVITEES

Mark Bulkeley (MB)		Operations Manager
Mark Munro (MM)		Mine Manager
Elizabeth Fishpool (EF)		Environment and Community Coordinator
Greg Peard (GP)		Environment and Community Coordinator
Dianne Munro (DM)	Hansen Bailey	Lead Auditor
Theresa Folpp (TF)	Hansen Bailey	Assistant Auditor
Clayton Richards (CR)	MineSoils	Rehabilitation and Water Specialist Auditor

DAY 1 – Tuesday, 17 December

Time	Description	Location	Attendees
7 – 7:30am	Opening Meeting <ul style="list-style-type: none"> • Introductions (MB) • IEA scope and purpose (DM) • Confidentiality Arrangements (DM) • IEA process and timing (DM) • Meeting Confirmation (All) 	Boardroom	All
7:30 – 8am	Baal Bone Presentation <ul style="list-style-type: none"> • Overview of current operations by site personnel 	Boardroom	DM, TF, EF, GP
8am – 12pm	Compliance Review <ul style="list-style-type: none"> • Baal Bone Colliery (PA 09_0178) Individual Conditions 	Boardroom	DM, TF, EF, GP
12 – 12:15pm	Lunch	Boardroom	-
12:15 – 3:30pm	Compliance Review (cont.) <ul style="list-style-type: none"> • Individual conditions (cont.) • Actual, EA and MOP Comparison • Closure Plan Review • Supporting Documents (EA) Review (key parameters) • Management Plan Commitments 	Boardroom	DM, TF, EF, GP
3:30 – 4pm	Auditors Revision Day 1	Boardroom	DM, TF


DAY 2 – Wednesday, 18 December

Time	Description	Location	Attendees
7 – 7:15am	Day 2 Overview Meeting <ul style="list-style-type: none"> Confirm arrangements for Day 2 	Boardroom	DM, TF, EF, GP
7:15 – 9:30am	Compliance Review <ul style="list-style-type: none"> EPL Mining Authorities 	Boardroom	DM, TF, EF, GP
9:30am - 12pm	Facility Discussion <ul style="list-style-type: none"> Waste Management Water Management Dust and Noise Management Rehabilitation Training and Communications 	Boardroom	DM, TF, EF, GP
12 – 12:15pm	Lunch	Boardroom	-
12:15 – 2:30pm	Site Inspection <ul style="list-style-type: none"> Mining Areas Main Infrastructure Areas Noise, visual and air quality management Onsite Ecological Offsets Heritage Monitoring Key private neighbours 	Field	DM, TF, EF, GP
2:30 – 3:30pm	Closeout Preparation <ul style="list-style-type: none"> Auditors Revision and Preparation for Closeout Meeting 	Boardroom	DM, TF
3:30-4pm	Close Out Meeting <ul style="list-style-type: none"> Overview of findings Confirmation of outstanding items / issues or documents required Confirm Audit Completion Process 	Boardroom	DM, TF, EF, GP

MINESOILS ITINERARY DAY 1 – Thursday, 28 November

Time	Description	Location	Attendees
8am – 3pm	Rehabilitation Specialist Site Visit <ul style="list-style-type: none"> EIS Conditions – Rehabilitation / Closure Water and tailings management Management Plan/MOP – Rehabilitation / Closure Procedures – Rehabilitation and Closure Field visit of Rehabilitation and Water Management 	Field	CR, EF, GP

APPENDIX D
DPIE Certification Form

Independent Environmental Audit Submission Form	
Project	
Consent No.:	PA 09_0178 (as modified)
Description of Project:	Baal Bone Colliery
Project Address:	Cullen Bullen, NSW 2333
Proponent	Baal Bone Colliery
Proponent Address:	Castlereagh Highway CULLEN BULLEN NSW 2333
Independent Audit	
Title of Audit:	Baal Bone Colliery Independent Environmental Audit
Certificate	<p>I certify that I have prepared the contents of the attached independent audit and to the best of my knowledge:</p> <p>It is in accordance with relevant approval condition(s)</p> <p>I have acted professionally, accurately and in an unbiased manner in conducting the audit</p> <p>I am not related to any owner or operator of the project as a spouse, partner, parent, child, sibling, employer, employee, business partner, in sharing a common employer, or in a contractual arrangement outside the audit</p> <p>I do not have any pecuniary interest in the project, including where there is a reasonable likelihood or expectation of appreciable financial gain or loss to me or to a person to whom I am related</p> <p>Neither I nor my employer have provided consultancy services for the project that were subject to this audit</p> <p>I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the project, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</p>
Signature:	
Name:	Dianne Munro
Address:	6/127-129 John Street, Singleton NSW 2330
Email Address:	dmunro@hansenbailey.com.au
Auditor Certification (Body, No. Grade):	Auditor for Environmental Management, EMS and Compliance Audits. Exemplar Global No. 107622
Date:	27 February 2020

APPENDIX E
Compliance Tables

Table A Baal Bone Project Approval 09_0178

Blue type represents: MOD 1 – January 2015

Red type represents: MOD 2 – December 2015

Condition Number	Condition	Status	Evidence
SCHEDULE 2 ADMINISTRATIVE CONDITIONS			
OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT			
1	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project	Compliant	No evidence of harm to the environment sighted as part of this Independent Environmental Audit (IEA) (including regulatory, complaints or during site visit).
TERMS OF APPROVAL			
2	<p>The Proponent shall carry out the project:</p> <p>(a) generally, in accordance with the EA;</p> <p>(b) generally, in accordance with the general layout of the project and the Statement of Commitments; and</p> <p>(c) in accordance with the conditions of this approval.</p> <p>Notes:</p> <ul style="list-style-type: none"> The general layout of the project is shown in Appendix 2; The statement of commitments is reproduced in Appendix 3. 	Compliant	<p>The most recent Environmental Assessment "Baal Bone Colliery Environmental Assessment" (AECOM, March 2010) (Baal Bone EA) covers LW 29-31. Mining in LW 29-31 was completed in September 2011 (2018 AR, Section 1.1). Coal washing and transportation continued until 2012 (2018 AR, Section 3.4). In 2015, modification one was approved to mine an area known as the "Remnant Areas", however, to date, this has never occurred (EF pers comms). Modification two was granted in 2015 to allow for the rehabilitation of Ben Bullen Creek.</p> <p>The site has been on care and maintenance during the audit period and more recently has commenced closure planning.</p> <p>Closure Commitments</p> <p>Section 13.7 of the Baal Bone EA outlines commitments for Mine Closure Planning and Activities. These included refinement/ finalisation of closure objectives and completion criteria for the preferred final land use; and finalisation of scientifically based Rehabilitation Maintenance and Monitoring Plan utilising the concept of Landscape Function Analysis (LFA). Both of these commitments are addressed in the document "Baal Bone Project Closure Plan v.1" (Baal Bone PCP) Sections 2 and Section 6 respectively. See Sch 3 Cond 25 for a full description of the PCP.</p>
3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	Compliant	<p>Appendix 2 of PA 09_0178 shows the approved layout of Baal Bone.</p> <p>As discussed in Sch 3 Cond 24, the C&M MOP indicated the following:</p> <p><i>28ha of rehabilitation in Northern Void and Northern Rehabilitation domains which may include sealing of adits, stabilisation of the highwall, recontouring of the area and placement of growth medium material (see Plan 3D).</i></p> <p>Only the sealing on entries had been undertaken at the time of the audit with other activities to occur in the closure phase. The stabilisation of highwall, recontouring and placement of growth medium has also not yet occurred.</p> <p>No known inconsistencies were identified during audit period (EF pers comms). No regulatory correspondence sighted describing any inconsistencies.</p> <p>See Table B for Statement of Commitments (SoCs). SoCs relating to closure include SoC 16 Mine Closure and Rehabilitation and SoC 18 and 19 Tailings and Rejects Management.</p>
4	<p>The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:</p> <p>(a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this approval; and</p> <p>(b) the implementation of any actions or measures contained in these documents.</p>	Compliant	<p>Secretary directives are outlined in Section 4 of the 2016, 2017 and 2018 AR. Other directives include the following:</p> <ul style="list-style-type: none"> Email dated 18 April 2018 re: the Coxs River Swamp. Discussed in Sch 3 Cond. Investigation of the Rockfall Event. Discussed in Sch 3 Cond 1.
LIMITS ON APPROVAL			
5	<p>The Proponent may undertake mining operations on the site until 31 December 2019.</p> <p>Note: Under this approval, the Proponent is required to rehabilitate the site and perform additional undertakings to the satisfaction of the Secretary and DRE. Consequently, this approval will continue to apply in all other respects other than the right to conduct mining operations until the site has been properly rehabilitated.</p>	Compliant	<p>Within audit period, however no mining operations occurred in the audit period.</p> <p>From 31 December 2019 activities that are not mining operations (i.e. anything other than coal extraction, processing and transportation activities) may continue to occur.</p>
6	The Proponent shall not extract more than 2.8 million tonnes of ROM coal from the site per calendar year.	Compliant	<p>There was no coal extracted during the audit period (Section 3.4: 2016, 2017 and 2018 Annual Review).</p> <p>Condition does not apply after December 2019.</p>

Condition Number	Condition	Status	Evidence
7	The Proponent shall not transport more than 900,000 tonnes of coal per calendar year by road.	Compliant	There was no coal transported during the audit period (Section 3.4: 2016, 2017 and 2018 Annual Review). Condition does not apply after December 2019.
8	The Proponent shall not transport any coal reject from the site.	Compliant	No mineral waste was produced during the audit period (Section 3.5.4: 2016, 2017 and 2018 Annual Review) and as such none was transported from the site.
SURRENDER OF CONSENTS			
9	Within 12 months of the date of this approval, or as otherwise agreed by the Secretary , the Proponent shall surrender all existing development consents for the operation of the Baal Bone Colliery, in accordance with sections 75YA and 104A of the EP&A Act, to the satisfaction of the Secretary .	Not Triggered	As discussed in the 2016 Audit, this condition was satisfied in the 2013 audit period.
STRUCTURAL ADEQUACY			
10	The Proponent shall ensure that any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. <i>Notes:</i> <ul style="list-style-type: none"> Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works; and Part 8 of the EP&A Regulation sets out the requirements for the certification of the project. 	Compliant	No construction activities were undertaken during the reporting period (Section 3.3: 2016, 2017 and 2018 Annual Review). The existing administration, amenities, workshops and coal handling infrastructure associated with the Baal Bone Colliery remained unchanged (Section 3.3, 2016, 2017 and 2018 AR).
DEMOLITION			
11	The Proponent shall ensure that all demolition work is carried out in accordance with AS 2601-2001: The Demolition of Structures, or its latest version.	Not Compliant	Concrete barriers around mine adits 1-5 and 8-11 were demolished during the audit period (pers comms). Viewed Job Safety Analysis (JSA) demolition methodology and procedure dated 23/7/2019. JSA does not reference the AS 2601-2001 Standard. 'MDG 6001 – Guidelines for permanent filling and capping of surface entries to coal seams' relied upon for this demolition work (GP pers comms). JSA references MDG-6001, however MDG-6001 does not reference the AS 2601-2001 Standard nor does it describe adit demolition works methodology. Recommend that a note be added in future Annual Reviews regarding demolition conducted in the IEA period. Recommend to include reference to AS 2601-2001 Standard and summary of requirements for demolition in relevant documentation for Mine Closure phase.
OPERATION OF PLANT AND EQUIPMENT			
12	The Proponent shall ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	Compliant	Viewed 2016, 2017 and 2018 AR Section 10 which states there were official cautions, warning letters, penalty notices or prosecution proceedings in relation to this condition. There were no noise complaints or safety related incidents during the audit period (Section 5.8 and Section 10 2016, 2017 and 2018 Annual Review). The following equipment only is present on site; three light vehicles (two road registered, one not), underground vehicles (Eimco), PJB (person transporter), and forklift (pers comms EF). Viewed selected plant maintenance work orders confirming maintenance carried out: -Light vehicle (order no: 102011343, dated 4/12/19 for monthly mechanical service) -Eimco (order no: 101893274, dated 6/9/19, mechanical monthly check, no issues) -Forklift (order no: 101883174, dated 28/8/19, examination, no issues) -PJB (order no: 101815056, dated 3/7/19, mechanical check, no issues) Site visit confirmed CHPP, workshop and related infrastructure are being maintained and operating in an efficient manner commensurate with Care & Maintenance (C&M) status.
STAGED SUBMISSION OF STRATEGIES, PLANS OR PROGRAMS			
13	With the approval of the Secretary , the Proponent may submit any strategies, plans or programs required by this approval on a progressive basis. Existing strategies, plans or programs at the date of this approval may continue to be implemented for mining operations, until the strategies, plans or programs required under this approval are approved by the Secretary , in accordance with the EA, Statement of Commitments and the conditions of this approval. <i>Note: The conditions of this approval require certain strategies, plans, and programs to be prepared for the project. They also require these documents to be reviewed and audited on a regular basis to</i>	Not triggered	No request was made during the audit period (EF pers comms).

Condition Number	Condition	Status	Evidence																												
	ensure they remain effective. However, in some instances, it will not be necessary or practicable to prepare these documents for the whole project at any one time; particularly as these documents are intended to be dynamic and improved over time. Consequently, the documents may be prepared and implemented on a progressive basis. In doing this however, the Proponent will need to demonstrate that it has suitable documents in place to manage the existing operations of the project																														
SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS																															
SUBSIDENCE																															
Performance Measures																															
1	<p>The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 1.</p> <p><i>Table 1: Subsidence Impact Performance Measures</i></p> <table border="1" data-bbox="290 695 1187 1115"> <thead> <tr> <th colspan="2">Water</th> </tr> </thead> <tbody> <tr> <td>Coxs River, Coxs River Swamp, Wolgan River, Jews Creek, Baal Bone Creek and Ben Bullen Creek</td> <td>No greater subsidence impact or environmental consequences than predicted in the EA.</td> </tr> <tr> <th colspan="2">Biodiversity</th> </tr> <tr> <td>Threatened species or populations, endangered ecological communities</td> <td>Negligible impact.</td> </tr> <tr> <th colspan="2">Land</th> </tr> <tr> <td>Cliffs</td> <td>No cliff falls from the Wolgan Escarpment</td> </tr> <tr> <td>Rock pagodas</td> <td>Negligible impact</td> </tr> <tr> <td>Other rock formations</td> <td>No greater subsidence impact or environmental consequences than predicted in the EA.</td> </tr> <tr> <th colspan="2">Heritage</th> </tr> <tr> <td>Aboriginal cultural heritage sites</td> <td>No greater subsidence impact or environmental consequences than predicted in the EA.</td> </tr> <tr> <th colspan="2">Built Features</th> </tr> <tr> <td>Wolgan Gap Trig Station</td> <td>Safe, serviceable and repairable.</td> </tr> <tr> <th colspan="2">Public Safety</th> </tr> <tr> <td>Public Safety</td> <td>No additional risk due to mining.</td> </tr> </tbody> </table> <p><i>Note: The Proponent maybe required to define more detailed performance indicators for each of these performance measures in the various management plans that are required under this approval.</i></p>	Water		Coxs River, Coxs River Swamp, Wolgan River, Jews Creek, Baal Bone Creek and Ben Bullen Creek	No greater subsidence impact or environmental consequences than predicted in the EA.	Biodiversity		Threatened species or populations, endangered ecological communities	Negligible impact.	Land		Cliffs	No cliff falls from the Wolgan Escarpment	Rock pagodas	Negligible impact	Other rock formations	No greater subsidence impact or environmental consequences than predicted in the EA.	Heritage		Aboriginal cultural heritage sites	No greater subsidence impact or environmental consequences than predicted in the EA.	Built Features		Wolgan Gap Trig Station	Safe, serviceable and repairable.	Public Safety		Public Safety	No additional risk due to mining.	Compliant	<p>Water</p> <p>Two potential impacts to 'water' as a result of subsidence effects were investigated during the audit period (one in 2018 and one in 2019). These are described below.</p> <p>In an email from DPIE dated 18 April 2018, the groundwater levels in the Coxs River Swamp had dropped rapidly and a complaint had been made from the Lithgow Environment Group. DPIE requested that Glencore review its groundwater monitoring data for Baal Bone to determine whether its operations were having any effect on the swamp. Glencore provided a response on the 9 May 2018 that showed "the recent decrease in water levels in the Cox's River Swamp is climate related and does not appear to be mining related".</p> <p>No response has been provided from DPIE. (pers comms).</p> <p>See Sch 2 Cond 21 for discussion of groundwater impacts.</p> <p>Biodiversity</p> <p>Sections 5.4 and 5.5 of the 2016, 2017 and 2018 ARs note that routine flora and fauna monitoring above extracted longwalls as required by the LW 29 – 31 SMP was not undertaken following the completion of mining on 3 September 2011. However, the Project Closure Plan (PCP) (see Sch 3 Cond 25 for a full description of the PCP) states that permanent monitoring sites have been established and that monitoring of these sites will be undertaken annually and reported in the Annual Review.</p> <p>Land</p> <p>Two incidents occurred in relation to potential impacts to 'land' during the audit period. These are described in Section 10 of the 2017 Annual Review and include:</p> <ul style="list-style-type: none"> Longwall 3 Cliff Fall on 26 September 2017; and Longwall 6 Cliff Fall on 19 October 2017 <p>On 28 September 2017, Glencore notified the Resources Regulator that a rockfall had occurred above the Longwall 3 mining area. A second rockfall was identified above Longwall 6 was also reported to the Resources Regulator on 24 October 2017. SCT Operations Pty Ltd undertook a geotechnical assessment of both areas and assessed the nature and likely cause of the rock falls.</p> <p>An investigation of both incidents was undertaken by the Resources Regulator and in a letter dated 29 May 2018, it was concluded that "...there was insufficient evidence to substantiate any breach of the Mining Act."</p> <p>Heritage</p> <p>Section 5.10.3 of the 2018 Annual Review notes that no significant impacts to Aboriginal heritage sites were predicted in the EA, however subsidence monitoring of rock shelter site BBC-RS1 was undertaken in accordance with the ACHMP. Post-mining monitoring found that subsidence induced movements in the rocks that make up BBC-RS1 were within EA predictions and did not result in any visible impacts to the site.</p> <p>Built Features and Public Safety</p> <p>"The SMP for development and extraction of Longwalls 29-31 expired on 1 December 2014, with mining operations in this area completed in early September 2011. The results of final monitoring were presented in the Annual Environment Review 2014 – Baal Bone Colliery. These results were reviewed by a Subsidence Engineer from DT&I, Mine Safety. In light of the results from this assessment and pursuant to Condition 12 of Deputy Director General's approval of Baal Bone Colliery Longwalls 29-31 Subsidence Management Plan, the request to discontinue subsidence monitoring and remove survey lines and monitoring equipment was approved". (Section 3.2.1.5, C&M MOP).</p> <p>"As part of mine closure processes, Baal Bone Colliery conducted an investigation into areas of potential subsidence cracking. Two high risk areas were identified within Baal Bone's mining leases: steep slope areas and shallow cover</p>
Water																															
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Condition Number	Condition	Status	Evidence
			<p>areas. The steep slope areas were inspected for subsidence cracks in April 2015, while the shallow cover areas were inspected in May/June 2016.</p> <p>The high risk subsidence cracks identified during the steep slope survey (April 2015) were progressively remediated during the second half of 2015. In February 2017 Baal Bone Colliery remediated a number of subsidence cracks in the shallow cover area over LW16-18a within CCL 749.”</p> <p>Recommend a single register for all known existing subsidence repairs be created and a clear process for sign-off of each be documented to completion.</p> <p>Table 3.1 of the draft “Mine Closure MOP August 2019 – December 2025” (not approved) (draft Mine Closure MOP) outlines subsidence remediation criteria which will be used as a guide for future subsidence remediation activities. However, the locations and schedule for subsidence monitoring is not clear. Section 3.2.5 of the draft Mine Closure MOP specifically states that “Remediation activities will be undertaken in response to regular monitoring until rehabilitation has been achieved”. Table 1.1 of the draft Mine Closure MOP states that subsidence remediation maintenance will be “as required during the MOP term”. The PCP does not describe a subsidence monitoring schedule. As stated in the 2016 IEA Action Plan, no further subsidence inspections well undertaken as all subsidence areas have been inspected and remediated. The 2016 IEA Action Plan was approved by DPE 18/5/17.</p>
First Workings			
2	<p>The Proponent may carry out first workings on site provided that DRE is satisfied that the first workings are designed to remain long-term stable and non-subsiding, except insofar as they may be impacted by approved second workings.</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> The intent of this condition is not to require an additional approval for first workings, but to ensure that first workings are built to geotechnical and engineering standards sufficient to ensure long-term stability, in accordance with the subsidence criteria in Table 1 above. First workings are defined as comprising the development of main headings, bord and pillar workings, roads, cut throughs and the like. Second workings are defined as comprising the extraction of coal through pillar extraction, including pillar splitting and pillar quartering. 	Not Triggered	<p>There was no mining during the audit period (Section 3.4: 2016, 2017 and 2018 Annual Review). Condition does not apply after December 2019.</p>
Extraction Plan			
3	<p>The Proponent shall prepare and implement an Extraction Plan for second workings on site to the satisfaction of the Secretary. Each Extraction Plan must:</p> <ol style="list-style-type: none"> be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary; be approved by the Secretary before the Applicant carries out any of the second workings covered by the plan; integrate ongoing management of previously mined areas; include detailed plans of existing and proposed first and second workings and overlying surface features; include adequate consideration of mine roof and floor conditions, pillar width to height ratios, final pillar dimensions and long-term stability of pillars, which has been prepared in consultation with DRE; include detailed performance indicators for each of the performance criteria in Table 1; describe the measures that would be implemented to ensure compliance with the performance criteria in Table 1, and manage or remediate any impacts and/or environmental consequences; include a Public Safety Management Plan, which has been prepared in consultation with DRE, to ensure public safety in the mining area; incorporate measures to conserve and protect: <ul style="list-style-type: none"> Cliff lines, rock pagodas and other rock formations; 	Not Triggered	<p>Underground mining operations at Baal Bone ceased in September 2011, after which the mine was placed into care and maintenance. There has been no coal extracted during the audit period (Section 3.4: 2016, 2017 and 2018 Annual Review). Condition does not apply after December 2019.</p>

Condition Number	Condition	Status	Evidence																	
	<ul style="list-style-type: none"> watercourses; groundwater; terrestrial flora and fauna and ecology (including any threatened species and their habitats); and Aboriginal cultural heritage. <p>(j) include a subsidence monitoring program, which has been prepared in consultation with DRE; and</p> <p>(k) include a program to collect sufficient baseline data for future Extraction Plans.</p>																			
NOISE																				
Noise Impact Assessment Criteria																				
4	By 31 December 2011, the Proponent shall ensure that the noise generated by the project does not exceed the long term noise impact assessment criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.		2011 requirement confirmed in 2011 IEA conducted by URS.																	
	<p><i>Table 2: Long Term Noise Impact Assessment Criteria</i></p> <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th>All periods</th> <th>Night</th> </tr> <tr> <th>dB(A) $L_{Aeq}(15\text{ min})$</th> <th>dB(A) $L_{A1}(1\text{ min})$</th> </tr> </thead> <tbody> <tr> <td>R1</td> <td>46</td> <td>47</td> </tr> <tr> <td>R2</td> <td>41</td> <td>48</td> </tr> <tr> <td>R3</td> <td>41</td> <td>48</td> </tr> <tr> <td>All other privately-owned land</td> <td>35</td> <td>45</td> </tr> </tbody> </table>	Location	All periods	Night	dB(A) $L_{Aeq}(15\text{ min})$	dB(A) $L_{A1}(1\text{ min})$	R1	46	47	R2	41	48	R3	41	48	All other privately-owned land	35	45	Compliant	<p>Attended monitoring was undertaken on an annual basis at receptors R1 and R2/R3 (Section 5, NMP). Annual environmental compliance noise audits were undertaken on 25 June 2019, 4 July 2018, 27 July 2017 and 29 August 2016. Noise levels complied with the $L_{Aeq}, 15\text{minute}$ and $L_{A1}, 1\text{minute}$ development consent criteria at all monitoring locations during the 2019, 2018 and 2017 audits.</p> <p>As reported in the 2016 Annual Review, "the daytime audit noise from the mine ventilation fan was audible at the Muldon residence (R1). Other noise sources identified included local domestic activities, wind in the trees, insects, aircraft and distant road traffic. During the evening and night audits noise from the ventilation fan was audible at both the Muldon (R1) and Desch (R2/3) residences. Baal Bone Colliery related L_{Amax} noise levels were not observed to cause exceedances of the licence noise limits at measurement locations for the duration of the audit. From the audit measurements and assessment, the $L_{Aeq}, 15\text{ min}$ noise contributions from BBC during the day, evening and night assessment periods satisfied the long-term licence noise limits."</p> <p>EPL 765 contains various noise monitoring requirements to determine compliance, each of these were tested during the site visit and confirmed compliant.</p>
Location	All periods		Night																	
	dB(A) $L_{Aeq}(15\text{ min})$	dB(A) $L_{A1}(1\text{ min})$																		
R1	46	47																		
R2	41	48																		
R3	41	48																		
All other privately-owned land	35	45																		
5	Until 31 December 2011, the Proponent shall ensure that the noise generated by the project does not exceed the interim noise impact assessment criteria in Table 3 at any residence on privately-owned land or on more than 25 per cent of any privately-owned land.																			
	<p><i>Table 3: Interim Noise Impact Assessment Criteria</i></p> <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th>All periods</th> <th>Night</th> </tr> <tr> <th>dB(A) $L_{Aeq}(15\text{ min})$</th> <th>dB(A) $L_{A1}(1\text{ min})$</th> </tr> </thead> <tbody> <tr> <td>R1</td> <td>48</td> <td>47</td> </tr> <tr> <td>R2</td> <td>43</td> <td>48</td> </tr> <tr> <td>R3</td> <td>43</td> <td>48</td> </tr> <tr> <td>All other privately-owned land</td> <td>35</td> <td>45</td> </tr> </tbody> </table> <p>Notes to Tables 2 and 3:</p> <ul style="list-style-type: none"> To interpret the locations referred to in Table 2, see the applicable figure in Appendix 2; Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy; and These noise impact assessment criteria do not apply if the Proponent has an agreement with the relevant owner/s to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement. 	Location	All periods	Night	dB(A) $L_{Aeq}(15\text{ min})$	dB(A) $L_{A1}(1\text{ min})$	R1	48	47	R2	43	48	R3	43	48	All other privately-owned land	35	45	Not Triggered	2011 is outside this audit period.
Location	All periods		Night																	
	dB(A) $L_{Aeq}(15\text{ min})$	dB(A) $L_{A1}(1\text{ min})$																		
R1	48	47																		
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Condition Number	Condition	Status	Evidence
Noise Management Plan			
6	The Proponent shall prepare a Noise Management Plan for the project, to the satisfaction of the Secretary. The plan must: (a) be prepared in consultation with EPA, and submitted to the Secretary for approval within 6 months of the date of this approval; and (b) include a Noise Monitoring Program, that uses a combination of real-time and supplementary attended monitoring measures, and includes a protocol for determining exceedances with the relevant conditions of this approval.	Compliant	Viewed Noise Management Plan (NMP) V.9 dated 1 July 2019. a) Appendix 1 dated 15/8/19 b) Section 5 No community complaints regarding Noise during the audit period. Viewed 2016, 2017 and 2018 AR Section 10 - No official cautions, warning letters, penalty notices or prosecution proceedings in relation to this condition. Section 5 of the NMP outlines noise management measures which includes noise monitoring on a regular basis annually as described in Schedule 3 Condition 4 and regular maintenance of equipment used onsite. Attended monitoring was undertaken on an annual basis at receptors R1 and R2/R3 (Section 5, NMP). Viewed maintenance work orders for road vehicles (see response to Schedule 2 Condition 12). Recommend consolidation of management plans as discussed in Sch 5 Cond 2.
Operating Conditions			
7	The Proponent shall: (a) implement best practice noise management, including all reasonable and feasible noise mitigation measures to minimise the operational, low frequency, rail, and road traffic noise generated by the project; (b) regularly assess the real-time noise monitoring and meteorological forecasting data and relocate, modify, and/or stop operations on site to ensure compliance with the relevant conditions of this approval, to the satisfaction of the Secretary.	Compliant	Viewed 2016, 2017 and 2018 AR Section 10 - No official cautions, warning letters, penalty notices or prosecution proceedings in relation to this condition. No community complaints regarding Noise during the audit period (Section 8.1 2016, 2017 and 2018 AR) (a) Noise management of rail is no longer required as the site is in care and maintenance. Section 5 of the NMP outlines noise management measures which includes noise monitoring on a regular basis annually as described in Schedule 3 Condition 4 and regular maintenance of equipment used onsite. Attended monitoring was undertaken on an annual basis at receptors R1 and R2/R3 (Section 5, NMP). Viewed maintenance work orders for road vehicles (see response to Schedule 2 Condition 12). (b) Viewed approval letter from DP&E dated 14/11/14 approving cessation of RTNM, therefore it was not required in this audit period.
Road Haulage Management Plan			
8	The Proponent shall prepare and implement a Road Haulage Management Plan for the project to the satisfaction of the Secretary. This plan must: (a) be submitted to the Secretary for approval 3 months prior to any proposal to truck more than 5,000 tonnes of coal per month from the mine; (b) detail the procedures for the ongoing assessment of noise impacts on residences as a result of road haulage of coal from the project; and (c) detail the procedures for the ongoing identification and implementation of reasonable and feasible noise mitigation works at residences adversely impacted by road haulage noise directly attributable to the project.	Not Triggered	There was no transportation of coal product at Baal Bone during the audit period (Section 3.4: 2016, 2017 and 2018 Annual Review). The Road Haulage Management Plan has not been approved (EF pers comms). A draft copy was submitted via email letter to the Department of Mining Industry Projects on 9 February 2012 and a response was not received. On 21 September 2011, the Department of Planning approved Baal Bone's request to suspend auditing this condition for the 2011 IEA and stated "the Department has reviewed the request and considers it has merit, in recognition that Baal Bone has not transported any coal by road in the last 12 months and does not plan to do so.....the Director-General has therefore approved your request".
AIR QUALITY & GREENHOUSE GAS			
Greenhouse Gas Emissions			
9	The Proponent shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Secretary.	Compliant	There have been minimal activities on site during the audit period. No coal has been produced or transported. The only greenhouse gas emission generation from diesel use and electrical energy consumption (EF pers comms). See Schedule 2 Condition 12 for plant maintenance work orders. One ventilation fan was operational during the audit period, within adit 1, however Ventilation ceased September 2019. Viewed 2019 NGERs spreadsheet for reporting greenhouse gas emissions. Scope 1 greenhouse gas emissions from site during the audit period did not trigger the NGER Emission Reduction Fund (ERF) Safeguard Mechanism (GP per comms). Greenhouse gas monitoring will continue into closure (as per the commitment in Appendix 1, draft Mine Closure MOP).
Air Quality Impact Assessment Criteria			
10	The Proponent shall ensure that the dust emissions generated by the project do not cause additional exceedances of the criteria listed in Tables 3, 4 and 5 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.		

Condition Number	Condition	Status	Evidence																							
	<p>Table 3: Long term criteria for particulate matter</p> <table border="1" data-bbox="278 331 997 436"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>^a90 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> <td>^a30 µg/m³</td> </tr> </tbody> </table> <p>Table 4: Short term criterion for particulate matter</p> <table border="1" data-bbox="278 464 997 531"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>^a50 µg/m³</td> </tr> </tbody> </table> <p>Table 5: Long term criteria for deposited dust</p> <table border="1" data-bbox="278 558 997 632"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase^e in deposited dust level ^a2 g/m²/month</th> <th>Maximum total deposited dust level ^a4 g/m²/month</th> </tr> </thead> <tbody> <tr> <td>^eDeposited dust</td> <td>Annual</td> <td></td> <td></td> </tr> </tbody> </table> <p>Notes for Tables 3-5:</p> <p>(a) Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to other sources);</p> <p>(b) Incremental impact (i.e. incremental increase in concentrations due to the project on its own);</p> <p>(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</p> <p>(d) Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agree to by the Secretary in consultation with EPA.</p>	Pollutant	Averaging period	^d Criterion	Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³	Pollutant	Averaging period	^d Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³	Pollutant	Averaging period	Maximum increase ^e in deposited dust level ^a 2 g/m ² /month	Maximum total deposited dust level ^a 4 g/m ² /month	^e Deposited dust	Annual			Compliant	<p>Air quality is monitored monthly at four locations via dust gauges: DM1, DM2, DM3 and DM4.</p> <p>Page 7 of the approved Air Quality Monitoring Program (see Sch 3 Cond 12) states “that while Baal Bone Colliery is in Care and Maintenance, monitoring for PM₁₀ and TSP is not required as per the approved Air Quality Monitoring Program.</p> <p>All dust monitoring results for 2016, 2017, 2018 and 2019 were below the maximum allowable annual average dust level of 4 g/m²/month (Section 5.1.3, 2016, 2017 and 2018 Annual Review).</p> <p>Viewed meteorological station calibration certificates, no issues:</p> <ul style="list-style-type: none"> WO 20301 dated 24/10/18; and WO 23804 dated 23/05/19. <p>Recommend consideration of reduction of monitoring points during closure, relocate monitor DM2 to be representative of closest residence and remove others.</p>
Pollutant	Averaging period	^d Criterion																								
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³																								
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³																								
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^e Deposited dust	Annual																									
Operating Conditions																										
11	<p>The Proponent shall:</p> <p>(a) ensure any that any air pollution generated by the project which is visible from privately owned land or public roads is assessed regularly, and that operations are modified and/or stopped as far as is reasonable and feasible to minimise air quality impacts on privately-owned land;</p> <p>(b) ensure that the real-time air quality monitoring and meteorological forecasting data are assessed regularly, and that operations are modified and/or stopped as required to ensure compliance with the relevant air quality criteria; and</p> <p>(c) implement all reasonable and feasible measures to minimise off-site odour, fume and dust emissions generated by the project, to the satisfaction of the Secretary.</p>	Compliant	<p>(a) Not triggered - No community complaints regarding air pollution were received during the audit period (Section 8.1, 2016, 2017 and 2018 AR). Baal Bone procedure for responding to complaints and incidents is outlined in Section 5 of the AQMP.</p> <p>(b) A letter dated 29 May 2012 was sent to the then DPE, requesting approval of the “Reduction of Dust Monitoring as per approved Air Quality Monitoring Program”. This letter requested the removal of the Tapered Element Oscillating Microbalance (TEOMS) (real time monitors) and the meteorological station. The letter specifically requested that “the Department of Planning contact Baal Bone Colliery via writing.... If there are any issues with this reduction in monitoring”. No response has been received therefore it is considered that DPE have “no issues with this reduction in monitoring”. The meteorological station still operates.</p> <p>(c) Not triggered - Maximum predicted odour at discrete sensitive receptors are tabulated in Section 5.1.5 of the Annual Reviews. However, “Odour is not monitored as part of site operations (Section 5.1.5, 2018 AR)”. No odour complaints were received during the audit period (Section 5.1.5 2016, 2017 and 2018 Annual Review)”. Site visit did not identify any odour issues.</p>																							
Air Quality Monitoring Program																										
12	<p>The Proponent shall prepare and implement an Air Quality Monitoring Program for the project to the satisfaction of the Secretary. This program must:</p> <p>(a) be prepared in consultation with EPA, by a suitably qualified expert whose appointment has been approved by the Secretary;</p> <p>(b) be submitted to the Secretary for approval within 3 months of the date of this approval, or as; otherwise agreed by the Secretary;</p> <p>(c) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, including the proposed real-time air quality management system; and</p> <p>(d) include an air quality monitoring program, using a combination of real-time monitors, high volume samplers and dust deposition gauges to monitor the performance of the project, and a protocol for determining exceedances with the relevant conditions of this approval.</p> <p>Note: The air quality monitoring program may incorporate monitoring from any relevant regional monitoring network endorsed by EPA.</p>	Compliant	<p>Viewed Air Quality Monitoring Program (AQMP) v.9 dated 1 July 2019.</p> <p>a) Appendix 1</p> <p>b) Appendix 1</p> <p>c) Sections 3 and 4</p> <p>d) Section 4, See response to Schedule 3 Condition 10</p> <p>SLR, in its 2016 Audit recommended that “air quality is assessed for future proposed rehabilitation activities” and to “implement necessary air quality controls”.</p> <p>According to the draft Mine Closure MOP, “it is anticipated that impacts to air quality upon rehabilitation will be limited to dust generation from surface movement of vehicles and machinery within the site during rehabilitation activities (Section 3.2.39)”. The air quality monitoring locations and agenda is outlined in Section 4.3 of the AQMP and specifically references that “during proposed rehabilitation works, air quality controls will be implemented on an as-needs basis”.</p> <p>Recommend consolidation of management plans as discussed in Sch 5 Cond 2.</p>																							

Condition Number	Condition	Status	Evidence
METEOROLOGICAL MONITORING			
13	The Proponent shall ensure that there is a suitable meteorological station in the vicinity of the site that complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline.	Compliant	One meteorological station is present on site. A letter dated 29 May 2012 was sent to the then DPE, requesting approval to remove the meteorological station but a response has never been received. The letter specifically requested that "the Department of Planning contact Baal Bone Colliery via writing.... If there are any issues with this reduction in monitoring". No response has been received therefore it is considered that DPE have "no issues with this reduction in monitoring"
SOIL & WATER			
Water Discharges			
14	The Proponent shall ensure that all surface water discharges from the site comply with the discharge limits (both volume and quality) set for the project in any EPL.	Compliant	Water is discharged via LDP1 / EPA11 (Overshot Dam to Ben Bullen Creek) (Plate 13). LDP discharged water off-site during all months. Monitoring frequency is monthly. As per Condition E2.1 of EPL 765 "by December 2019, the licensee must cease all mine water discharge from licenced discharge point 11 (LDP0011)". <u>Volume</u> Section 10.1.2 of the Baal Bone EA notes that discharges from dewatering of the underground workings will be approximately 1,500 ML per year. The annual discharge volumes reported in Annual Reviews for the audit period were: <ul style="list-style-type: none"> 1,502 ML in 2016; 1,247 ML in 2017; 1,002 ML in 2018; <u>Water Quality</u> Condition L2 of EPL 765 outlines water concentration limits for oil, grease, pH, TSS and total iron. Table 6.4 of the Annual Reviews outlines the results of concentrations required by the EPL. Reporting Data for 2019 was available on the company website. All monitoring results were within EPL criteria.
15	Deleted		
Water Management Plan			
16	The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with EPA, DRE, NSW Fisheries, and DPI Water by suitably qualified expert/s whose appointment/s have been approved by the Secretary; (b) be submitted to the Secretary for approval prior to carrying out any construction on site; and (c) include: <ul style="list-style-type: none"> a detailed Site Water Balance; an Erosion and Sediment Control Plan; a Surface Water Monitoring Plan; a Groundwater Monitoring Plan; and a Surface and Ground Water Response Plan. 	Compliant	Viewed the Water Management Plan (WMP) v.9 dated 1 July 2019: a) Appendix 2 includes evidence of consultation with DPI Water. Viewed consultation emails to EPA, DRE and NSW Fisheries dated 6 Aug 2019. Management Plans were forwarded to DPIE 23 July 2019 and approved 15 Aug 2018. Experts were approved by the Secretary in 2011 (Appendix 2, WMP) and approval letter from DPIE in Appendix 2, WMP. Viewed endorsement letter from Secretary dated 24/1/18 stating specialists were approved to prepare and update management plans. Although the Water Management Plan was approved, recommend that for future updates where consultation with other regulators is required, that regulators are offered an opportunity to comment for a duration of at least 30 days prior to submission to DPIE for approval b) Section 2.4 c) Section 4.1 Appendix 3 Appendix 4 Appendix 5 Appendix 6 Recommend consolidation of management plans as discussed in Sch 5 Cond 2 Site Water Balance As discussed in Schedule 4 Condition 14, "by 31 December 2019, the licensee must cease all mine water discharge from licenced discharge point 11 (LDP0011)". The groundwater model will be updated in the first quarter of 2020 to incorporate (GP pers comms). Recommend the water balance in the WMP be updated to reflect this change. Recommend that following receipt of 2020 report and confirmation of any water take or ongoing discharge required (considered unlikely), confirmation that no security and relinquishment of a relevant groundwater licences under the Water Management Act 2000 is required. BBWMP1

Condition Number	Condition	Status	Evidence
			<p>Reviewed Appendix C of the WMP which outlines Surface Water Monitoring requirements. Viewed a sample of locations.</p> <p>See discussion in Sch 3 Condition 14 regarding monitoring for EPL.</p> <p>Water Take during Closure</p> <p>Water licensing during closure is discussed in Appendix I of the PCP, Section 4.3.3 and states specifically, "The Overshot Dam and Horseshoe dam predate the Water Management Act 2000 and are therefore not subject to the licensing or Harvestable Rights limits. Therefore, of the permanent water storage proposed for the final landform, only evaporative losses of water from the Northern Void are to be licensed." Estimated Water Access Licences required are outlined in Table 4-1 Appendix I of the PCP.</p>
17	<p>The Site Water Balance must include details of:</p> <p>(a) sources of water supply;</p> <p>(b) water use on site;</p> <p>(c) water management on site;</p> <p>(d) off-site water transfers; and</p> <p>(e) reporting procedures.</p>	Compliant	<p>Viewed the Water Management Plan (WMP) v.9 dated 1 July 2019.</p> <p>(a) Section 4.10.1</p> <p>(b) Section 4.10.2</p> <p>(c) Section 4.0</p> <p>(d) Section 4.10.3</p> <p>(e) Section 4.10.6</p> <p>See discussion in Sch 3 Cond 16 regarding discharge cessation and the mine water balance update.</p>
18	Deleted.		
19	<p>The Erosion and Sediment Control Plan must:</p> <p>(a) be consistent with the requirements of the Managing Urban Stormwater, Soils and Construction Volume 2E Mines and Quarries (DECCW, 2008), or its latest version;</p> <p>(b) identify activities that could cause soil erosion and generate sediment;</p> <p>(c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;</p> <p>(d) describe the location, function, and capacity of erosion and sediment control structures; and</p> <p>(e) describe what measures would be implemented to maintain the structures over time.</p>	Compliant	<p>(a) The ESCP is contained in Appendix 3 of the Water Management Plan, approved on 15082019 (Approval sighted). Section 4.12 of WPM states works will be in accordance with Managing Urban Stormwater (DECC 2008). Appendix A.2 outlines Blue Book drawings.</p> <p>(b) Sources of erosion sighted in Section 3.3. of ESCP.</p> <p>(c) Covered in Section 4 of ESCP.</p> <p>(d) Figure 1.3 indicates location of ESC structures. Appendix A.2 of ESCP shows typical drawings from Blue Book. Details included in section 4.3 and 4.4 of ESCP.</p> <p>(e) Covered in Section 4 and 5.1 of ESCP.</p> <p>Minesoils: Inspected rock weirs along the upper section of Ben Bullen Creek. These structures appeared stable and provided some scour protection in times of high flow (Plate 8).</p> <p>Minesoils: The rock gabion and concrete weir/dam was also inspected and appeared stable and was holding water, with minor flow over the spillway evident.</p> <p>Minesoils recommends the site forms a register of water management structures with locations shown on GIS and linked to original design drawings and maintenance inspections. This should include drop structures, banks, dams, diversion drains and Ben Bullen creek diversion (Plate 9).</p> <p>The site visited identified an area requiring bunding between Jews and Baal Bone Creek in the Northern Rehabilitation Area (Plate 10). Recommend this area be properly bunded.</p>
20	<p>The Surface Water Monitoring Plan must include:</p> <p>(a) detailed baseline data on surface water flows and quality in creeks and other waterbodies that could be impacted by the project (including the Coxs River, Ben Bullen Creek, Baal Bone Creek and Jews Creek);</p> <p>(b) surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts; and</p> <p>(c) a program to monitor:</p> <p>(i) surface water flows, quality, and impacts on water users;</p> <p>(ii) stream health; and</p> <p>(iii) channel stability</p> <p>(iv) the Coxs River, Ben Bullen Creek, Baal Bone Creek and Jews Creek.</p>	Compliant	<p>Viewed the Surface Water Monitoring Program v.8 dated 1 July 2019</p> <p>(a) Section 3.2.</p> <p>(b) Section 3.3 and Section 4.0</p> <p>(c) Section 5.0.</p> <p>i) Viewed sample of monitoring data for 2017 to 2019. Parameters are monitored at Ben Bullen Creek and Baal Bone Creek. Channel Stability monitoring undertaken annually for Coxs River, Ben Bullen Creek, Baal Bone Creek and Jews Creek and reported in the Annual Review.</p> <p>ii) Stream Health Monitoring was suspended following the 2014 survey of Coxs River, Ben Bullen Creek, Baal Bone Creek and Jews Creek and due to the care and maintenance status. Viewed email to P Freeman at DPIE dated 1 December 2015 requesting approval for suspension of stream health monitoring at next SWMP update. The letter specifically states that "the revised SWMP including the proposed updates will be submitted to the DP&E for approval next year" and that "given the results of the 2014 monitoring and the fact that mining is not currently taking place, it is recommended that annual monitoring of riparian vegetation and stream features be suspended". No response was received from</p>

Condition Number	Condition	Status	Evidence
			<p>DPE. The SWMP was revised and approved by C Preshaw at DPIE 12 September 2016.</p> <p>Section 5.2.4 of the SWMP describes historic stream health monitoring procedures and documents the trigger for when stream health monitoring should resume. <i>“Should mining recommence, a further baseline survey consistent with the monitoring conducted in 2014 will be undertaken prior to any mining recommencing....Prior to the commencement of Ben Bullen Creek Rehabilitation works, aquatic fauna monitoring sites will be identified in Jew’s Creek and in analogue sites in order to establish baseline completion criteria. Following the completion of physical Ben Bullen Creek rehabilitation works, the monitoring will be extended to sites in the rehabilitated creek line with rehabilitation success being assessed against the analogue site(s)(Section 5.2.4 SWMP).</i></p> <p>iii) Under the SWMP, Channel Stability Monitoring is to be undertaken annually. Results are reported in the ‘Channel Stability Monitoring’ Reports prepared by Umwelt.</p> <p>iv) Appendix C of the approved WMP outlines the surface water monitoring locations which includes Coxs River, Ben Bullen Creek, Baal Bone Creek and Jews Creek. Results are discussed in Sch 3 Cond 16.</p>
21	<p>The Groundwater Monitoring Plan must include:</p> <p>(a) baseline data of groundwater levels, yield and quality in the region that may be affected by mining operations on site;</p> <p>(b) a program to augment the baseline data over the life of the project;</p> <p>(c) groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;</p> <p>(d) a program to monitor:</p> <ul style="list-style-type: none"> • groundwater inflows to the underground mining operations; • the impacts of the project on: • the alluvial, Triassic, and coal seam aquifers; • base flows to the Coxs River Swamp; • any groundwater bores on privately-owned land; • riparian vegetation; and • seepage/leachate from any tailings dams, water storages or backfilled voids on site; and <p>(e) a program to validate the groundwater model for the project, and calibrate it to site specific conditions.</p>	<p>Not Compliant</p>	<p>Viewed Groundwater Monitoring Plan v.9 dated 1 July 2019.</p> <p>(a) Section 3.2</p> <p>(b) Section 3.3</p> <p>(c) Section 3.3</p> <p>(d)</p> <ul style="list-style-type: none"> • Section 4.2.2 • Section 3.1.1 • Section 3.1.1 • Section 3.1.2 • Section 3.1.3 • Section 4.1.4 <p>(e) Section 4.2.1</p> <p>There are six piezometers in and around Cox’s River Swamp as shown on Plan 5 of the 2018 AR.</p> <p>Groundwater Chemistry</p> <p>In 2011, Baal Bone noted increases in trace metals in bores outside the Coxs River Swamp, more specifically, BBPB3 has been showing higher levels of zinc (EF pers comms).</p> <p>BBPB3 is located down-gradient of longwalls 29-31 and up-gradient of Coxs River Swamp and measures groundwater chemistry in the deeper sandstone aquifer. The final longwall panel (LW31) was completed on 3 September 2011.</p> <p>Viewed “Baal Bone 2019 Coxs Swamp Piezo’s” spreadsheet and results for dissolved zinc at BBPB3 exceeded the Water Quality Trigger Level for a “Short Term Major Change Criteria” of 0.175 mg/L (Table 3.1 of the Groundwater Monitoring Plan (GMP)) in 2017, 2018 and 2019. Of particular concern was the result Feb 19, showing a level of 2.05 mg/L.</p> <p>Aurecon (2012) was requested to prepare a report on the changes in groundwater quality from 2008 to 2011 and to investigate the appropriateness of the TARP trigger levels. This report was titled “Groundwater Level and Water Quality Changes compared to TARP Trigger Values in and around the Coxs River Swamp from 2009 to 2011 for SMP AreaLW29-31”.</p> <p>Aurecon (2012) noted that BBPB3 showed minor exceedances for zinc (results are shown in Table 2) but the report concluded “there is no need to update the TARP trigger values”.</p> <p>Aurecom (2012) did not clarify the source of the exceedance at BBPB3 nor did it confirm the exceedance was not mining related. It concluded that the exceedance was a result of natural variability and that the largest increase corresponded with the peak in rainfall recovery.</p> <p>As per the Surface Water and Groundwater Response Plan (SWGRP), the Trigger, Action, Response, Plan (TARP) for Loss of Water Quality is outlined in Section 2.2.</p> <p>In Feb 2012 and Dec 2013 notifications were sent to various regulators including the then DPE. Baal Bone also provided a notification to WaterNSW (June, 2012). No response has been received.</p> <p>No evidence was available to demonstrate that further notifications have been provided to the relevant</p>

Condition Number	Condition	Status	Evidence
			<p>agencies or no other corrective actions undertaken in relation to the ongoing exceedance of zinc levels in the audit period. Recommend to revisit the zinc trigger levels for BBPB3 in consultation with DPIE for the closure stage. .</p>
22	<p>The Surface and Ground Water Response Plan must describe what measures and/or procedures would be implemented to:</p> <ul style="list-style-type: none"> (a) respond to any exceedances of the surface water, stream health, and groundwater assessment criteria; (b) mitigate the loss of any base flows to Jews Creek following the completion of mining; and (c) mitigate and/or offset any adverse impacts on riparian vegetation. 	Not Compliant	<p>The following non-compliances were identified during the audit period:</p> <ul style="list-style-type: none"> (a) Sep/Nov 2017 - "Coxs River Swamp Groundwater Level, failure to undertake two monthly water level monitoring" (Section 10, 2017 Annual Review). (b) January 2018 – "Coxs River Swamp: failure to take groundwater chemistry sample at BBPB1 in January 2018 in accordance with Groundwater Monitoring Plan" (Section 10, 2018 Annual Review). <p>Viewed the Surface Water and Groundwater Response Plan (SWGRP) v.8 dated 1 Jul 2019.</p> <ul style="list-style-type: none"> (a) Section 2.1, 2.2, 2.3, 2.4 and 2.6. As per the 2016 IEA recommendations, the groundwater TARP presented in the Annual Review has been updated to be consistent with the TARP presented in the Surface Water and Groundwater Response Plan. (b) Baseflow is described in Section 2.7.1 of the SWGRP in relation to groundwater flow but does not directly describe Jews Creek. It states that groundwater monitoring will occur at Cox's River Swamp only and will be undertaken in accordance with the Groundwater Monitoring Plan to monitor groundwater levels and water quality. It also states that if loss of baseflow is identified at Baal Bone Colliery, it will be considered an unforeseen impact and management will be undertaken in accordance with Section 2.6. <p>The GMP indicates groundwater monitoring is conducted at the bores at Table 1 BPB1-6 which are located at Cox's River Swamp which we understand are the appropriate bores for impacts at Jews Creek (although located over 8 km south of Jew's Creek). A review of the 2017 and 2018 ARs did not indicate any loss of baseflow at these bores. Groundwater level is compared to previous annual reviews (AR, Section 6.2.1.1) and EA predictions (AR, Section 6.2.1.2) but no direct explanation of baseflow or comparison to baseflow is described.</p> <p>Glencore indicates that mitigation is not required.</p> <p>Going forward, the Overshot Weir is representative of Jews Creek as it flows directly to it. Base flows to Jews Creek following the completion of mining is discussed in relation to the Overshot Weir/Dam in the draft Mine Closure MOP (p.30 and 31) and PCP (p.45) (GP pers comms) however does not directly describe any predicted impacts to baseflow or any requirement for mitigation.</p> <p>Page 45 of the PCP states that "discharge over the Overshot Weir is expected to resume as early as 2022 (assuming underground pumping ceases 1 January 2020. The Overshot Weir may be a constraint if monitoring indicates that the overflows are less than about 0.3 ML/day by 2023. This would result in a probability that the Overshot Weir would be removed. Similarly, if monitoring indicates that the overflows are between 0.3ML/day and 0.8ML/day, the retention of the Overshot Weir would be reassessed".</p> <ul style="list-style-type: none"> (c) The measures to mitigate the impact on riparian vegetation is outlined in Section 2.7.2 of the SWGRP which states "If loss of riparian vegetation is identified at Baal Bone, it will be considered an unforeseen impact and management will be undertaken in accordance with Section 2.7". There is no detail on how this will be measured. (d) As discussed in Sch 3 Cond 20, Stream Health Monitoring (which surveyed riparian vegetation characteristics) in Jews Creek (and other watercourses) was approved to be suspended in September 2016. A review of the 2017 and 2018 ARs did not indicate any comment on impacts to riparian vegetation at the site. Riparian vegetation is discussed in relation to Ben Bullen Creek Rehabilitation only. <p>Viewed email to P Freeman at DPIE dated 1 December 2015 requesting approval for suspension of stream health monitoring at next SWMP update. The letter specifically states that "the revised SWMP including the proposed updates will be submitted to the DP&E for approval next year" and that "given the results of the 2014 monitoring and the fact that mining is not currently taking place, it is recommended that annual monitoring of riparian vegetation and stream features be suspended". No response was received from DPIE, however, the SWMP was updated in 2016 and approved by DPIE which removed the requirement to monitor Jews Creek's riparian vegetation.</p> <p>Viewed letter from Umwelt dated 30 November 2014 that states "Given the results of the 2014 monitoring and the fact that mining is not currently taking place, it is recommended that annual monitoring of riparian vegetation</p>

Condition Number	Condition	Status	Evidence
			<p>and stream features be suspended". Viewed results (Section 3.2) of the "2014 Channel Stability and Stream Health Monitoring Report (Umwelt, 2015)" which shows Coxs River, upstream of Baal Bone Creek and Jews Creek were considered to be in good condition, with low levels of disturbance and high-quality riparian vegetation identified.</p>
LANDSCAPE MANAGEMENT			
Biodiversity Management Plan			
23	<p>The Proponent shall prepare and implement a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH, and submitted to the Secretary for approval within 6 months of the date of this approval, or as otherwise agreed by the Secretary;</p> <p>(b) include:</p> <p>(i) a description of the short, medium, and long term measures that would be implemented to manage the remnant vegetation and habitat on site;</p> <p>(ii) a detailed description of the measures that would be implemented over the next 2 years, including the procedures to be implemented for:</p> <ul style="list-style-type: none"> • managing salinity; • conserving and reusing topsoil; • managing impacts on fauna; • landscaping the site to minimise visual impacts; • collecting and propagating seed; • salvaging and reusing material from the site for habitat enhancement; • controlling weeds and feral pests, including terrestrial and aquatic species; • managing grazing and agriculture on site and in the biodiversity offset areas; • controlling access; • bushfire management; and • managing potential conflicts between the offset areas and Aboriginal cultural heritage values; <p>(iii) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria; and</p> <p>(iv) details of who would be responsible for monitoring, reviewing, and implementing the plan.</p>	Compliant	<p>(a) Minesoils: Biodiversity and Land Management Plan approved by DPIE on 15/8/2019. Evidence of consultation with OEH on 14/09/2011. E-mails sighted from Aug 2019 that plan was sent to OEH.</p> <p>(b)(i) Minesoils: Table 3 in Section 3.3 describes short, medium and long term measures. The changes from the 2011 version consist of the following:</p> <ul style="list-style-type: none"> • Short Term – From 2011: Area placed in care and Maintenance to 2019: Underground entries seal. • Medium Term – From 2011: Demolition and rehabilitation to be determined whilst in care and maintenance, to 2019: Demolition and rehabilitation to occur from 2020 onwards should no mining activities occur. • Long Term – From 2011: Implement Rehabilitation Plan and Follow up monitoring to 2019: follow up monitoring, aftercare and maintenance. <p>These changes are considered minor as they simply progress rehabilitation activities and confirm dates for implementation.</p> <p>(b)(ii)</p> <ul style="list-style-type: none"> • Salinity – 3.2.5 • Topsoil – 3.1.1 • Fauna – 3.1.4 • Visual – 3.2.7 • Seed – 3.2.6 • Habitat – 3.1.3 • Weeds & Pests – 3.2.2 • Grazing – 3.2.1 (see discussion below) • Bushfire – 3.2.4 (see discussion below) • Aboriginal Heritage – 3.2.9 & 2.2.7 and Aboriginal Cultural Heritage Management Plan referenced. <p>(b)(iii) Section 4 Monitoring Programs</p> <p>(b)(iv) Section 7 Accountabilities</p> <p>Revegetation</p> <p>Minesoils: No new revegetation areas have been undertaken on site within the audit period. Maintenance of existing revegetation has been ongoing through weed management across all rehabilitation, additional soil material spread on Thistle Hill rehabilitation, and annual rehabilitation inspections.</p> <p>Weeds and Pests</p> <p>Weeds and feral pests in the BMP. Ongoing plan mostly for Blackberry spraying.</p> <p>Grazing</p> <p>Land is leased to neighbours for the purpose of grazing however, no cattle currently on property.</p> <p>Bushfire</p> <p>Bushfire management – prepared a "Bushfire Preparedness System" dated 15/01/18. Commitments include smoke-free pit, infrastructure and equipment.</p> <p>During the audit period, there have not been any fire breaks created, however the helipad and dams have been maintained for fire management. The RFS have also been creating fire breaks near Wolgan Escarpment.</p> <p>Recommend considered in draft Mine Closure MOP.</p>
Rehabilitation Objectives			
24	The Proponent shall rehabilitate the site to the satisfaction of the DRE . This rehabilitation must be	Compliant	Minesoils: The 2016 C&M MOP indicated the following:

Condition Number	Condition	Status	Evidence																
	generally consistent with the proposed rehabilitation strategy described in the EA (and depicted conceptually in Figure 1 in Appendix 4), and achieve the objectives in Table 6.		<p>28ha of rehabilitation in Northern Void and Northern Rehabilitation domains which may include sealing of adits, stabilisation of the highwall, recontouring of the area and placement of growth medium material (see Plan 3D).</p> <p>Only the sealing on entries had been undertaken at the time of the audit (Plate 3). The stabilisation of highwall, recontouring and placement of growth medium had not yet occurred.</p> <p>The site indicated the entry closure and sealing methodology was agreed with Government department.</p> <p>Minesoils: Annual reviews contained sign off letter at end of document. Whilst this item is not yet triggered, the sign off of Annual Reviews indicates DRE is satisfied with the reporting of rehabilitation efforts.</p>																
	<p>Table 6: Rehabilitation Objectives</p> <table border="1" data-bbox="305 579 1255 1041"> <thead> <tr> <th>Feature</th> <th>Objective</th> </tr> </thead> <tbody> <tr> <td>Mine site (as a whole)</td> <td>Safe, stable and non-polluting.</td> </tr> <tr> <td>Surface infrastructure</td> <td>To be decommissioned and removed.</td> </tr> <tr> <td>Ben Bullen Creek</td> <td> <input type="checkbox"/> Hydraulically and geomorphologically stable, with established native riparian and aquatic vegetation which complements local and regional biodiversity. <input type="checkbox"/> Rehabilitated areas contribute to achieving self-sustaining biodiversity habitats. </td> </tr> <tr> <td>Other watercourses</td> <td>Hydraulically and geomorphologically stable.</td> </tr> <tr> <td>Cliffs</td> <td>No additional risk to public safety compared to pre-mining conditions.</td> </tr> <tr> <td>Other land affected by the project</td> <td>Restored ecosystem function, including maintaining or establishing self-sustaining eco-systems: <ul style="list-style-type: none"> <input type="checkbox"/> comprised of local native plant species; with <input type="checkbox"/> a landform consistent with the surrounding environment. </td> </tr> <tr> <td>Community</td> <td>Minimise the adverse socio-economic effects associated with mine closure.</td> </tr> </tbody> </table>	Feature	Objective	Mine site (as a whole)	Safe, stable and non-polluting.	Surface infrastructure	To be decommissioned and removed.	Ben Bullen Creek	<input type="checkbox"/> Hydraulically and geomorphologically stable, with established native riparian and aquatic vegetation which complements local and regional biodiversity. <input type="checkbox"/> Rehabilitated areas contribute to achieving self-sustaining biodiversity habitats.	Other watercourses	Hydraulically and geomorphologically stable.	Cliffs	No additional risk to public safety compared to pre-mining conditions.	Other land affected by the project	Restored ecosystem function, including maintaining or establishing self-sustaining eco-systems: <ul style="list-style-type: none"> <input type="checkbox"/> comprised of local native plant species; with <input type="checkbox"/> a landform consistent with the surrounding environment. 	Community	Minimise the adverse socio-economic effects associated with mine closure.	Not triggered	<p>The draft "Mine Closure MOP August 2019 – December 2025" (not approved) (draft Mine Closure MOP) addresses these items which will be required by Schedule 3 Condition 24.</p> <p>Minesoils: Site inspection indicates progressive rehabilitation undertaken in sealing of entries, however northern void and rehabilitation yet to be undertaken in accordance with the C&M MOP (28ha in 2019), maintenance and annual monitoring has been undertaken across the rehabilitation areas aimed at fulfilling these objectives at closure.</p> <p>Minesoils: The 2016 C&M MOP indicated the following: 28ha of rehabilitation in Northern Void and Northern Rehabilitation domains which may include sealing of adits, stabilisation of the highwall, recontouring of the area and placement of growth medium material (see Plan 3D).</p> <p>Only the sealing on entries had been undertaken at the time of the audit. The stabilisation of highwall, recontouring and placement of growth medium had not yet occurred.</p> <p>General Comments from Minesoils on Rehabilitation:</p> <ol style="list-style-type: none"> 1. Surface water structures including banks, drop structures and dams need to be inspected and any failures or high risk items should be repaired. It was noted on Thistle Hill, one contour drain was not repaired following a track to the top was installed to bring in and place soil material on the top section. This drain requires immediate attention so water can be transferred to the designed drop structure (Plate 4). 2. Weeds were evident onsite including blackberry. It is understood weed maintenance occurs regularly onsite and should continue, an especially high risk period will be following decent rain. 3. REA5 showed two areas of complete failure. Minesoils recommends soil tests for Electrical Conductivity (EC), pH, Cation Exchange Capacity (CEC) and Exchangeable Sodium Percentage. It appears these two areas have received and pooled saline water from irrigation which has resulted in an area too salty for most vegetation. Some simple soil tests will indicate if this is true. In the event salinity is the limiting factor it is recommended to either leach the salts through the primary root zone via natural rainfall (slow) or irrigate with non saline water. Alternatively, bring in additional material suitable for growth medium, subject to relevant approvals. 4. REA5: The remainder of REA5 showed no acacia species established (Plate 6). This is believed to have occurred due to the tree seed not being treated prior to sowing. Most acacia species require a mechanism to break the seedcoat such as boiling, scarifying or low heat fire. It is recommended that low depth (<300mm surface ripping be strategically undertaken to avoid areas already establishing with Eucalypts. Additional seed mix (especially Acacia species) should then be treated, brought in and sown in the newly ripped areas. 5. Overall the rehabilitation is establishing adequately in most areas (Plate 5,7), however additional intervention is required to meet target species composition (especially the lower storey species) within a timeframe suitable for lease relinquishment. <p>Recommend that the stockpiles identified in the 2016 IEA (Ref 6.1b of the 2016 IEA Action Plan) be seeded as per 2016 IEA recommendation during rehabilitation / closure period if not used within three months.</p>
Feature	Objective																		
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Community	Minimise the adverse socio-economic effects associated with mine closure.																		
Rehabilitation Management Plan																			
25	<p>The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the DRE and the Secretary. The Rehabilitation Management Plan must:</p> <ol style="list-style-type: none"> (a) be prepared in consultation with DRE, OEH, DPI Water and Council, and submitted for approval within 6 months of the date of this approval; (b) pared in accordance with the relevant DRE guideline; 	Compliant	<ol style="list-style-type: none"> (a) MOP 2016 – 2019 sighted and Amendment approved on 17 September 2019. Email evidence of MOP consultation sighted from 22/5/2017, including Council, OEH, DPI water and DRE. (b) Prepared in accordance with ESG3. (c) Rehabilitation Objectives 4.3 (d) Post Mining Land use Goal 4.2. Consistent with regional area land uses. 																

Condition Number	Condition	Status	Evidence
	<p>(c) define the objectives and criteria for site rehabilitation;</p> <p>(d) investigate options for the future use of the site in a manner consistent with any regional planning strategies;</p> <p>(e) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the project; and</p> <p>(f) describe how the performance of these measures would be monitored over time.</p>		<p>(e) Section 3 Environmental Issues Management.</p> <p>(f) Section 8 Rehabilitation Monitoring.</p> <p>RCE Tool Updated RCE, in draft Mine Closure MOP. Secretary undertook review of the RCE tool, amendment to take effect 19 Jan 2018. Security Bond is discussed within Cond 28 of Consolidated Coal Lease 749.</p> <p>Draft Mine Closure MOP Minesoils: During the Site Visit, PA explained the draft Mine Closure MOP was being reviewed and was with DRG for approval. The draft Mine Closure MOP was prepared in accordance with the ESG3-MOP Guidelines (DRE, September 2013) to satisfy Condition 2 of a Notice Under Section 240(1)(d) of the <i>Mining Act 1992</i> which requires Glencore to prepare a Project Closure Plan (PCP) to address the rehabilitation of all mining activity at Baal Bone. According to the PCP, carbonaceous material will remain in place in Domain 3 Infrastructure Area, and covered with 0.5m of capping material sourced from site (p.94, PCP). VENM will be used to cover carbonaceous material (Slide 15, MOP MCP Presentation Rev 2). "<i>Baal Bone has obtained legal advice which outlines that sourcing inert material externally is permitted</i> (p.8, C&M MOP)".</p>
Ben Bullen Creek Rehabilitation			
25A	<p>The Proponent shall prepare and implement a Ben Bullen Creek Rehabilitation Plan to the satisfaction of the DRE. The plan must:</p> <p>(a) be prepared in consultation with the Department, OEH, DPI Water, DRE and NSW Fisheries, and in accordance with the relevant DRE guideline;</p> <p>(b) be submitted for approval by 31 May 2016, unless otherwise agreed with the Secretary;</p> <p>(c) include hydrologic, hydraulic, geomorphic and geotechnical assessments of Ben Bullen Creek and the effect of any proposed bank slope regrading and highwall stabilisation works;</p> <p>(d) include a flood hydraulic assessment, including how the design of final landforms would manage high flow events;</p> <p>(e) describe the staging and timing of rehabilitation works, and how these works would be integrated into the overall rehabilitation of the site;</p> <p>(f) detail the proposed native riparian and aquatic species to be used in rehabilitation works, and how these species would complement local and regional biodiversity and contribute to self-sustaining biodiversity habitats; and</p> <p>(g) include completion criteria and a monitoring program to assess and report on the efficacy of the rehabilitation works.</p>	Compliant	<p>(a) Section 2.6 states Agency Consultation. Required agencies consulted.</p> <p>(b) Extension to 22 Dec 2016. Submitted on 16 Dec 2016.</p> <p>(c) Hydrologic, hydraulic, geomorphic and geotechnical assessments included. Sections 2.4, 3.5, 3.6 and 4.2.</p> <p>(d) Section 3.5</p> <p>(e) Section 6</p> <p>(f) Section 4.8</p> <p>(g) Section 3.8</p> <p>Minesoils: The implementation of the Ben Bullen Creek Rehabilitation Plan has been on hold due to commercial processes in play which, if eventuated, would require operations to continue by another owner, and therefore delay the rehabilitation further. The Management Plan is expected to be implemented with the approval and implementation of the Mine Closure MOP.</p> <p>Minesoils: A detailed Rehabilitation design and rehabilitation plan for Ben Bullen Creek was undertaken in 2017 and approved as a MOP amendment by Division of Resources and Geoscience letter dated 13th Dec 2017.</p> <p>Minesoils: The MOP only indicated the Plan was to be developed. No work on the creek has been undertaken during the audit period. Implementation of rehabilitation works in reaches 1 and 3 of Ben Bullen Creek was completed (prior to audit period). Reach 2 is subject to the rehabilitation design and rehabilitation Plan (GHD 2017).</p> <p>There is no timing (only stages of work) mentioned within the plan.</p> <p>The plan is ready to implement once the draft Mine Closure MOP is approved.</p> <p>Minesoils recommends implementing the plan as designed.</p>
HERITAGE			
Aboriginal Cultural Heritage Management Plan			
26	<p>The Proponent shall prepare and implement an Aboriginal Cultural Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) incorporate the existing Aboriginal Cultural Heritage Management Plan for Longwalls 29-31;</p> <p>(b) be prepared in consultation with OEH, relevant Aboriginal community groups and Council;</p> <p>(c) be submitted to the Secretary for approval within 6 months of the date of this approval;</p> <p>(d) include programs and/or procedures for:</p> <p>(i) salvage, excavation and/or management of Aboriginal sites and potential archaeological deposits which are at risk of significant impact within the project disturbance area;</p> <p>(ii) managing the discovery of any new Aboriginal objects or skeletal remains found during the project;</p>	Compliant	<p>Viewed Aboriginal and Cultural Heritage Management Plan v.7 dated 28/08/2018</p> <p>(a) Section 7.2. LW 29-31 had AHCMP developed and found one site. Infrastructure, disturbed in 1950</p> <p>(b) Section 3 and 4 and Appendix 2</p> <p>(c) Appendix 3</p> <p>(d) Section 7</p> <p>See discussion on Heritage in Sch 3 Cond 1.</p> <p>No additional sites identified during audit period (EF pers comms).</p> <p>Viewed Section 6.5 of the EMS outlines Glencore Activity Risk Assessments and Work Permits which references "CAA HSEC PER 0001 – Work Authorisation". The Work Authorisation "<i>provides a checklist of environmental aspects that must be completed and approved by the E&C Department prior to the commencement of any work</i> (EMS, p.22)". The</p>

Condition Number	Condition	Status	Evidence
	(iii) maintaining and managing access to archaeological sites by the Aboriginal community; and (iv) ongoing consultation with, and involvement of, relevant Aboriginal community groups in the conservation and management of Aboriginal cultural heritage at the project site.		"Coal Assets – Ground Disturbance Permit (CAA-HSEC-PER-004)" supports the Work Authorisation and outlines the process for part ii of this condition.
TRANSPORT			
Hours of Operation			
27	The Proponent shall undertake road transport of coal only between 7.00am and 7.00pm, Mondays to Saturdays (excepting Public Holidays). No road transport of coal shall take place on Sundays or Public Holidays.	Not Triggered	There was no coal transported during the audit period (Section 3.4: 2016, 2017 and 2018 Annual Review). Condition does not apply after December 2019.
Monitoring of Coal Transport			
28	The Proponent shall keep records of the: (a) amount of coal transported by both rail and road from the site (on a daily basis); and (b) number of coal haulage train movements generated by the project (on a daily basis); and (c) make these records publicly available on its website in accordance with condition 6 of schedule 5.	Not Triggered	There was no coal transported during the audit period (Section 3.4: 2016, 2017 and 2018 Annual Review). Condition does not apply after December 2019.
VISUAL			
Visual Amenity and Lighting			
29	The Proponent shall: (a) minimise the visual impacts, and particularly the off-site lighting impacts, of the surface infrastructure area and the Southern ventilation shaft site; (b) take all reasonable and feasible measures to further mitigate off-site lighting impacts from the project; and (c) ensure that all external lighting associated with the project complies with Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting, to the satisfaction of the Secretary .	Compliant	(a) As per Section 3.2.1.17 of the C&M MOP, all lighting associated with the CHPP and UC1 conveyor/ROM stockpile has been designed and constructed to minimise glare and stray light. (b) As per Section 3.2.1.17 of the C&M MOP, the mine is nestled in a valley on the edge of an escarpment and is not visible from the road. Given that mining operations have been suspended, there will be reduced visual amenity. Not operating at night therefore reduced impacts (c) A lighting survey completed in November 2011 showed that all lighting was within the limits of AS 4282-1997. Section 3.2.16 of the draft Mine Closure MOP includes all the above information.
WASTE			
30	The Proponent shall: (a) minimise the waste (including coal reject) generated by the project; (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of, to the satisfaction of the Secretary .	Compliant	(a) No mineral waste was produced during the audit period (Section 3.5.4: 2016, 2017 and 2018 Annual Review) (b) Generated waste during audit period only included sewage (reduced load for < 10 employees), rubbish, hydrocarbon. Sewage tank in administration area and CHPP, but CHPP not in use. Sewage Treatment Plant (STP) on site (Plate 14) and two transpiration ponds for discharge, however the transpiration beds are dry. Sita Sewers is the subcontractor employed to remove general waste. Two skip bins are collected approximately every six months. Viewed Waste Register for 2018 and 2019. Waste generation includes: general waste and scrap steel (separate register). Hydrocarbons – small vehicle fleet. Waste oil contractors visit when oil container full. Closure There is an underground fuel and oil storage tank (UST) in the Pit top area. Contaminants of potential concern include hydrocarbons, polycyclic aromatic hydrocarbons (PAHs) and heavy metals. The UST was assessed within the PCP and it was identified as an area of environmental concern with a high potential impact and specifically states "Previous investigations have identified significant impacts around the UST". "Groundwater impacts of total recoverable hydrocarbons (TRH) identified at MW01 were considered attributable to the adjacent diesel UST with evidence of concentrations decreasing over time. It is expected that levels of contaminants in groundwater will continue to attenuate over time with the planned closure" (p.35 PCP). The UST is not directly conditioned by the EPL, however its management during closure is discussed further in the PCP.
31	The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Secretary . This plan must be submitted to the Secretary within 3 months of the date of this approval.	Compliant	Viewed Waste Management Plan v.9 dated 1 July 2019, approved by the Secretary on the 15 August 2019. Site inspection reviewed significant capacity for ongoing scrap steel recycling and general waste clean-up which should be continued as part of closure (Plate 15 and 16).
SCHEDULE 4 ADDITIONAL PROCEDURES			

Condition Number	Condition	Status	Evidence
NOTIFICATION OF LANDOWNERS			
1	If the results of monitoring required in schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, except where a negotiated agreement has been entered into in relation to that impact, then the Proponent shall, within 2 weeks of obtaining the monitoring results, notify the Secretary , the affected landowners and tenants accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the criteria in schedule 3.	Not Triggered	None (EF pers comms)
INDEPENDENT REVIEW			
2	If a landowner of privately-owned land considers the project to be exceeding the impact assessment criteria in schedule 3, 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 shall within 3 months of the Secretary's decision: (a) consult with the landowner to determine his/her concerns; (b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary , to conduct monitoring on the land, to: (i) determine whether the project is complying with the relevant impact assessment criteria in schedule 3; and (ii) 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.	Not Triggered	None (EF pers comms).
3	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 . If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 3, then the Proponent shall: (a) implement all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria, and conduct further monitoring to determine whether these measures ensure compliance; or (b) secure a written agreement with the landowner to allow exceedances of the relevant impact assessment criteria, to the satisfaction of the Secretary . If the further monitoring referred to under paragraph (a) above determines that the project is complying with the relevant impact assessment criteria, then the Proponent may discontinue the independent review with the approval of the Secretary .	Not Triggered	Not triggered, see Response to Schedule 4 Condition 2.
SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING			
ENVIRONMENTAL MANAGEMENT			
Environmental Management Strategy			
1	The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary . The strategy must: (a) be submitted to the Secretary for approval within 6 months of the date of this approval; (b) provide the strategic framework for environmental management of the project; (c) identify the statutory approvals that apply to the project; (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; (e) describe the procedures that would be implemented to: (i) keep the local community and relevant agencies informed about the operation and environmental performance of the project;	Compliant	Viewed Environmental Management Strategy v.9 dated 1 July 2019. (a) Appendix 3 (b) EMS (c) Appendix 1 (d) Section 10 (e) (i) Section 7.2 (ii) Section 7.3 (iii) Section 7.4. Dispute resolution was added to the EMS as per the 2016 recommendations.

Condition Number	Condition	Status	Evidence
	(ii) receive, handle, respond to, and record complaints; (iii) resolve any disputes that may arise during the course of the project; (iv) respond to any non-compliance; and (v) respond to emergencies; and (f) include: (i) copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved, and/or demonstrate that suitable strategies, plans and programs are in place to manage operations; and (ii) a clear plan depicting all the monitoring currently being carried out within the project area.		(iv) Section 7.5 (v) Section 7.6 (f) (i) Appendix 1 (ii) Appendix 2 Recommend consolidation of management plans as discussed in Sch 5 Cond 2.
Management Plan Requirements			
2	Proponent shall ensure that the Management Plans required under this approval are prepared in accordance with any relevant guidelines, and prepared by a suitably qualified expert/s whose appointment has been approved by the Secretary . The Plans must include: (a) detailed baseline data; (b) a description of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures/criteria; and (iii) 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: (i) impacts and environmental performance of the project; and (ii) effectiveness of any management measures (see (c) above); (e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the project over time; (g) a protocol for managing and reporting any: (i) incidents; (ii) complaints; (iii) non-compliances with statutory requirements; and (iv) exceedances of the impact assessment criteria and/or performance criteria; and (h) a protocol for periodic review of the plan. <i>Note: At the discretion of the Secretary, some of these requirements may be waived where they are either not relevant or necessary.</i>	Compliant	Viewed key management plans: Water Management Plan (a) Section 3. See recommendations in Sch 3 Cond 16 (b) Section 2 and 5. See recommendations in Sch 3 Cond 16 (c) Section 5 and Section 6 (d) Section 5 and 6 (e) Section 5 (f) Section 6 (g) Section 5.5 (h) Section 6 Noise Management Plan (a) Noise model and assumptions outlined in Section 4 (b) Section 3 and 4 (c) Section 4. See recommendations in Sch 3 Cond 4 (d) Section 6. See recommendations in Sch 3 Cond 4 (e) Section 6 and 7 (f) Section 6 (g) Section 4, 5 and 6 (h) Section 6 Recommend for closure, re-approve specialists where required Recommend consideration of combining all relevant management plans from this consent into single, reduced management plan (Noise, Air Quality, Aboriginal Cultural Heritage, Biodiversity and Land Management, Rehabilitation, Erosion and Sediment Control, Groundwater Monitoring, Surface Water Monitoring, Waste and Water, Road Haulage) (with approval from DPIE) and/or include single document as appendix to draft Mine Closure MOP. See individual conditions for further recommendation on each plan. Recommend in management plan update: <ul style="list-style-type: none"> • Tabulate this condition showing where each point is addressed; • Ensure that all agencies are consulted with during preparation of management plan; and • All technical specialist be approved by the Secretary, where required to do so.
Annual Review			
3	By 31 March 2012, and annually thereafter, the Proponent shall submit a report to the Secretary reviewing the annual environmental performance of the project to the satisfaction of the Secretary . This review must: (a) describe the works that were carried out in the previous calendar year, and the works that are proposed to be carried out over the current calendar year; (b) include a comprehensive review of the monitoring results and complaints records of the	Compliant	Viewed 2016, 2017 and 2018 Annual Reviews. (a) Section 3 and Section 11 (b) Section 5 includes performance measures and relevant criteria, monitoring results and comparison against EIS predictions. (c) Section 10 (d) Section 5 describes trends in the monitoring data for key aspects such as surface water, groundwater (e) Section 5, 6 and 7

Condition Number	Condition	Status	Evidence
	<p>project over the previous calendar year, which includes a comparison of these results against:</p> <p>(i) the relevant statutory requirements, limits or performance measures/criteria;</p> <p>(ii) the monitoring results of previous years; and</p> <p>(iii) the relevant predictions in the EA;</p> <p>(c) identify any non-compliance over the previous calendar year, and describe what actions were (or are being) taken to ensure compliance;</p> <p>(d) identify any trends in the monitoring data over the life of the project;</p> <p>(e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and</p> <p>(f) describe what measure will be implemented over the current calendar year to improve the environmental performance of the project.</p>		<p>(f) Section 11</p> <p>Recommend request to DPIE to reduce the content of the AR commensurate with closure status (i.e. risk based noise monitoring):</p> <p>b) replace “comprehensive” with “relevant” and not address i to iii which hare not included in the EA;</p> <p>d and e) not address as trends during operations cannot be compared to trends during closure.</p>
Revision of Strategies, Plans and Programs			
4	<p>Within 3 months of:</p> <p>(a) the submission of an audit report under condition 7 of Schedule 5;</p> <p>(b) the submission of an incident report under condition 5 of Schedule 5; and</p> <p>(c) the submission of an annual review under condition 3 of Schedule 5,</p> <p>(d) the approval of any modification to the conditions of this approval; or</p> <p>(e) a direction of the Secretary under condition 4 of Schedule 2;</p> <p>the Proponent shall review and, if necessary, revise the strategies, plans, and programs required under this approval.</p> <p>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, unless otherwise agreed with the Secretary.</p> <p><i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.</i></p>	Compliant	<p>(a) Viewed 2017 Management Plan Review letter to DPIE dated 15 June 2017. Various management plans updated.</p> <p>(b) Viewed letter to DPIE for cliff falls dated 22/1/18.</p> <p>(c) Viewed 2017 Annual Review update letter dated 24 July 2018. Viewed 2018 Annual Review update letter dated 23 July 2019.</p> <p>(d) No modifications occurred in audit period.</p> <p>(e) See response to Sch 2 Cond 4.</p>
REPORTING			
Incident Reporting			
5	<p>The Proponent shall notify the Secretary and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident.</p>	Compliant	<p>As reported in Section 10 of the 2017 Annual Review, there were two reportable incidents during the audit period as follows:</p> <ul style="list-style-type: none"> Longwall 3 Cliff Fall on 26 September 2017 Longwall 6 Cliff Fall on 19 October 2017. <p>These were reported (along with attached reports prepared by SCT Operations Pty Ltd) to the Resources Regulator on 28 September and 24 October 2017 respectively.</p> <p>The incident at Longwall 3 was reported to the Secretary (Paul Freeman) on 28 September 2017.</p> <p>No further direction was provided by the Secretary.</p>
Regular Reporting			
6	<p>The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs under this approval, and to the satisfaction of the Secretary.</p>	Compliant	<p>Website sighted on 3 December 2019. Sighted EPL monthly reporting, management plans and programs, Annual Reviews, Community Documents, Quarterly Environmental Summaries, previous reports.</p>
INDEPENDENT ENVIRONMENTAL AUDIT			
7	<p>By 31 December 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission at its own cost an Independent Environmental Audit of the project. This audit must:</p> <p>(a) be conducted by suitably qualified, experienced and independent team of experts whose</p>	Compliant	<p>2019 IEA site component completed 17 and 18 December 2019.</p> <p>(a) DM is an Exemplar Global Certified Lead Auditor (107622). Appointment of the IEA team was endorsed by Nominee of the Secretary by email letter on 29 October 2019.</p> <p>(b) Section 3.3 and Appendix A of this IEA Report.</p>

Condition Number	Condition	Status	Evidence
	<p>appointment has been endorsed by the Secretary;</p> <p>(b) include consultation with the relevant agencies;</p> <p>(c) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);</p> <p>(d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate;</p> <p>(e) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals; and</p> <p>(f) be completed within 2 months of the approval of the audit team.</p> <p><i>Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.</i></p>		<p>(c) This IEA Report.</p> <p>(d) This IEA Report.</p> <p>(e) See Section 6 of this IEA Report.</p> <p>(f) An extension of time request for submission of the IEA Report was approved by Nominee of the Secretary by letter email on 11 November 2019. Consequently, the IEA Report is due 6 March 2020.</p>
8	<p>Within 6 weeks of the completing of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.</p>	Compliant	<p>In regards to the 2019 IEA, see response to Schedule 5 Condition 7(f). Viewed letter from DPIE dated 8/5/17 stating that they had received the IEA and Response to Recommendations.</p>
ACCESS TO INFORMATION			
9	<p>From 31 March 2011, the Proponent shall:</p> <p>(a) make the following information publicly available on its website to the satisfaction of the Secretary:</p> <p>(i) a copy of all approved strategies, plans and programs;</p> <p>(ii) a comprehensive summary of all monitoring results of the project, which have been reported in accordance with the various plans and program under this approval;</p> <p>(iii) a complaint's register, updated on a quarterly basis;</p> <p>(iv) copies of any Annual Reviews (over the last 5 years);</p> <p>(v) copies of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit;</p> <p>(vi) any other matter required by the Secretary; and</p> <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>	Compliant	<p>Website sighted on 3 December 2019 and viewed:</p> <p>(a) (i) Management Plans and Programs (ii) EPL Reporting Data and Quarterly Environmental Summaries (iii) Community Complaints Register updated on a quarterly basis (iv) 12 years of Annual Reviews (v) 2016 Audit Report and Action Plan (vi) No further information requested</p> <p>(b) up to date.</p>

Table B Baal Bone Statement of Commitments

Blue type represents: MOD 1 – January 2015

Red type represents: MOD 2 – December 2015

Issue	Commitment	Status	Evidence
APPENDIX 3: STATEMENT OF COMMITMENTS			
General			
1	The Proponent shall carry out the project generally in accordance with the EA and the Statement of Commitments.	See Schedule 2, Condition 2	
2	Within 12 months of Project Approval, subject to confirmation that Project Approval conditions provide for feasible implementation of the project and ongoing operations at the Colliery, the Proponent shall surrender all redundant development consents that relate to activities in the Project Area, other than Project approval MP 07_0035 granted by the Minister for Planning on 24 October 2007 relating to the construction and operation of the ventilation shaft and power line corridor associated with Longwalls 29 to 31.	See Schedule 2 Condition 9	
3	The Project will be in operation for up to 24 hours a day, seven days per week. The Proponent may load coal for road haulage between the hours of 7:30am and 2:45pm and 3:30pm to 5:30pm Monday to Saturday in accordance with the current Truck Management Plan. The hours of road haulage of coal, including initial and final laden journeys of the haulage vehicles to the Colliery and from the power stations, are to be limited to the hours of 7.00am to 7.00pm, Mondays to Saturdays. No road haulage is to take place on Sundays or Public Holidays.	See Schedule 2 Conditions 6 and 7	
4	The Proponent shall not: (a) extract more than 2.8 million tonnes of ROM coal from the Project area in a calendar year; or (b) transport more than 2.0 million tonnes of product coal from the Project area in a calendar year.	See Schedule 2 Conditions 6 and 7.	
Environmental Management and Monitoring			
5	The Proponent shall adhere to the environmental management, monitoring and reporting requirements contained in Baal Bone's existing and revised monitoring programs contained within the EMS and in the SMP approval for Longwalls 29 to 31 dated 7 December 2007 which includes the following plans: <ul style="list-style-type: none"> • Subsidence Management Plan; • Public Safety Management Plan • Community Consultation Process; • Environmental Monitoring Program • Land Management Plan; • Underground Water Make Monitoring Program; • Subsidence Monitoring Program; • Wolgan Escarpment Management Plan; and • Aboriginal Heritage Management Plan (BBC-RS1). 	Not Triggered	Applied to previous audit period.
6	Within 12 months of project approval, the Proponent will review and update Baal Bone's Environmental Management System to incorporate relevant aspects of the environmental management of the Project including a review of the following environmental management plans: <ul style="list-style-type: none"> • Biodiversity and Land Management Plan; • Cultural Heritage Management Procedure; • Social Involvements Plan; • Community Complaints Management Procedure; • Conflict Resolution Procedure; • Hydrocarbon Management; • Mine Closure Plan; • Product Stewardship Management Plan; • Subsidence Management Plan; • Public Safety Management Plan; • Land Management Plan; • Aboriginal Heritage Management Plan; • Truck Management Plan; • Waste Management Plan; • Water Quality Management Plan; and • Training and Competency Management Plan Following a review of these plans, the Proponent will implement the revised plans in carrying out the Project.	Not Triggered	Within 12 months of original approval.
7	The Proponent shall prepare and lodge with the Director-General an Annual Environmental Management Report (AEMR) for the Project containing all Report monitoring data including an analysis of that data, and providing an assessment of the effectiveness or otherwise of all	See Schedule 5 Condition 3	

Issue	Commitment	Status	Evidence
	environmental control measures. The first of such reports for the Project shall be completed within 12 months of the date of the Project approval		
Subsidence – Performance Measures			
8	In carrying out its mining operations within the Project area, the Proponent shall implement appropriate mining methods that seek to achieve the objectives contained in Table 8-2 of the Environmental Assessment for the Project.	See Schedule 3 Condition 1	
Subsidence - Remnant Areas			
9	<p>Prior to commencing second workings in the Remnant Areas, the Proponent shall prepare and implement an Extraction Plan for all second workings in the Remnant Areas to the satisfaction of the Director-General. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared by a team of suitably qualified and experienced experts whose appointment has been endorsed by the Director-General; (b) include a detailed plan for the second workings, which has been prepared to the satisfaction of DII, and provides for adaptive management (for the identified Remnant Areas); (c) include detailed plans of associated surface construction works; (d) include the following to the satisfaction of DII: <ul style="list-style-type: none"> • a coal resource recovery plan that demonstrates effective recovery of the available resource; • revised predictions of the conventional and non-conventional subsidence effects and subsidence impacts of the extraction plan, incorporating relevant information that has been obtained since this approval; and • a Subsidence Monitoring Program to: <ul style="list-style-type: none"> ◦ validate the subsidence predictions; and ◦ analyse the relationship between the subsidence effects and subsidence impacts of the Extraction Plan and ensuing environmental consequences. 	See Schedule 2 Condition 2 and Schedule 3 Conditions 1 and 3.	
10	<p>The Proponent must:</p> <ul style="list-style-type: none"> • protect the three cliff formations and Ben Bullen Creek from being directly mined under by an angle of draw of 26.5 degrees of greater as shown in Figure 8.2; and • develop a management strategy in consultation with independent archaeologists to manage the subsidence impacts of the archaeological site (Site ID 45-1-0125). 	Not Triggered	There was no mining during the audit period. End of panel reports for LW 29-31 suggest mining was generally consistent with the predicted impacts. Cliff formations avoided in the mine design
Subsidence – Longwalls 29 to 31			
11	<p>The Proponent shall implement the Subsidence Management Plan and associated monitoring programs for Longwalls 29 to 31. The monitoring program will include detailed survey and scientific monitoring which must be undertaken prior to, during and following the mining of Longwalls 29 to 31. Survey and monitoring will include the following:</p> <ul style="list-style-type: none"> • Three-dimensional subsidence monitoring; • Horizontal stress changes in the cliff forming sandstones of the Wolgan Escarpment using stress change monitoring instruments; • Temperature changes in the rock formation at the northern pinch point as a basis for understanding thermal stress changes experienced on the Wolgan Escarpment; and • Implementation of the Land Management Plan which addresses management of surface impacts in the vicinity of the Wolgan Escarpment and pagoda formations and surface cracking in other general surface areas. Visual inspections, plus photographic and video monitoring would be conducted over the surface area at regular intervals during mining of the longwall panels. 	Not Triggered	There was no mining during the audit period. End of panel report for LW 29-31 (dated December 2012) suggest mining was generally consistent with the predicted impacts..
Noise			
12	<p>Within twelve months of receiving Project Approval, the Proponent shall prepare a Site Noise Reduction Program (SNRP), which would include a Strategy for the reduction of noise generated from the Project area. The SNRP will include investigation of the following items to seek to reduce noise generated from the Project area where feasible:</p> <ul style="list-style-type: none"> • Replacement of damaged insulation installed in Washery Building; • Closure of façade openings in the Washery to Stockpile Transfer and/or Washery buildings; • Options to assess the feasibility and possibility of reducing noise emissions from the Bradford breaker; • Options to reduce noise emissions from the tracked dozer during night hours; and • A program for regular inspections of site plant including the dozer to ensure that the installed noise suppression controls are functioning and require no maintenance. The SNRP will review and/or develop procedures to manage noise complaints from residents: • Procedures for residents to contact the site environmental manager in regard to noise complaints or requests for information; • Procedures to inform residents of actions implemented following receipt of noise complaints; and • Procedures for the recording, investigation and follow up of noise complaints, and if required, site attended noise audits to identify additional procedures to minimise noise emissions from the Project area. 	Not Triggered	As noted in the 2016 Audit, this SoC was satisfied in the 2013 Audit Period.

Issue	Commitment	Status	Evidence
Groundwater			
13	The Proponent shall monitor groundwater in the vicinity of Longwalls 29 to 31 in accordance with the Surface and Groundwater Response Strategy and Underground Mine Water Make Monitoring Program to provide an ongoing assessment of the impact of mining works on the groundwater regime, enable early detection of potential adverse impacts, and to monitor the recovery of the groundwater system following completion of mining.	See Sch 3, Cond 21	
14	In the event that the monitoring of ground or surface water indicates an exceedance of trigger levels, procedures contained within the Surface and Groundwater Response Strategy would be implemented.	See Schedule 3 Condition 22	
15	Prior to mining of the Remnant Areas, the Proponent shall review and update the Surface and Groundwater Response Strategy and Underground Mine Water Make Monitoring Program for implementation upon commencement of mining in these areas.	See Schedule 2 Condition 2	
Mine Closure and Rehabilitation			
16	The Proponent shall progressively rehabilitate the site over the life of the mine, rehabilitate all disturbed lands within the Project Area i accordance with the reasonable requirements of DII prior to relinquishment of mining leases.	See Sch 3 Cond 24	<p>Minesoils: Site inspection indicates progressive rehabilitation, maintenance and annual monitoring aimed at fulfilling these objectives at closure.</p> <p>Minesoils: Rehabilitation of disturbed lands has been completed for some sections of the site with additional rehabilitation still required post closure. Rehabilitation has been completed as per the areas outlined in the C&M MOP and a Final Closure Plan is currently being developed. There has been no lease relinquishment. Rehabilitation activities during the audit period included:</p> <ul style="list-style-type: none"> (a) In Feb 2017 BB weed spraying remediated a number of subsidence cracks in the shallow cover area over LWs 16 to 18a within CCL 749 - photos included in Section 7 of 2017 and 2018 Annual Reviews. (b) During 2017 and 2018 Baal Bone Colliery commenced locating and capping legacy exploration boreholes across the site. Sited folder: "Borehole Evidence". (c) The LW19 vent shaft was filled and capped, and the site rehabilitated in April 2019. This will be reported on in the 2019 Annual Review. Sited photos as evidence. (d) 11 underground adits have been sealed. This will be reported on in the 2019 Annual Review. Noted during inspection. <p>Minesoils: The draft Mine Closure MOP divides the site up in Domains according to rehabilitation requirements for Closure. Minesoils appreciates the mining process and historical rehabilitation which has been undertaken.</p> <p>Minesoils: The underground area/ subsidence domain has been monitored and specific areas repaired over the life of the mine. Underground mining concluded in 2011. And monitoring requirements for the 6 months post mining has long since ceased. An overall site inspection of subsidence areas was undertaken in 2015 (prior to IEA period) which recorded and ranked all surface impacts. Regular site visits to subsidence areas are undertaken for specific purposes such as groundwater monitoring (pers comm Elisabeth Fishpool).</p> <p>Minesoils: Low cover areas were inspected in 2017. During the site visit the two rock falls previously reported to the Regulator, were pointed out. These are discussed in Sch 2 Cond 1.</p> <p>Minesoils: Eleven adits have been sealed and closed using methodology approved by the Regulator. This is discussed further in Sch 3 Cond 24.</p> <p>Minesoils: The areas of rehabilitation were inspected during the</p>

Issue	Commitment	Status	Evidence
			site visit and most areas have consistent establishment of target vegetation with appropriate mix of species. The annual rehabilitation inspections highlight areas to be targeted for maintenance and supplemental plantings/seeding. Minesoils: The REA5 appears to have failed in two distinct patches whilst the remaining areas of REA 5 do not contain acacia species.
17	The Proponent shall prepare and implement a Rehabilitation Monitoring Methodology and Program for the Project within 12 months of project approval.	Compliant	Prepared previously and included in C&M MOP
	<ul style="list-style-type: none"> Investigation of ways to minimise the adverse socio-economic effects associated with the conclusion of Baal Bone, including reduction in local and regional employment levels; and Description of measures that would be implemented to minimise or manage the on-going environmental effects of Baal Bone. 	Not Triggered	Social assessment for closure was undertaken in 2012.
Tailing and Reject Management			
18	The Proponent will implement the following operational controls to mitigate potential impacts associated with the Reject Emplacement Area: <ul style="list-style-type: none"> Regular visual inspections of the emplacement area including specific attention to the structural integrity of the embankment and the flow of leachate; All dams and associated pipelines at Baal Bone will be inspected on a daily, weekly and monthly basis as required; and Operation of transport in the vicinity according to regulations. 	See response to Sch 3 Cond 24	
19	Prior to constructing any future dams with a catastrophic or high risk ranking, the Proponent will ensure that the following actions have been undertaken in relation to the dam: <ul style="list-style-type: none"> the dam has undergone an appropriate engineering design (e.g. relevant dam safety committee concurrence); or the dam has a specific management plan including operational requirements and monitoring program. The monitoring program may be incorporated into the regular inspection checklists, however, the person who is to inspect the catastrophic or high risk dams must be competent to do so. 	Not Triggered	No large dams constructed during audit period.
Traffic - Coal Road Haulage			
20	Haulage of coal from Baal Bone by public road will not exceed 900,000 tonnes per annum (tpa) with a maximum daily rate of 6,000 tonnes.	See Schedule 2 Condition 6 and 7	
21	Prior to resumption of haulage of coal by road to the power stations from the Colliery, the Proponent shall undertake a review of the existing Road Haulage Management Plan and update the plan as required, for implementation. Once implemented the Road Haulage Management Plan is to be reviewed annually and updated as required.	See Schedule 2 Condition 6 and 7	
22	Prior to resumption of haulage of coal by road to the power stations from the Colliery, the Proponent shall undertake a review of the existing Truck Management Plan, and update the plan as required, for implementation. Once implemented, the Truck Management Plan is to be reviewed annually and updated as required.	See Schedule 2 Condition 6 and 7	
	Following the installation of road signage, the Proponent shall undertake an annual review of road accident statistics along the Castlereagh Highway between Baal Bone Colliery and Mount Piper and Wallerawang Power Stations to monitor the effectiveness of road signage and review the implementation of other mitigation measures as appropriate.	Not triggered (pers comms)	
23	The Proponent shall finalise all outstanding noise insulation works to the remaining four residences in Cullen Bullen identified in the Road Haulage Management Plan, being 2541 Castlereagh Highway, 42 Castlereagh Highway, 46 Castlereagh Highway, 2508 Castlereagh Highway, prior to resuming road haulage of coal to the power stations. The Proponent shall meet all reasonable costs required to implement these works.	Not triggered	
Air Quality			
24	The Proponent shall implement the following existing operational practices in the Surface Infrastructure Area to minimise air quality impacts to the surrounding environment as contained in the Mine Operations Plan: <ul style="list-style-type: none"> Conveyors and transfer points are either fully or partially enclosed on the side of the prevailing winds; Spraying of stockpiles to minimise dust; Watering of haul road to minimise dust; Regular cleaning of areas that may generate dust; and Appropriate ventilation of operational mine shafts. 	See response to Sch 3 Cond 10-12	
25	The Proponent will monitor potential impacts to air quality resulting from dust in accordance with the Environment Protection Licence (EPL) applying to the Project area and report any potential impacts according to the requirements of the EPL.	See response to Sch 3 Cond 10-12	
26	The Proponent shall operate the premises to seek to avoid exceedances of air quality impact assessment criteria identified in Section 15.3 the EA.	See response to Sch 3 Cond 10-12	

Issue	Commitment	Status	Evidence
Greenhouse Gas			
27	The Proponent will continue to seek to provide maximum resource extraction with maximum efficiency and will assess and consider implementation, where feasible, of GHG and energy management and mitigation initiatives during the design, operation and decommissioning of the mine.	See response to Sch 3 Cond 9	
Geology and Soils			
28	The Proponent shall continue to undertake regular inspections of the surface features in accordance with the Land Management Plan for Longwalls 29 to 31 to address potential impacts on soils and geology.	Not Triggered	The require inspections according to the Land Management Plan was for 6 months. This ended in 2012 which was the last of the detailed inspections for LW 29 to 31.
Flora and Fauna			
29	The Proponent shall continue to implement ongoing monitoring and management of quadrats in the vicinity of Longwalls 29 and 31 and Coxs River Swamp in accordance with the Environmental Monitoring Program contained within the SMP.	Not Triggered	No monitoring evident in documentation during the audit period. This ceased on 2/6/2016. Refer to Conditions 13 and 19 of the Environmental Monitoring Program.
30	Prior to and during mining of the Remnant Areas, the Proponent shall implement ongoing monitoring of fauna populations and wildlife habitats within and in the vicinity of the Remnant Areas. The details of the monitoring requirements are to be developed in accordance with the SMP for the Remnant Areas.	Not Triggered	No mining in Audit period within those areas. This was for possible future mining.
31	The Proponent shall use best endeavours to incorporate Capertee Stringybark in its future rehabilitation works.	Compliant	The seed mix during mine closure will include this species however no new areas have been rehabilitated within the audit period. It is recommended REA 5 repair mix includes Capertee Stringybark.
Indigenous Heritage			
32	The Proponent shall continue to manage the Aboriginal rock shelter (45-1-2665) in the vicinity of Longwalls 29 to 31 in accordance with the current Aboriginal Heritage Management Plan. If further sites are identified during the heritage surveys of the Remnant Areas, the Proponent will update the Aboriginal Heritage Management Plan to include any additional Indigenous sites requiring management.	Not Triggered	No mining during the audit period.
33	Prior to the mining of the Remnant Areas, the Proponent shall undertake a further full heritage survey to: <ul style="list-style-type: none"> ascertain the present condition of the site known as Ben Bullen Creek 1 (Site ID 45-1-0240); properly assess this region for its heritage significance; and develop a management strategy in consultation with the stakeholders to manage the subsidence impacts of the mining of the Remnant Areas on any cultural heritage items identified in the heritage survey. 	Not Triggered	No mining during the audit period.
34	During the course of mining, if any 'relics' or other Aboriginal sites are identified, work in that area will cease and the DECC and respective Aboriginal community organisations or Local Aboriginal Land Council will be contacted to discuss how to proceed.	Not Triggered	Not triggered during audit period.
Land Use			
35	The Proponent shall continue to implement the current Land Management Plan and Public Safety Management Plan which form part the SMP for Longwalls 29 to 31.	Refer to Sch 3 Cond 3	

Table C
Other Licences & Approvals

* Reasons for non-compliances with individual conditions are indicated in **bold and underlined**. Recommendations are **bolded**.

Instrument	Status	Comments
EPL 765	Not Compliant	<p>A1.1) See response to Schedule 2 Condition 6 and 7. During closure, the Scale for the Fee Based Activity “Coal Works” will be zero.</p> <p>A2.1) The EPL applies to this site including all mentioned mining leases.</p> <p>A3.1) Refer to response to Schedule 2, Condition 1 of PA 09_0178</p> <p>P1.1) Viewed “Baal Bone Colliery – 2011 Licenced Monitoring Sites” figure dated 17 Jan 2012 which shows points referred to for the purpose of monitoring. See response to Schedule 3 Condition 10 of PA 09_0178.</p> <p>P1.3) Viewed plan titled “2008 Licenced Monitoring Sites” dated 10/01/2008. <u>Figure does not show locations of LDPs. Recommend to update 2008 figure for 2019/2020 plan.</u></p> <p>L1) Not triggered (per comms).</p> <p>L2) Not triggered, see response to Schedule 3 Condition 14 of PA 09_0178.</p> <p>L3) Not triggered (per comms).</p> <p>L4) See response to Sch 3 Cond 4 of PA 09_0178.</p> <p>L5) Not triggered (per comms).</p> <p>O1) See response to Sch 2 Cond 6-8 and Sch 3 Cond 30 of PA 09_0178.</p> <p>O2) See response to Sch 2 Cond 12 of PA 09_0178.</p> <p>O3) See response to Sch 3 Cond 10-12 of PA 09_0178.</p> <p>M1) All EPL monitoring records from 2012 are available on Baal Bone’s website. Viewed 2019 Baal Bone spreadsheet, four years’ worth of data, monthly monitoring sheet dated 25/9/19 for LDP1 and all surface water sites</p> <p>M2.1) See response to Sch 3 Cond 10-12 (Air) and Sch 3 Cond 14 and 15 (Water).</p> <p>M2.2) Viewed ALS Dust Gauge Audit 25/6/19 which references AS Standard.</p> <p>M2.3) See response Sch 3 Cond 14 of PA 09_0178.</p> <p>M3) See response to Sch 3 Cond 12 of PA 09_0178.</p> <p>M4) Complaints recorded in CMO, viewed complaint in CMO dated May 2017, contains nature of complaint, actions taken. Response letter sent.</p> <p>M5) Complaints telephone number available on website. Advertised in newsletter. Viewed 2017 newsletter # 10 which has complaints number.</p> <p>M6) Not triggered. No blasting during the audit period</p> <p>R1.1) Viewed the 2018, 2017 and 2016 Annual Returns and confirm these satisfy this condition.</p> <p>R1.2) 2018, 2017 and 2016 Annual Returns contain required information for each reporting period.</p>

Instrument	Status	Comments
		<p>R1.3) Not triggered (per comms). R1.4) Not triggered (per comms). R1.5) Viewed 2018, 2017 submission receipts, with dates submitted respectively 20/2/19, 7/2/18. R1.6) Viewed records of Annual Returns submitted to EPA dating back at least four years. R1.7) Viewed 2016, 2017 and 2018 Annual Returns and submission receipts from the EPA. R2) See response to Sch 3 Cond 1 of PA 09_0178. R3) Not triggered (EF pers comms) G1) Viewed a copy of license at the premises. E1) Not triggered (EF pers comms)</p>
CCL 749	Not Compliant	<p>1) Not triggered 2) See response to Sch 3 Cond 1 of PA 09_0178. 3) The current MOP “<i>Baal Bone Underground Mining Operations Plan Feb 2016 – December 2019</i>” was approved by letter from the Department of Industry Resources and Energy on 9 May 2016. Within the audit period, there has been four amendments to the current MOP with the latest amendment being approved by letter from the Department of Planning and Environment Resources Regulator on 17 September 2019. 4) An Annual Review has been prepared annually during the audit period. 5) Section 6 of the C&M MOP outlines Completion Criteria for each Domain, whereas Section 7.3 of the Annual Review reports on the status of each Rehabilitation Phase. Recommendations: Going forward, ensure the Domain’s listed table in Section 7.4.2 of the Annual Review correlate to Section 6 of the draft Closure MOP. 6) See response to Schedule 3 Condition 1 of PA 09_0178 in regards to Cliff Fall incidents. 7) See response to Schedule 3 Condition 24 and 25 of PA 09_0178. 8) Not triggered (EF pers comms) 9a) Viewed “<i>Variation of Labour and Expenditure Conditions on Consolidated Coal Lease CCL749</i>” letter (18/643660) from DRG dated 10 September 2018 which permits omission of Condition 9 in respect to labour and expenditure starting 8 October 2018. 10) Not triggered (EF pers comms) 11) Baal Bone have not explored during the audit period, however are still required to submit an Exploration Report under this condition. Viewed Baal “<i>Bone Colliery Annual Exploration Report</i>” for the following periods; 4 April 2018 – 5 April 2019, 2017-2018 (EROL RP0018732), 2016-2017 (EROL RP0016942) 12) Note 13a) Note 13b) Not triggered (EF pers comms) 13c) Noted</p>

Instrument	Status	Comments
		<p>14) Not triggered (EF pers comms)</p> <p>15) Not triggered (EF pers comms)</p> <p>16) There were no holes drilled excavations during the audit period. There is no stock on site. As per response to SoC 16, eleven adits have been sealed.</p> <p>17) Not triggered (EF pers comms)</p> <p>18) See response to Schedule 3 Conditions 9-12 and 14-22</p> <p>19) 15) Not triggered (EF pers comms)</p> <p>20) There have been no complaints from Forestry Corporation of NSW</p> <p>21) During the audit period, a subsidence crack was found across an access track. The cracking did not exceed the LW 29-31 SMP TARP. The subsidence cracking was filled with soil and a report was prepared. Viewed photo dated 24/7/18 showing subsidence cracking repair.</p> <p>22) Not triggered (EF pers comms)</p> <p>23) Not triggered (EF pers comms)</p> <p>25) No coal mined in audit period. Viewed "Suspension of Mining Operations Letter Ref 11/4957" dated 13 July 2017 which approves suspension of mining operations until 12 July 2021 (however we note coal mining development consent is not permitted after December 2019).</p> <p>26) Noted</p> <p>28) Viewed Liberty Bond dated 27/7/16 with no expiry for the amount of \$13,022,000. Viewed Simitomo SMBC dated 10/8/16 for the amount of \$10,234,000. Viewed Simitomo SMBC dated 26/2/18 for the amount of \$537,000.</p> <p>30) Viewed "Suspension of Mining Operations Letter Ref 11/4957" dated 13 July 2017 which approves suspension of mining operations until 12 July 2021.</p> <p>31) Viewed the DRG Minview Webtool, no overlapping petroleum titles within this CCL</p> <p>32a) This condition satisfied by the implementation of Water Management Plan and Environment Protection Licence (EPL) 765.</p> <p>32b) There were no complaints from the Environment Protection Authority during the audit period.</p> <p>32c) There were no complaints or notices from the Sydney Catchment Authority during the audit period.</p> <p>32e) There is an onsite Sewage Treatment Plant, discharge (LDP2) is operated in accordance with EPL 765. LDP2 is dry and there has been no discharge from this point. Recommend the Warragamba Outer Catchment Area be shown on a draft Closure MOP figure to ensure that work in relation to rehabilitation is completed before termination of the authority.</p> <p>33) The lands shown by green on colour on the plan annexed and marked B have the following infrastructure in place: Admin Building, Workshop and Stores, Washery, CHPP workshop, Diesel Workshop, Switching Shed and Rail Loop. Baal Bone has recently consulted with the District Soil Conservationist Lithgow regarding this condition and related infrastructure (email to Chris Howath dated 4/12/19); however, consultation has not occurred at a minimum of six-monthly intervals. Recommend DSCL is consulted six-monthly for site-wide rehabilitation or written exemption sought from DRG if it can be justified.</p>

Instrument	Status	Comments
		34) As discussed in Schedule 3 Condition 24, the only rehabilitation during the audit period was the filling of adits. The only consultation to be undertaken with the District Soil Conservationist Lithgow (DSCL) during the audit period was an email to Chris Howath dated 4/12/19. 35) Not triggered (EF pers comms)