



Independent Environmental Audit 2019

Bulli Seam Operations

20 December 2019

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Bulli Seam Operations



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CONTENTS

EXECUTIVE SUMMARY	I
1. INTRODUCTION	1
1.1 Overview of Operations and Approvals	1
1.1.1 Description of primary processes undertaken during the audit period	2
1.2 Audit Objectives	3
1.3 Audit Scope	3
1.4 Audit Criteria	4
1.5 Limitations of this report	4
2. AUDIT METHODOLOGY	5
2.1 Methodology and Process	5
2.2 Agency and Community Consultation	6
2.3 Classification of Audit Findings	9
3. AUDIT FINDINGS.....	10
3.1 Previous audit follow up	10
3.2 Complaints summary	16
3.3 Incident Summary	16
3.4 Environmental monitoring performance	16
3.4.1 Noise	16
3.4.2 Air Quality	16
3.4.3 Water Management	16
3.5 Management Plan Adequacy	17
3.6 Environmental Protection Licence	17
3.7 Consolidated Coal Leases	17
3.8 Compliance with regulatory instruments	17
4. CONCLUSION.....	30
 APPENDIX A CONDITIONS OF APPROVAL, ENVIRONMENTAL PROTECTION LICENCE AND MINING LEASE COMPLIANCE TABLES	
 APPENDIX B DEPARTMENTAL CORRESPONDENCE	

List of Tables

Table E.1 Summary of Audit Findings	i
Table 2.1 Agency and Stakeholder Consultation Summary	7
Table 3.1 Summary of 2017 Audit Findings	11
Table 3.2 Summary of Plan Implementation Review Findings	15
Table 3.3 Summary of 2019 Audit Findings	18
Table 3.4 Summary of 2019 Audit Findings – Management Plans	27
Table 4.1 Summary of Audit Findings	30

EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned to perform an Independent Environmental Audit (IEA) of the Bulli Seam Operations ('BSO') located 25km north-west of Wollongong, NSW on behalf of South32's Illawarra Metallurgical Coal (herein referred to as 'Illawarra Coal'). The primary purpose of the audit was to satisfy the Department of Planning, Industry and Environment (DPIE) Ministers' Conditions of Approval (CoA) Project Approval number PA 08_0150, which requires completion of an independent audit every three years from the date of the approval. This audit was also undertaken to meet the requirements of Condition 18 of EPBC 2010/5350. The audit period assessed in this IEA is 4 February 2017 through 24 October 2019 (the date the site visit was completed as part of the audit).

The audit included a review of:

- DPIE, Ministers Conditions of Approval PA 08_0150 (Modification 2) issued 28 October 2016;
- Environmental Protection Licence (EPL) 2504;
- Consolidated Coal Leases 724 and 767 with reference to Mining leases 1383, 1433, 1473, 1574, 1678 and 1698; Coal leases 388 and 381 and Mining purposes leases 200 and 201;
- EPBC Approvals 2010/5350 and 2010/5722; and
- Implementation of Management Plans developed as part of the Ministers Conditions of Approval.

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

A qualitative risk assessment was also completed on the findings, consistent with AS/NZS 4360:2004 Risk management and HB 436:2004 Risk Management Guidelines Companion to AS/NZS 4360:2004 and as described in the Department of Planning & Environment publication "Independent Audit Guidelines" issued October 2015. The number of non-conformances with the statutory conditions and implementation of the management plans is summarised in *Table E1* below.

Table E.1 Summary of Audit Findings

Review	Non-compliances (NC)	Administrative non-compliance (ANC)	Observations (Obs NC)	Observations (Obs C)
Statutory Instruments	12	11	1	3
Implementation of Plans	-	3	-	2

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

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned to perform an Independent Environmental Audit (IEA) of the Bulli Seam Operations (BSO). The mine is located 25 km north-west of Wollongong, New South Wales (NSW), on behalf of South32's Illawarra Metallurgical Coal (herein referred to as 'Illawarra Coal'). The primary purpose of the audit was to satisfy the Department of Planning, Industry and Environment (DPIE)¹ Ministers' Conditions of Approval (CoA) Project Approval number PA 08_0150 (Modification 2), which requires completion of an independent audit every three years from the date of the approval. This audit was also undertaken to meet the requirements of Condition 18 of EPBC 2010/5350. The audit period assessed in this IEA is 4 February 2017 through to 24 October 2019 (the date the site visit was completed as part of the audit). The audit must:

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

The Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

1.1 Overview of Operations and Approvals

The NSW Government granted approval for the Bulli Seam Operations (BSO) Project in December 2011. The BSO combined future mining operations and provided for the continuation of coal mining operations at Appin Mine and West Cliff Colliery. The Bulli Seam underground longwall mining operations have transitioned wholly to the Appin areas (Area 9 and Area 7) following completion of longwall mining activities at West Cliff in early 2016.

Illawarra Metallurgical Coal is 100 per cent owned by South32 Limited and operates BSO.

Key areas associated with the current Appin operations include the Appin Colliery - East (Appin East) Pit Top site, the Appin Colliery - West (Appin West) Pit Top site, the Appin East No.1 and No.2 fan site, the Appin East No.3 fan site, the Appin West No.6 fan site and Appin Colliery – North (Appin North) formerly West Cliff Colliery, including the West Cliff Coal Preparation Plant.

BSO was granted approval (Project Approval 08_0150) by the NSW Government in December 2011 through to 31 December 2041. Construction and operation of ventilation shaft No. 6 was approved 4 May 2011 under Project Approval 10_0079. The Appin East Mine Gas Safety Management project was approved under a modification to the BSO Project Approval dated 28 October 2016. This modification also combined the ventilation shaft No. 6 Project Approval into the BSO Project Approval.

The approval allows for the extraction of 10.5 million tonnes Run of Mine coal per annum and transport of no more than 9.3 million tonnes of product coal in a financial year.

EPBC approval (2010/5350) was granted in May 2012 to expand underground mining operations at the existing Appin Coal Mine and West Cliff Colliery.

¹ Formerly the Department of Planning and Environment (DP&E).

The BSO is covered by the one Environment Protection Licence (EPL) No. 2504. The EPL was varied in September 2019 to incorporate a number of minor changes, including changing the property name to Appin Mine.

The BSO includes two Consolidated Coal Leases (CCL):

- CCL 767 associated with Appin Mine and West Cliff Colliery covering an area of 20,780 hectares to a maximum depth of 900m below Australian Height Datum (AHD).
- CCL 724 associated with West Cliff Colliery only covering an area of 2,721 hectares to a maximum depth of 900m below AHD.

1.1.1 Description of primary processes undertaken during the audit period

Activities on-site predominately include the following: Earthworks and associated haulage; Coal extraction (annual volumes FY19 – 3.660 MT, FY18 – 1.771 MT, FY17 – 3.99 MT); Coal stockpiling; Coal haulage (annual volumes FY19 – 3.037 MT, FY18 – 1.381 MT, FY17 – 5.73 MT); Coal processing; Emplacement works; Water Management; Maintenance Facility; and Waste Management.

1.1.1.1 Maintenance Facility

Maintenance of plant and equipment occurs within the maintenance workshops located at Appin North, East and West pit tops. The workshops were observed to be on hardstand. Fuel, oils and chemicals were observed stored outside the workshops generally within bunded areas or on bunded pallets. A number of bunds were observed to contain rainwater and other debris, reducing the bund capacity. A number of bunds, such as at the waste oil storage area at Appin East appeared to have insufficient capacity to contain all the products stored (Refer Table A1 – CoA Sch.2 C1)

1.1.1.2 Waste Management

Wastes produced at the site include general waste, scrap metal, timber, oily water and hydrocarbon impacted wastes, which are stored in designated areas at the pit tops and removed from site as required by licenced contractors. It was noted that a new contract has been negotiated with Cleanaway (the current waste contractor) in September 2019 who will manage the waste management areas going forward.

Sewage is treated on-site at Appin West and North and effluent used for irrigation on site. Appin East is connected to the town sewerage system.

Coal wash is emplaced at the West Cliff Emplacement Area (Appin North).

1.1.1.3 Rehabilitation

Progressive rehabilitation has been ongoing during the audit period at the West Cliff Coal Wash Emplacement Area. Other rehabilitation undertaken includes grouting of gas wells and rehabilitation through topsoil emplacement and grass seeding.

The BSO Mining Operations Plan (MOP) addresses the rehabilitation requirements and objectives for all domains associated with the combined BSO sites. The MOP outlines a range of post land use options that are potentially available for the BSO sites upon completion of operations. The future final land use objectives are yet to be decided upon and agreed due to timing of the eventual closure of BSO related sites. Closure commitments are not triggered during the audit period.

1.1.1.4 Water Management

Water management at BSO is undertaken in accordance with the approved Surface Water Management Plan. The site has a network of water dams, pipelines and channels. Clean and potentially contaminated stormwater is separated at each of the sites. Potentially contaminated stormwater is treated, reused and / or discharged via a licensed discharge point.

BSO has reported one non-compliance with water discharge in the audit period. The incident occurred when a pump was replaced with one of a higher capacity resulting in overdosing of ferric chloride to the storage pond and discharge of contaminated water to the George's River. BSO received two Penalty Notices from the EPA in February 2019 in relation to the incident (Refer Table B1, Sch.3 L1.1).

Potable water supplied by Sydney Water is used for drinking, bathhouse facilities and surface cooling systems. A potable water supply is also used to temporarily dilute discharge from Brennans Creek Dam to reduce salinity levels in accordance with the EPL.

1.2 Audit Objectives

The primary objectives of the audit included:

- assessment of the environmental performance of the site, and its effects on the surrounding environment and sensitive receivers;
- assess whether the site is complying with the requirements in the CoA, and any other relevant consents/approvals (including any assessment, plan or program required under these consents/approvals);
- review the adequacy of the BSO Environmental Management Strategy and Environmental Monitoring Program required under the abovementioned consents/approvals; and
- identify opportunities for improved environmental management and recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.

1.3 Audit Scope

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

- the audit to be carried out in accordance with AS/NZS ISO 19011:2014: Guidelines for auditing management systems;
- review of compliance against the documentation identified in CoA (as it relates to the current activities at the Appin Mine) which included:
 - document review of compliance against the CoA;
 - a site inspection to assess compliance against field based CoA;
 - review of supporting plans developed as part of the Consent Conditions and assessment of their adequacy towards effective environmental performance;
 - draft report with results of compliance assessment; issued for comment to South32; and
 - a final report issued for submission to the DPIE.

The audit covers the period 4 February 2017 to 24 October 2019 and is limited to assessing the activities completed during the audit period.

1.4 Audit Criteria

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

- Conditions of Approval PA 08_0150 (Modification 2) including Statements of Commitments;
- EPL 2504;
- Consolidated Coal Leases 724 and 767 with reference to Mining leases 1383, 1433, 1473, 1574, 1678 and 1698; Coal leases 388 and 381 and Mining purposes leases 200 and 201;
- EPBC approvals 2010/5350 and 2010/5722;
- Implementation of Management Plans:
 - Mining Operations Plan (Sch.2 C5);
 - Heritage Management Plan (Sch.4 C23);
 - Air Quality and Greenhouse Management Plan (Sch.4 C12);
 - Environment Management Strategy (Sch.6 C1);
 - Noise Management Plan (Sch.4 C5);
 - Surface Water Management Plan (Sch.4 C16);
 - Biodiversity Management Plan (Sch.4 C36); and
 - Waste Management Plan (Sch4 C29).
- monitoring results and trends;
- comparison of monitoring results against regulatory limits and CoA limits (where applicable);
- community complaints with review completed for any trends and identifying the source of an established trend; and
- regulatory actions including any letters, penalty notices and prosecutions.

1.5 Limitations of this report

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

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

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

This report has been prepared solely for use by, and is confidential to, the client and ERM accepts no responsibility for its use by other persons. This report is subject to copyright protection and the copyright owner reserves its rights. This report does not constitute legal or financial advice.

2. AUDIT METHODOLOGY

2.1 Methodology and Process

The audit comprised a site inspection, interviews with key personnel and review of records and other related documentation during the dates 21 to 24 October 2019.

The audit process included the following primary components:

- development of a Terms of Reference developed which included:
 - audit scope and objectives;
 - date and location of audit;
 - members of audit team;
 - list of people to be audited; and
 - list of reference documents and audit criteria;
- a project inception meeting was held on 16 September 2019 to confirm details of the Terms of Reference, site inspection logistics and request for documentation required prior to the site inspection component of the audit;
- an opening meeting was held on 21 October 2019 at site to confirm the audit objectives and scope for the site inspection. Attendees included:
 - Nicole Whittaker (ERM Lead Auditor);
 - Heather McKay (ERM Support Auditor);
 - Chris Schultz (Lead Environment);
 - Casey Bishop (Specialist Environment); and
 - Kai Koosmen (PSM, Subsidence Specialist).
- Site inspections were undertaken between 21 October and 24 October 2019;
- Any identified gaps/issues were documented and followed up with site personnel and additional information was requested as required. The following personnel provided information and/or accompanied ERM during the site inspection;
 - David Gregory – Specialist Environment
 - Simon Pigozzo – Specialist Environment
 - Joshua Carlon – Coordinator Environment
 - Matthew Johnson – Principal Infrastructure Protection & Legacy Sites
 - Amanda Blunt - Specialist Community
 - Gary Brassington - Manager Mining Approvals
 - Luke Williams - Surface Planner
- A closeout meeting was held on 24 October 2019 to discuss initial findings and recommendations. Attendees were as per the opening meeting with the exception of Kai Koosmen;
- Preparation of a draft audit report;
- Response to comments developed by South32; and
- Preparation of a final audit report (this report).

All members of the audit team approved by the Department of Planning, Industry and Environment were involved in the audit.

2.2 Agency and Community Consultation

ERM consulted with the agencies and stakeholders as required including Department of Planning, Industry and Environment (DPIE) (including its various departments such as Compliance, Post approvals, Resources Regulator and Biodiversity and Conservation Division), Illawarra Coal Community Consultative Committee, New South Wales Environment Protection Authority (NSW EPA), as well as the Campbelltown City Council and the Wollondilly Shire Council. Emails were issued on 30 September 2019, with a follow up email submitted on 15 October to those that had not yet replied. Responses are outlined in *Table 2.1*.

Table 2.1 Agency and Stakeholder Consultation Summary

Agency/Stakeholder	Method	Consultation summary	Response	Location Addressed in Report
Department of Planning, Industry and Environment (DPIE) – Compliance	Email on 30 September 2019	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	DPIE suggested the following areas of interest: <ul style="list-style-type: none"> Noise 	Annex A – CoA Sch.4 (4.1-4.3)
Department of Planning, Industry and Environment (DPIE) – Resource Regulator	Email on 30 September 2019	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	DPIE suggested the following areas of interest: <ul style="list-style-type: none"> Compliance with mining leases 	Annex C
WaterNSW	Email 30 September 2019	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	Response received. No further requirements.	N/A
Commonwealth Department of Environment and Energy	Email 30 September 2019	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	Response received. No further requirements.	N/A
New South Wales Environment Protection Authority (NSW EPA)	Email on 30 September 2019	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	Response received. No further requirements.	N/A
Campbelltown City Council	Email 30 September 2019	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	Response received. No further requirements.	N/A
Wollondilly Council	Email 30 September 2019	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	No response received.	N/A

Agency/Stakeholder	Method	Consultation summary	Response	Location Addressed in Report
Community Consultative Committee (CCC)	Email 30 September 2019	Provision of Audit Terms of Reference, introduction to team, outline date of audit and provide opportunity to comment.	<p>CCC provided a response via email on 4 October 2019 and a follow-up email on 23 October 2019 and suggested the following areas of interest:</p> <ul style="list-style-type: none"> ■ Rehabilitation of North Cliff Mine ■ Subsidence ■ Air quality ■ Water quality ■ Noise impacts ■ Waste management ■ Heritage restoration 	<p>Rehabilitation Annex A – Sch.4 (4.31-4.33)</p> <p>Subsidence Annex A – Sch.3</p> <p>Air quality Annex A – Sch.4 (4.9) Annex B – EPL compliance</p> <p>Water Quality Annex A – Sch.4 (4.15-4.16) Annex B – EPL Compliance</p> <p>Waste Management Annex A – Sch.4 (4.28-4.29) Annex B – EPL Compliance</p> <p>Heritage Annex A – Sch.3 and Sch.4 (4.23)</p>

In each case, an email was sent to representatives of each agency requesting feedback on those issues considered most relevant by their Department at the time of the audit. The consultation outlining the terms of reference was provided prior to the site inspection to obtain feedback and draw attention to any key issues, within the agreed scope of the audit. The Departmental correspondence is provided in *Appendix B*.

Responses received required the audit to focus on compliance against CoA as well as compliance with the Mine Operations Plan, rehabilitation, air quality, subsidence and noise. These areas are captured in the audit findings.

2.3 Classification of Audit Findings

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

- **Compliant (C):** the intent and all elements of the audit criteria requirements have been complied with within the scope of the audit.
- **Not Verified (NV):** insufficient verifiable evidence to demonstrate that the intent and all elements of the audit criteria have been complied with within the scope of the audit.
- **Non-compliant (NC):** Failure to meet the audit requirements, failure to achieve the field performance outcomes identified in documentation, or ineffective environmental management of the activity.
- **Administrative Non-compliance (ANC):** technical conformance with audit requirements that would not impact on performance and is considered minor in nature (e.g. report submitted but not on the due date, failed monitor or late monitoring session). This would not apply to performance-related aspects (e.g. exceedance of a noise limit) or where a requirement had not been met at all (e.g. noise management plan not prepared and submitted for approval). 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).
- **Observation (O):** Observations are recorded where the audit identified issues of concern which do not strictly relate to the scope of the audit or assessment of compliance.
- **Not Triggered (NT)** – A regulatory approval requirement has an activation or timing trigger that had not been met at the time of the audit inspection, and therefore a determination of compliance could not be made.
- **Note:** A statement or fact, where no assessment of compliance is required.

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

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

- **High:** Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence;
- **Medium:** Non-compliance with:
 - potential for serious environmental consequences, but is unlikely to occur; or
 - potential for moderate environmental consequences, but is likely to occur;
- **Low:** Non-compliance with:
 - potential for moderate environmental consequences, but is unlikely to occur; or
 - potential for low environmental consequences, but is likely to occur.

3. AUDIT FINDINGS

3.1 Previous audit follow up

The last audit was conducted by ERM for the period 1 March 2014 through 3 February 2017. A summary of the May 2017 audit findings and their status is summarised below in *Table 3.1 and Table 3.2*.

Table 3.1 Summary of 2017 Audit Findings

Item No	Assessment Requirement	Comment	2016 Audit Classification	Response/Action	2019 Status
<i>Minister's Conditions of Approval PA 08_0150</i>					
Sch 3.1	If the Proponent exceeds the performance measures in Table 1 and the Secretary determines that: a) it is not reasonable or feasible to remediate the impact or environmental consequence; or b) remediation measures implemented by the Proponent have failed to satisfactorily remediate the impact or environmental consequence; then the Proponent shall provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Secretary.	None identified at this stage. Georges River Remediation Plan of Minor (Level 2) impacts to rock bars under review. Assessed as compliant pending outcomes of Georges River Remediation Plan.	Obs	Noted. Will review once remediation works have commenced.	Deemed Compliant during this audit. The GRRP has been resubmitted to government and is under review. Remediation works are not permitted until the plan is approved.
Sch 4.1	From the end of June 2013, the Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 1 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.	Attended monitoring conducted on a quarterly basis. Non-compliance recorded at AE-NS4 - Night time LA1 criteria exceeded 4 September 2014 considered to be associated with loading at site and compressor noise. These were investigated and actions undertaken where required.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Report (AEMR) process.	Addressed and deemed Compliant during this audit
Sch 4.2	From the end of December 2014, the Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.	Attended monitoring conducted on a quarterly basis. Non-compliance recorded with night time LA1 criteria exceeded. Four non-compliance recorded at AW-NS3, one at AW – NS4 and six at AW – NS5. These were investigated and actions undertaken where required.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Report (AEMR) process.	Deemed Non-compliant during this audit due to recorded noise exceedances.
Sch 4.11	The Proponent shall: (a) implement best practice air quality management on site, including all reasonable and feasible measures to minimise the off-site odour, fume and dust emissions generated by the project, including from any spontaneous combustion on site, (b) minimise any visible air pollution generated by the project; and (c) regularly assess the air quality 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.	No exceedance of EPL long term particulate matter criteria at private residences reported during the audit. However, a high black dust plume was observed from some distance (while driving to VS#6) emanating from coal handling activities at the West Cliff CPP stockpile. There was a moderate to high breeze at the time, noting that dust was not observed from other areas of the site either from afar or during the site inspection earlier in the day. The dust suppression cart was active at the site during the site inspection.	Obs	Noted. Will continue to manage dust in accordance with Air Quality Management Plan.	Addressed and deemed Compliant during this audit
Sch 4.15	The Proponent shall ensure that all surface water discharges from the site (including from the Brennans Creek Dam) comply with the discharge limits (both volume and quality) set for the project in any EPL.	Refer EPL Compliance Table, A.2, EPL 2504 conditions under L2.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Returns process.	Deemed Non-compliant during this audit due to discharges to Georges River
Sch 4.20	The Proponent shall prepare and undertake an Underground Coal Wash Emplacement Trial for the project to the satisfaction of the Secretary. The design of the trial must: (a) be undertaken in consultation with OEH;	Revised trial submitted to the Department, October 2013. As indicated in previous IEA approval by December 2012 was not achieved. The revised Plan proposed to defer the trial for 5 years for the following reasons: The declaration of Dharawal National Park has eliminated a	ANC	The underground coal wash trial plan was submitted to DPE for approval prior to December 2012. There is no requirement for it to be approved prior to December 2012. A deferral of 5 years was granted for the trial.	Deemed as Not-verified during this audit as correspondence is ongoing with the regulator

Item No	Assessment Requirement	Comment	2016 Audit Classification	Response/Action	2019 Status
	<p>(b) be submitted to the Secretary for approval by the end of December 2012;</p> <p>(c) contain a two year program to undertake both pilot scale and demonstration scale trials of underground coal wash disposal;</p> <p>(d) include commitments for ongoing development and/or implementation of underground emplacement options following this two-year trial; and</p> <p>(e) include 6 monthly progress reporting to the Department and OEH.</p>	<p>significant area of potentially suitable roadways for underground coalwash emplacement; BSO's focus on diverting material from surface emplacement via alternative beneficial uses continues; Following discussions with the Department, further commitments have been included in the Plan to report on the research annually in the AEMR during the deferred period.</p>			
Sch 6.11	<p>From 30 June 2012, the Proponent shall:</p> <p>(a) make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> the documents referred to in Condition 2 of Schedule 2; all current statutory approvals for the project; all approved strategies, plans and programs required under the conditions of this approval; a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs; a complaints register, updated on a monthly basis; minutes of CCC meetings; the annual reviews of the project; any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit; any other matter required by the Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>	<p>Required documentation available on website at time of the audit however it is noted that only the previous year's annual review was available on the website.</p>	Obs	Upload previous years AEMRs onto Regulatory website.	Deemed Compliant during this audit.
<i>Statement of Commitments</i>					
-	<p>ICHPL Commitment</p> <p>ICHPL will fund and commence development of a pilot-scale research and development trial for underground coal wash emplacement technology at the Project, to the satisfaction of the Secretary. The trial will draw upon available information/technical data from similar investigations and trials in the Southern Coalfield and internationally.</p> <p>The results of the trial will be used to inform a value analysis of the feasibility of a portion of the coal wash being emplaced underground at the Project. The value analysis will include consideration of aspects such as:</p> <ul style="list-style-type: none"> practical application and mine safety for underground emplacement at the Project design volumes/rates; infrastructure requirements (including supporting equipment) for underground emplacement; 	<p>Refer Schedule 4, Condition 20 of PA 08_015 (Mod 2)</p> <p>Revised trial submitted to the Department, October 2013. As indicated in previous IEA approval by December 2012 was not achieved.</p> <p>The revised Plan proposed to defer the trial for 5 years for the following reasons: The declaration of Dharawal National Park has eliminated a significant area of potentially suitable roadways for underground coalwash emplacement; BSO's focus on diverting material from surface emplacement via alternative beneficial uses continues; Following discussions with the Department, further commitments have been included in the Plan to report on the research annually in the AEMR during the deferred period.</p>	ANC	Noted. ICH will continue to report in Annual Review process.	Deemed as Not-verified during this audit as correspondence is ongoing with the regulator

Item No	Assessment Requirement	Comment	2016 Audit Classification	Response/Action	2019 Status
	<ul style="list-style-type: none"> water and other materials consumption/use requirements; and consideration of benefits/costs of underground emplacement versus ongoing surface emplacement at the West Cliff pit top. 				
<i>EPL 2504</i>					
L 2.1	For each monitoring/discharge point or utilisation area specified in the table below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	Exceedances were reported in discharge as discussed below.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Returns process.	Deemed as Non-compliant during this audit due to non-compliant discharges to the Georges River
L 2.4	Water and/or Land Concentration Limits: Point 3	AR 2016 reported marginal Oil and Grease exceedance of the prescribed concentration limit. It was reported as unlikely to be an actual breach of the limit.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Returns process.	Deemed as Non-compliant during this audit due to exceedances during the reporting period. It is noted that oil and grease limits have been removed from the recent EPL variation.
L 2.4	Water and/or Land Concentration Limits: Point 10	AR 2015 reported exceedances of the Oil and Grease and EC limits at LDP10. These were investigated and actions undertaken where required.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Returns process.	Addressed and deemed Compliant during this audit.
L 2.4	Water and/or Land Concentration Limits: Point 22	AR 2016 reported marginal Oil and Grease (12mg/L) exceedance of the prescribed concentration limit. An issue with sewage treatment sludge was cited as a possible cause. An aeration system was subsequently installed in sewage lagoons to improve treatment efficiency and reduce sludge production.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Returns process.	Deemed as Non-compliant during this audit due to exceedances during the reporting period. It is noted that oil and grease limits have been removed from the recent EPL variation.
L 2.4	Water and/or Land Concentration Limits: Point 23	AR 2015 reported exceedance of pH limit with result of 9.2pH. Follow-up in-situ retesting and laboratory testing were within the reporting limits. The result was considered likely to be an anomaly from laboratory testing.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Returns process.	Deemed as Non-compliant during this audit due to exceedances during the reporting period. It is noted that oil and grease limits have been removed from the recent EPL variation.
L2.5	Water and/or Land Concentration Limits: Point 24	AR 2016 reported an Oil and Grease (21mg/L) exceedance of the prescribed concentration limit. Cause not clear.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Returns process.	Addressed and deemed Compliant during this audit.
L3.1	For each discharge point or utilisation area specified in the L3.1 of EPL2504, the volume/mass of: a) liquids discharged to water; or; b) solids or liquids applied to the area; must not exceed the volume/mass limit specified for that discharge point or area.	AR 2016 reported electrical conductivity (highest value of 3080 microsiemens per centimetre) exceeding the 80th percentile concentration limit. AR 2016 reported total dissolved solids marginally exceeding (highest value of 1990 milligrams per litre) the 80th percentile concentration limit. AR 2015 reported electrical conductivity exceeding (highest value of 3080 microsiemens per centimetre) the 80th percentile concentration limit. Refer condition U1.1 in relation to Pollution Reduction program.	NC	Noted. No further action required. Non-compliances will continue to be reported in the Annual Returns process.	Addressed and deemed Compliant during this audit.

Item No	Assessment Requirement	Comment	2016 Audit Classification	Response/Action	2019 Status
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	The auditor observed an area for improvement in relation to housekeeping and storage of chemicals and hydrocarbons at the Appin West maintenance yard and laydown. One example included a pallet of chemicals that was observed to not be in a contained or covered area, and contents of the containers was not known as labels had worn off.	Obs	Noted. Illawarra Coal has since addressed auditors concerns. Chemicals and hydrocarbons stored correctly.	Not addressed and deemed Non-compliant during this audit. An additional non-compliance was raised due to Site receiving a warning letter from EPA for an unbunded tank.
M2.3	Water and/or Land Monitoring Requirements Point 36	Samples collected at the required frequency when discharging during the audit period. This condition incorrectly refers to Condition L3.3. It should reference the concentration limits specified in Condition L3.1.	Obs	Illawarra Coal to liaise with EPA to rectify incorrect reference.	Addressed and deemed Compliant during this audit.
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Licence displayed on notice boards, control rooms and on ipick. Noted to be out of date version of the EPL.	ANC	Licences to be printed and placed in Control and on Notice Boards.	Addressed and deemed Compliant during this audit.
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises	Licence displayed on notice boards, control rooms and on ipick. Noted to be out of date version of the EPL.	ANC	As per ICH response for Item EPL2501 , Section G1.1 (Above)	Addressed and deemed Compliant during this audit.
G2.1	Each monitoring and discharge point must be clearly marked by a sign that indicates the EPA point identification number	Appropriate signage was observed at all water discharge monitoring points inspected by the auditor. A PM10 dust monitoring site at Appin Colliery did not have signage clearly marked with the EPA point identification number.	ANC	Audit being conducted to confirm locations of missing signage. Signage to be ordered and installed for missing locations.	Addressed and deemed Compliant during this audit.
U1.1	The aim of this Environment Improvement Program (EIP) is to improve water quality and aquatic health in the Georges River downstream of licenced discharge point 10 (Brennans creek discharge). The licensee must undertake its commitments to works and activities described in the latest controlled version of the document titled "Illawarra Coal, Bulli Seam Operations, Georges River Environmental Improvement Program". The latest version of the document must be displayed on the licensee's website. In addition to the reporting and consultation commitments in document, the licensee must submit a report to the EPA by the due date recommending licence limits for discharge point 10. DUE DATE: 31 DECEMBER 2018 Note: This EIP follows from Pollution Reduction Programs 19 and 20.	The document titled "Illawarra Coal, Bulli Seam Operations, Georges River Environmental Improvement Program" was not uploaded to the licensee's website at the time of the site audit. What appears to be the most current up-to-date report has since been uploaded. The report however is not dated and does not identify the current review or control status. Review of the referenced documents, along with in-field observations and discussions, demonstrates that the licensee is generally meeting the stated commitments to improvement works and monitoring activities	ANC	Add document control details to document and publish on website.	Deemed as Non-compliant during this audit due to report not being delivered by the updated due date (30 June 2019). It is noted there are ongoing discussions with the EPA regarding improvement of water quality in the Georges River.

Table 3.2 Summary of Plan Implementation Review Findings

Section	Assessment Requirement	Comment	Audit Classification	Recommended Action	Status
None raised during previous IEA					

3.2 Complaints summary

Complaints registers for the auditing period were available online and/or for review. There were a number of complaints received during the audit period related to the construction of the Mine Gas Safety Project and operation of vent shaft No. 6. A number of complainants reported a 'damp' odour from the vent shaft.

All complaints have been investigated and action taken as necessary. These are considered to be closed.

3.3 Incident Summary

A review of the incidents was undertaken through a review the South32 incident management system, as well as the notified exceedances. Below outlines the incidents recorded during the audit period:

- A discharge of ferric chloride to the Georges River on 18 October 2018;
- Two incidences of incorrect disposal of contaminated waste in August 2019 ;
- Warning letter received from EPA in March 2019 regarding failure to bund a flocculant tank; and
- Noise exceedances and non-compliances during the quarterly monitoring in March, June and September 2019.

3.4 Environmental monitoring performance

3.4.1 Noise

Quarterly noise monitoring was undertaken by the in-house environment team until 2019. ERM has conducted monitoring since 2019. Noise levels were above the assessment criteria on three occasions during 2019. Exceedances of assessment criteria were recorded at vent shafts No. 1 & 2 in June and September and at Vent shaft 6 in March 2019.

Investigations into the exceedances did not identify any significant issues with the vent fans however there is a plan to replace attenuators and inlet vanes to determine if that will resolve the issue.

Note: Where ERM has conducted Site work, an ethical wall procedure has been put in place between operational support to the Site and the IEA team

3.4.2 Air Quality

Air quality monitoring is undertaken monthly by the Environment Team. The maximum average 24 hour PM₁₀ compliance limit was exceeded on four occasions during the audit period. All maximums were assessed as associated with bush fires and hazard reduction burns in the area.

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

3.4.3 Water Management

3.4.3.1 Surface Water

Surface water management comprising water storage dams, sediment basins and clean / dirty surface water drains appeared to be in place and established as per the Surface Water Management Plan.

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

3.5 Management Plan Adequacy

The Management Plans for the site were reviewed and the adequacy in meeting the relevant approval requirements was assessed in view of current operations at the site. The site's Management Plans underwent review and approval during the audit period as part of the governance program. In general, Management Plans were considered to be appropriate for the site's operations at the time of the site visit. The findings of the Management Plan review are outlined in *Table 3.5* and *Appendix A*.

3.6 Environmental Protection Licence

The site operates under Environment Protection Licence (EPL) 2504 issued to Endeavour Coal Pty Ltd for the operation of Appin Mine. The site submitted Annual Returns to the EPA, as required for the audit period. The following non-compliances were noted:

2018:

- EPL M2.3 – The non-compliance was raised as BOD exceeded licence limits at Point 22 in August 2017.
- EPL M2.3 – The non-compliance was raised as a dust deposition bottle was destroyed by the tripod tipping over in July 2017.

2019:

- EPL B2 – The non-compliance was raised as oil and grease exceeded the licenced limit for December 2018.
- EPL B2 – The non-compliance was raised as total suspended solids (TSS) exceeded the licenced limit for March 2018.
- EPL O2.1 – The non-compliance was raised as ferric chloride was discharged into the Georges River.
- EPL L1.1 - The non-compliance was raised as ferric chloride was discharged into the Georges River.

Findings identified against the site's EPL are outlined in *Table 3.4* and *Appendix A*.

3.7 Consolidated Coal Leases

Appin Mine lies within the Consolidated Coal Leases (CCLs) 724 and 767 issued to Endeavour Coal Pty Ltd on 4 July 1991 and 29 October 1991. Appin Mine is wholly owned and managed by South32.

One non-compliance and three administrative non-compliances were noted. The non-compliance relates to the compliance exceedances with criteria stipulated within the Conditions of Approval relating to air quality and water discharges. The administrative non-compliances relate to the absence of formal documents indemnifying landowners (such as the Crown and Wollongong Council) against impacts from mining. The Mining Lease conditions and the summary of audit findings are provided in *Table 3.4* and *Appendix A*.

3.8 Compliance with regulatory instruments

A compliance check of the CoA, EPL, CCL and EPBC approval conditions as well as management plan review has been completed and is provided in Appendix A. Non-compliances and observations for each component are summarised in *Table 3.4* and *Table 3.5*.

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

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

Table 3.3 Summary of 2019 Audit Findings

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
<i>Minister's Conditions of Approval PA 08_0150</i>				
2.1.	In addition to meeting the specific performance criteria established under this approval, 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.	<p>The audit team observed inadequate storage of chemicals, oils and waste oil including bunds filled with water and other debris, bunds with insufficient capacity and drains to sumps blocked at the maintenance workshops, laydown areas and waste storage areas at Appin East and West.</p> <p>A bund, sump and oily water management procedure has been developed and it is understood a review of facilities has been conducted in accordance with the procedure. Actions are to be prioritised and implemented on a risk basis and capital availability.</p>	Obs-NC	Implement the actions from the review.
2.12.	The Proponent shall ensure that all the plant and equipment used on site is: <ol style="list-style-type: none"> maintained in a proper and efficient condition; and operated in a proper and efficient manner. 	<p>A SAP maintenance system is in place for preventative maintenance scheduling, execution and close out. A review of scheduled versus completed maintenance is done every Monday and rescheduling undertaken as necessary.</p> <p>Evidence of maintenance of subcontractor vehicles was also sighted by the auditor.</p> <p>New maintenance plans are being developed for bund checks, but have not yet been finalised and added to SAP.</p> <p>New metering at LDP24 is currently undergoing commissioning and will also need maintenance plans to be developed and added to SAP maintenance system.</p> <p>All personnel have access to system to add maintenance requests.</p> <p>The environment team conduct weekly and monthly inspections at Appin North, East and West. Inspections are recorded in G360. The Environment Specialists can raise maintenance work orders directly from G360 during the inspection.</p>	Obs - C	Ensure maintenance plans and preventative maintenance schedules are set up in SAP for bund checks and new metering at LDP24.
3.9	<p>The Proponent shall prepare and implement a program to improve its prediction and understanding of subsidence impacts (in particular sub-surface impacts and impacts on groundwater resources), to the satisfaction of the Secretary. This program must be prepared in consultation with DRE and be submitted to the Secretary for approval by 30 September 2012 and must include proposals for:</p> <ol style="list-style-type: none"> testing (including core testing and in situ testing) to further define the mechanical, hydrogeological and geochemical properties of rock strata within each longwall domain, including: <ul style="list-style-type: none"> testing and validation of assumptions regarding regional continuity of modelled hydraulic properties (including mass porosity and permeability); identifying hydraulic properties of rock strata close to water-dependent ecosystems; and identifying the presence and distribution of iron-bearing minerals that might contribute to surface water quality impairment; installation of a regional network of deep pore pressure monitoring bores with vertical arrays of pore pressure transducers to assess and quantify the height and impacts of subsurface fracturing; a census of boreholes which may be impacted by subsidence, the gathering of relevant borehole and groundwater quality data and a regular monitoring program; regular enhancement, calibration and verification of the project's regional groundwater model, and the further development of this model on a mining-domain scale; and regular recalibration of methodologies and models used for subsidence effect and impact prediction, as they are applied within the project area. <p><i>Note: Results of this program are to be incorporated within subsequent Extraction Plans, including the subplans required under condition 5(g)-(l) above.</i></p>	<p>South32 advised that the Environmental Research Program (ERP) was submitted to the Department on 19 September 2012 but have not received approval to-date. The ERP has been implemented and Extraction Plans updated to include the results.</p>	ANC	Recommend to confirm with DPIE that the ERP is approved or confirm the actions necessary to obtain approval.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action																																																																																																						
4.2.	<p>From the end of December 2014, the Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.</p> <p><i>Table 2: Noise Criteria dB(A)</i></p> <table border="1"> <thead> <tr> <th colspan="2">Location</th> <th>Day</th> <th>Evening</th> <th colspan="2">Night</th> </tr> <tr> <th>Area</th> <th>Receiver Number</th> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{A1} (1 min)</th> </tr> </thead> <tbody> <tr> <td>Appin West Receivers south-west of Appin West</td> <td>1-7, 9-11, 13, 184, 188-189</td> <td>39</td> <td>39</td> <td>35</td> <td>49</td> </tr> <tr> <td>Appin West receivers near Hume Highway</td> <td>185-187, 190</td> <td>35</td> <td>35</td> <td>35</td> <td>53</td> </tr> <tr> <td rowspan="2">All other Appin West Receivers</td> <td>14, 26</td> <td>45</td> <td>45</td> <td>35</td> <td rowspan="2">53</td> </tr> <tr> <td>15-25, 27-48, 50-56</td> <td>43</td> <td>43</td> <td>35</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">Location</th> <th>Day</th> <th>Evening</th> <th colspan="2">Night</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Appin No.3 Receivers</td> <td>58, 67, 71, 72</td> <td>41</td> <td>41</td> <td>41</td> <td rowspan="4">49</td> </tr> <tr> <td>68, 74, 75</td> <td>40</td> <td>40</td> <td>40</td> </tr> <tr> <td>69, 70, 76</td> <td>39</td> <td>39</td> <td>39</td> </tr> <tr> <td>217-218, 233, 279-282</td> <td>35</td> <td>35</td> <td>35</td> </tr> <tr> <td rowspan="4">Appin No.1 and No.2 Receivers</td> <td>82, 91, 216</td> <td>42</td> <td>42</td> <td>42</td> <td rowspan="4">50</td> </tr> <tr> <td>83, 85</td> <td>41</td> <td>41</td> <td>41</td> </tr> <tr> <td>78, 84, 86-90, 199</td> <td>40</td> <td>40</td> <td>40</td> </tr> <tr> <td>212-215, 226, 228-230, 232, 234, 235</td> <td>35</td> <td>35</td> <td>35</td> </tr> <tr> <td rowspan="3">Appin Township</td> <td>136, 137, 139, 142, 143</td> <td>44</td> <td>44</td> <td>44</td> <td rowspan="3">52</td> </tr> <tr> <td>135</td> <td>43</td> <td>43</td> <td>43</td> </tr> <tr> <td>All other privately owned property</td> <td>44</td> <td>44</td> <td>44</td> </tr> <tr> <td>Douglas Park</td> <td>All privately owned residences</td> <td>45</td> <td>45</td> <td>39</td> <td>49</td> </tr> <tr> <td colspan="2">All other privately owned land (excluding receivers in Table 3)</td> <td>35</td> <td>35</td> <td>35</td> <td>45</td> </tr> </tbody> </table>	Location		Day	Evening	Night		Area	Receiver Number	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)	Appin West Receivers south-west of Appin West	1-7, 9-11, 13, 184, 188-189	39	39	35	49	Appin West receivers near Hume Highway	185-187, 190	35	35	35	53	All other Appin West Receivers	14, 26	45	45	35	53	15-25, 27-48, 50-56	43	43	35	Location		Day	Evening	Night		Appin No.3 Receivers	58, 67, 71, 72	41	41	41	49	68, 74, 75	40	40	40	69, 70, 76	39	39	39	217-218, 233, 279-282	35	35	35	Appin No.1 and No.2 Receivers	82, 91, 216	42	42	42	50	83, 85	41	41	41	78, 84, 86-90, 199	40	40	40	212-215, 226, 228-230, 232, 234, 235	35	35	35	Appin Township	136, 137, 139, 142, 143	44	44	44	52	135	43	43	43	All other privately owned property	44	44	44	Douglas Park	All privately owned residences	45	45	39	49	All other privately owned land (excluding receivers in Table 3)		35	35	35	45	<p>Attended noise monitoring is conducted on a quarterly basis. Since 2019 noise monitoring has been conducted by ERM, prior to which it was conducted internally.</p> <p>Noise levels were above the assessment criteria on three occasions during 2019. Exceedances of assessment criteria were recorded at Appin No. 1 & 2 in June and September and at Vent shaft 6 in March 2019.</p> <p>Investigations into the exceedances did not identify any significant issues with the vent fans however there is a plan to replace attenuators and inlet vanes to determine if that will resolve the issue. No regulatory action has been taken.</p>	NC	Continue to investigate sources of noise exceedances and implement corrective actions.
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Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
	However, these criteria do not apply if the Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.			
4.14.	<p>The Proponent shall provide a compensatory water supply to any owner of privately-owned land whose water supply is adversely impacted (other than an impact that is negligible) as a result of the project, in accordance with the approved Surface Water Management Plan.</p> <p>The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the project. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.</p> <p>If the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.</p> <p>If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent shall provide alternative compensation to the satisfaction of the Secretary.</p>	<p>It is understood that BSO receive approximately half a dozen compensatory water requests per year. These have been historically handled through the subsidence advisory board. However, the new process is that the claims are now received directly by BSO.</p> <p>Short term solutions include a water truck taking water to affected landholders. Long term solutions can include new bore/s and drilling deeper at current bore.</p> <p>Claims are reviewed and tracked through the monthly Subsidence Review Meeting.</p> <p>Currently there is one case that has been referred to the Secretary for resolution and is currently with the department for consideration.</p>	Obs - C	Ensure BSO continues to work with DPIE to resolve compensatory water dispute.
4.15.	The Proponent shall ensure that all surface water discharges from the site (including from the Brennans Creek Dam) comply with the discharge limits (both volume and quality) set for the project in any EPL.	Refer to EPL P1.3, L2.4, L3.1.	NC	Refer Annex B.1 EPL Compliance Table
4.23A.	<p>Prior to construction of the Appin East Mine Gas Safety Management Project, the Proponent shall:</p> <p>(a) undertake a dilapidation survey of the Upper Canal, in consultation with WaterNSW and the Heritage Division;</p> <p>(b) prepare final detailed design plans in consultation with WaterNSW; and</p> <p>(c) undertake vibration monitoring for all earthworks undertaken within 25 metres of the Upper Canal, to the satisfaction of the Secretary.</p>	<p>Consultation of the modification for the pipeline was undertaken with OEH, but nothing specific was conducted with the Heritage Division. OEH made no comments on the Upper Canal in their submissions on the MOD. No evidence of further OEH or Heritage Division consultation was provided.</p> <p>Historical Heritage assessment attached to the MOD states that there is only one heritage site at this location and that impacts to this would be minor and that no further heritage assessment is required prior to commencement of the works.</p> <p>Extensive consultation and communication was conducted with WaterNSW during 2017, including discussions in relation to the following:</p> <ul style="list-style-type: none"> dilapidation survey detail design plans vibration monitoring 	ANC	No further action required – historic ANC
4.23B.	Following the completion of construction of the Appin East Mine Gas Safety Management Project, the Proponent shall:	<p>Extensive consultation and communication was conducted with WaterNSW during 2017, including discussions in relation to the following:</p> <ul style="list-style-type: none"> dilapidation survey detail design plans vibration monitoring monitoring results and photos <p>No consultation with Heritage Division on completion of the pipeline was provided.</p>	ANC	No further action required – historic ANC
4.28.	<p>The Proponent shall:</p> <p>(a) minimise the waste (including coal reject) generated by the project; and</p> <p>(b) ensure that the waste generated by the project is appropriately stored, handled and disposed of, to the satisfaction of the Secretary.</p>	<p>Two incidents were reported to the EPA related to issues of waste being inappropriately disposed at the site:</p> <ol style="list-style-type: none"> Contents of reagent bund removed and placed at the slurry ponds Oil separation pit cleaned out and disposed at Appin North pit top <p>Following the incidents the WMP has been reviewed but not yet updated.</p> <p>A maintenance strategy for maintenance of pits and oil separators is to be developed. A procedure for bund, sump and oily water maintenance has been developed and includes requirements for inspection and maintenance and assessment of historic bunds for capacity.</p>	NC	Ensure Waste Management Plan is updated and approved.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
		Waste is managed by Cleanaway and a new contract for Cleanaway to manage the area at Appin East and Appin West has recently been negotiated. Cleanaway will issue a notice if there is contamination of the waste streams. A Cleanaway representative is on site at Appin West full time and another representative will be shared between Appin East and North.		
4.29.	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 by 30 September 2012.	BSO has reviewed the current Waste Management Plan following recent incidents but has not yet updated the document.	Obs - C	Ensure Waste Management Plan is updated and approved.
6.1.	The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must: (a) be submitted to the Secretary for approval by 30 September 2012; (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: <ul style="list-style-type: none"> keep the local community and relevant agencies informed about the operation and environmental performance of the project; receive, handle, respond to, and record complaints; resolve any disputes that may arise during the course of the project; respond to any non-compliance; respond to emergencies; and (f) include: <ul style="list-style-type: none"> copies of any strategies, plans and programs approved under the conditions of this approval; and a clear plan depicting all the monitoring required to be carried out under the conditions of this approval. 	The EMS doesn't include "copies of any strategies, plans and programs approved under the conditions of this approval" but does list all relevant plans and these are generally available online with the EMS.	ANC	Suggest request removal or reword of condition 6.1 (f) dot point 1
6.5.	Within 3 months of: (a) the submission of an annual review under Condition 4 above; (b) the submission of an incident report under Condition 7 below; (c) the submission of an audit report under Condition 9 below; and (d) any modification to the conditions of this approval, (unless the conditions require otherwise), the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary. <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 project.</i>	Management plan reviews have generally been conducted on an annual basis however some reviews are overdue. Reviews have not been conducted following submission of incident reports. It is noted that BSO has developed a management plan review log and reviews are now being documented.	ANC	Ensure management plans are reviewed and revised as required by this condition.
6.7.	The Proponent shall notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the project, the Proponent shall notify the Secretary and any other relevant agencies 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, and such further reports as may be requested.	Ferric chloride discharge. Initial notification was to EPA hotline. – refer to EPL for details. Letter to EPA (7 day report) was provided on 5/11. Incident occurred on the 18 th October. DPIE was notified on Friday 19 th October along with other agencies but was not provided with a report until 5 November.	ANC	Ensure DPIE is provided with a written report within 7 days of the date of the incident.
6.10.	Within 6 weeks of the completion 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.	The last IEA Audit report was submitted on 27 March 2017, slightly later than the 6 week due-date of 7 March 2017. No evidence was provided that a response plan was submitted as required by the condition. An incorrect response plan is currently published online.	ANC	No further action, historical ANC. Ensure response plan is developed and submitted with this IEA.

Environmental Protection Licence 2504

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action																								
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Non-compliances with water quality limits were reported to the EPA during the reporting period. Two Penalty Notices were issued by the EPA in February 2019 for failing to maintain or operate equipment in a proper and efficient manner and for causing pollution of waters due to discharges of ferric chloride to the Georges River.	NC	No further action required																								
L2.1	For each monitoring/discharge point or utilisation area specified in the table below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	Non-compliances with water quality limits were reported to the EPA during the reporting period. Two Penalty Notices were issued by the EPA in February 2019 for failing to maintain or operate equipment in a proper and efficient manner and for causing pollution of waters due to discharges of ferric chloride to the Georges River.	NC	No further action required																								
L2.4	Water and/or Land Concentration Limits:																											
	<p>Point 3</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of Measure</th> <th>50 percentile concentration limit</th> <th>90 percentile concentration limit</th> <th>3DGM concentration limit</th> <th>100 percentile concentration limit</th> </tr> </thead> <tbody> <tr> <td>Biochemical oxygen demand</td> <td>milligrams per litre</td> <td>30</td> <td></td> <td></td> <td>50</td> </tr> <tr> <td>Oil and Grease</td> <td>milligrams per litre</td> <td></td> <td></td> <td></td> <td>10</td> </tr> <tr> <td>pH</td> <td>pH</td> <td>6.5 - 8.5</td> <td></td> <td></td> <td>6.0 - 9.0</td> </tr> </tbody> </table>	Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Biochemical oxygen demand	milligrams per litre	30			50	Oil and Grease	milligrams per litre				10	pH	pH	6.5 - 8.5			6.0 - 9.0	Non-compliance with the concentration limits were reported to the EPA on three occasions during the reporting period. All events were investigated and no further action taken.	NC	No further action required
Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																							
Biochemical oxygen demand	milligrams per litre	30			50																							
Oil and Grease	milligrams per litre				10																							
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Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																							
Biochemical oxygen demand	milligrams per litre	30			50																							
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Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																													
Oil and Grease	milligrams per litre				10																													
pH	pH				6.5 – 8.5																													
Total suspended solids	Milligram per litre				50																													
L3.1	<p>For each discharge point or utilisation area specified below (by a point number), the volume/mass of:</p> <p>a) liquids discharged to water, or;</p> <p>b) solids or liquids applied to the area;</p> <p>must not exceed the volume/mass limit specified for that discharge point or area.</p> <table border="1"> <thead> <tr> <th>Point</th> <th>Unit of Measure</th> <th>Volume/Mass Limit</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>18</td> <td>kilolitres per day</td> <td>1000</td> <td></td> <td></td> </tr> <tr> <td>19</td> <td>kilolitres per day</td> <td>2000</td> <td></td> <td></td> </tr> <tr> <td>20</td> <td>kilolitres per day</td> <td>13</td> <td></td> <td></td> </tr> <tr> <td>22</td> <td>kilolitres per day</td> <td>80</td> <td>KL/month</td> <td>93000</td> </tr> <tr> <td>24</td> <td>kilolitres per day</td> <td>3000</td> <td>kilolitres per day</td> <td>4700</td> </tr> </tbody> </table>	Point	Unit of Measure	Volume/Mass Limit			18	kilolitres per day	1000			19	kilolitres per day	2000			20	kilolitres per day	13			22	kilolitres per day	80	KL/month	93000	24	kilolitres per day	3000	kilolitres per day	4700	<p>Exceedances of the maximum allowable flow volumes were recorded at LDP24:</p> <ul style="list-style-type: none"> 3 June 2019 – 3.46 ML/day discharged. 8 June 2019 – 3.34 ML/day discharged. 	NC	No further action required as discharge volumes were subsequently increased in the EPL variation issued on 2 September 2019.
Point	Unit of Measure	Volume/Mass Limit																																
18	kilolitres per day	1000																																
19	kilolitres per day	2000																																
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24	kilolitres per day	3000	kilolitres per day	4700																														
O1.1	<p>Licensed activities must be carried out in a competent manner. This includes:</p> <p>a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and</p> <p>b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.</p>	<p>A formal warning letter was issued by the EPA in March 2019 for failure to bund a flocculant tank at Appin North. A temporary bund was placed at the tank. The tank has since been decommissioned.</p> <p>The audit team observed potentially inadequate storage of chemicals, oils and waste oil including bunds filled with water and other debris, bunds with insufficient capacity and drains to sumps blocked by mud at the maintenance workshops, laydown areas and waste storage areas at Appin East and West. A bund, sump and oily water management procedure has been developed and it is understood a review of facilities has been conducted in accordance with the procedure. Actions are to be prioritised and implemented on a risk basis and capital availability.</p> <p>Two incidents were reported to the EPA related to issues of waste being inappropriately disposed at the site:</p> <ol style="list-style-type: none"> Contents of reagent bund removed and placed at the slurry ponds Oil separation pit cleaned out and disposed at Appin North pit top <p>No further action was taken by the EPA.</p>	NC	Implement the actions of the review.																														

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action								
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	BSO reported a non-compliance with condition O2.1 relating to the discharge of ferric chloride into the Georges River in October 2018. The incident resulted from replacement of a pump taken out of service for maintenance with a pump that discharged at a higher rate and caused overdosing of the sediment dam at Point 19. A SAP maintenance system is in place for preventative maintenance scheduling, execution and close out. A review of scheduled versus completed maintenance is done every Monday and rescheduling undertaken as necessary. Evidence of maintenance of subcontractor vehicles was also sighted by the auditor. New maintenance plans are being developed for bund checks, but have not yet been finalised and added to SAP. New metering at LDP24 is currently undergoing commissioning and will also need maintenance plans to be developed and added to SAP maintenance system.	NC	Ensure maintenance plans and preventative maintenance schedules are set up in SAP for bund checks and new metering at LDP24.								
M6.1	For each discharge point or utilisation area specified below, the licensee must monitor: a) the volume of liquids discharged to water or applied to the area; b) the mass of solids applied to the area; c) the mass of pollutants emitted to the air; at the frequency and using the method and units of measure, specified below.											
	<p>POINT 4</p> <table border="1"> <thead> <tr> <th>Frequency</th> <th>Unit of measure</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Continuous</td> <td>Kilolitres per day</td> <td>In line instrumentation</td> </tr> </tbody> </table>	Frequency	Unit of measure	Sampling method	Continuous	Kilolitres per day	In line instrumentation	Monitoring report indicates manual readings taken from January to December 2017 as flow meters were being replaced. EPA was not notified of the change of sampling method Illawarra Coal now maintains a Correspondence Register to record all correspondence with regulators and it was sighted that issues with monitoring equipment was now being notified to the EPA.	ANC	Ensure issues with sampling equipment are notified to the EPA.		
Frequency	Unit of measure	Sampling method										
Continuous	Kilolitres per day	In line instrumentation										
	<p>POINT 19</p> <table border="1"> <thead> <tr> <th>Frequency</th> <th>Unit of measure</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Continuous during discharge</td> <td>Kilolitres per day</td> <td>In line instrumentation</td> </tr> </tbody> </table>	Frequency	Unit of measure	Sampling method	Continuous during discharge	Kilolitres per day	In line instrumentation	Monitoring report indicates manual readings taken from February to December 2017 as flow meters being replaced. Refer above				
Frequency	Unit of measure	Sampling method										
Continuous during discharge	Kilolitres per day	In line instrumentation										
	<p>POINT 24</p> <table border="1"> <thead> <tr> <th>Frequency</th> <th>Unit of measure</th> <th>Unit of measure</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Continuous during discharge</td> <td>Kilolitres per day</td> <td>KL/month per day</td> <td>Flow meter and continuous logger</td> </tr> </tbody> </table>	Frequency	Unit of measure	Unit of measure	Sampling method	Continuous during discharge	Kilolitres per day	KL/month per day	Flow meter and continuous logger	Monitoring report indicates manual readings taken from January to December 2017 as flow meters were being replaced. Refer above.		
Frequency	Unit of measure	Unit of measure	Sampling method									
Continuous during discharge	Kilolitres per day	KL/month per day	Flow meter and continuous logger									
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	Refer to condition L1.1 re ferric chloride incident. The incident occurred on 18 /10 and the 7 day written notification was provided on 5/11.	ANC	Ensure notification is undertaken as required.								
U1.1	AIM: The aim of this Environment Improvement Program (EIP) is to improve water quality and aquatic health in the Georges River downstream of licenced discharge point 10 (Brennans creek discharge). WORKS: The licensee must undertake its commitments to works and activities described in the latest controlled version of the document titled "Illawarra Coal, Bulli Seam Operations, Georges River Environmental Improvement Program". The latest version of the document must be displayed on the licensee's website. In addition to the reporting and consultation commitments in document, the licensee must submit a report to the EPA by the due date recommending licence limits for discharge point 10.	The EIP document is available on the company website. No report has been submitted for 2019. Reports for 2017 and 2018 reviewed. Monitoring of macroinvertebrates and ecotoxicity is continuing. BSO is in discussion with the EPA as to next steps to enable proposed discharge limits at Point 10 to be achieved. It is expected that another water filtration plant will be constructed at Appin North.	NC	No further action – dependent on outcome of negotiation with EPA.								

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
	DUE DATE: 31 December 2018 DUE DATE: 30 June 2019 Note: This EIP follows from Pollution Reduction Programs 19 and 20.			
Consolidated Coal Leases 724 and 767				
2. CCL 724 and 767	<p>Environmental Harm</p> <p>a) The lease holder must implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of any activities under this lease.</p> <p>b) For the purposes of this condition:</p> <p>i. environment means components of the earth, including:</p> <ul style="list-style-type: none"> • land, air and water, and • any layer of the atmosphere, and • any organic or inorganic matter and any living organism, and • human-made or modified structures and areas, and includes Interacting natural ecosystems that include components referred to in paragraphs (A)-(C). <p>ii. harm to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution, contributes to the extinction or degradation of any threatened species, populations or ecological communities and their habitats and causes impacts to places, objects and features of significance to Aboriginal people.</p>	Refer to CoA and EPL for air and water quality non-compliances. Erosion and sediment control was noted around construction works. Pit top areas run into stormwater management system.	NC	Refer to CoA and EPL for air and water quality non-compliances.

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
EPBC Approval 2010/5350				
5	<p>Shale I Sandstone Transition Forest</p> <p>The person taking the action must provide to the Minister for approval within 1 year of the date of this approval, a plan for the management of the Shale / Sandstone Transition Forest Offset. The approved Shale / Sandstone Transition Forest Offset Management Plan (the Forest plan) must include but not be limited to:</p> <p>a. specific management measures to control weed species, pest animals, public access and otherwise manage the Shale / Sandstone Transition Forest Offset so that the ecological condition of the Shale / Sandstone Transition Forest is maintained or enhanced to a higher condition than that being lost as a result of this action;</p> <p>i. this may be demonstrated through comparisons of floristic diversity and structure, vegetation health and/or percentage cover of introduced or weed plants;</p> <p>b. an outline of key milestones and performance objectives;</p> <p>c. measures for annual monitoring of the ongoing quality (as measured against the ecological survey information referred to at Conditions 4 a) of the Shale / Sandstone Transition Forest Offset and the effectiveness of management actions. Reports containing the monitoring results must be submitted to the department within 30 days of every 12 month anniversary of the date the Shale / Sandstone Transition Forest Offset is protected in perpetuity; and</p> <p>d. corrective actions and contingency measures to be implemented should monitoring indicate a decrease in the quality of the Shale / Sandstone Transition Forest conservation offset.</p> <p>The approved Forest plan must be implemented within 2 years of the date of this approval.</p>	<p>Approval of original plan outside audit period.</p> <p>Monitoring Report 2017 (covering once a year monitoring in November 2016), submitted 23 March 2017</p> <p>Monitoring Report 2018 (covering monitoring October 2017 to June 2018 under BioBanking), submitted 31 May 2018.</p> <p>Monitoring Report 2019 (covering April 2018-May 2019 under BioBanking) submitted 9 August 2019</p> <p>The submission email for the 2018 Monitoring Report was accompanied by a note explaining why this report was submitted later than “30 days of every 12 month anniversary of the date the Offset is protected in perpetuity” as a requirement of Condition 5c (which therefore required submission by 2-3 March 2018). South32 had been holding off sending the report until they received the Departments decision to revise Condition 5 in May 2018. Submission of the 2017 and 2019 reports were also outside of the requirements of 5c and no explanations for the late submission were provided in the submission emails.</p> <p>It is noted that condition 5A states that “annual reporting required under that (BioBanking) scheme may be provided to the department in place of the reports containing monitoring results required under Condition 5C”, thereby implying that the time of submission would also be according to the BioBanking scheme requirements, notwithstanding the final clause of this Condition 5c (“on the proviso that all measures specified in Condition 5 are covered”).</p> <p>Monitoring reports provide evidence of corrective actions. Photographs of photo points are compared to 2017 photo points, indicating changes in quality</p>	ANC	It is recommended that confirmation be sought from the Department that the required timing for submission of monitoring report in Condition 5c be changed to that required under the BioBanking scheme
18	<p>The audit must be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Minister.</p>	<p>The endorsement of the audit team was not received from the Minister prior to conducting the audit on 24 October 2019, but until 9 December 2019.</p>	ANC	No further action required
EPBC 2010/5722				
3	<p>The person taking the action must submit a Vegetation Management Plan to the Minister for approval. The plan must address the following requirements:</p> <p>(a) make reference to the Biodiversity Offset Strategy as outlined in condition 2;</p> <p>(b) measures to protect the population of <i>Pimelea spicata</i> found in the area proposed for protection through condition 2. These must;</p> <p>(i) monitor the <i>Pimelea spicata</i> population to determine the success of management or the need for intervention;</p> <p>(ii) include the establishment of thresholds that if reached would require intervention measures; and</p> <p>(iii) identify what further management measures must be implemented if a threshold is reached.</p> <p>(c) rehabilitate MZ2, MZ3 and MZ4 (Annexure B) using appropriate native species with input from a suitably qualified CPW expert; and</p> <p>(d) The plan must include key milestones, performance indicators, corrective actions and timeframes for the completion of all actions outlined in the plan for the life of the project.</p> <p>The approved plan must be implemented.</p> <p>The person taking the action must not clear any CPW until the Minister approves the plan.</p>	<p>Monitoring reports cover the offset area, but there is no evidence of monitoring or maintenance within rehabilitated vegetation within MZ2-4. During field inspection, it appeared that only the noise mitigation bund/wall had been planted with trees. Several areas were observed to be un-rehabilitated (e.g. MZ 2 and parts of MZ4) or exhibited rehabilitation failure, as evidenced by the numerous old plastic protective sleeves without plants growing within. Areas of weeds were also observed.</p>	NC	Survey to be undertaken by a suitably qualified expert of plant density/composition/survival in rehabilitated zones, and corrective measures to be taken where required.

Table 3.4 Summary of 2019 Audit Findings – Management Plans

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
Noise Management Plan				
4.5.	<p>The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with EPA and WSC, and submitted to the Secretary for approval by 30 September 2012;</p> <p>(b) include provisions to ensure that the road haulage fleet attains and maintains best practices in both equipment and operations;</p> <p>(c) seek to minimise road traffic noise generated by employee commuter vehicles on public roads, particularly Douglas Park Drive and Macarthur Road;</p> <p>(d) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval;</p> <p>(e) outline procedures to manage responses to any complaints or issues raised by the owners of affected residences; and</p> <p>(f) include a noise monitoring program that:</p> <ul style="list-style-type: none"> uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the project; and includes a protocol for determining exceedances of the relevant conditions of this approval. 	<p>It is understood the date of the NMP was updated by the document controller prior to publishing to the system – the actual date of the document pre-dates the Department approval.</p>	ANC	<p>Ensure those responsible for publishing documents are aware that they are approved documents.</p>
Air Quality & Greenhouse Management Plan				
4.12.	<p>The Proponent shall prepare and implement a detailed Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with EPA, and submitted to the Secretary for approval by 30 September 2012;</p> <p>(b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, including consideration of applying a real-time air quality management system that employs both reactive and proactive mitigation measures;</p> <p>(c) describe the measures that would be implemented to minimise the release of greenhouse gas emissions from the site; and</p> <p>(d) include an air quality monitoring program that uses a combination of high volume samplers and dust deposition gauges to evaluate the performance of the project, and includes a protocol for determining exceedances with the relevant conditions of this approval.</p>	<p>Consultation was not undertaken in accordance with the condition when the plan was revised. It was advised that consultation for the plan was completed at the time the plan was originally developed.</p> <p>The Air Quality, Greenhouse Gas & Energy Management Plan contains a commitment to undertake routine sensory odour assessments however it was confirmed that these are no longer conducted.</p>	ANC	<p>Ensure that revised management plans are provided to relevant stakeholders for consultation prior to submission for approval.</p> <p>The process for assessing odour should be reviewed and the plan updated accordingly.</p>
Heritage Management Plan				
Surface Water Management Plan				
4.16.	<p>The Proponent [must] update and implement the Surface Water Management Plan for the project to the satisfaction of the Secretary. This plan must be prepared in consultation with DPI Water and EPA by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary, and submitted to the Secretary for approval by 31 January 2017. This plan must include:</p> <p>(a) a comprehensive water balance for the project, that includes details of:</p> <ul style="list-style-type: none"> sources and security of water supply and water make; water use; and water discharges; and <p>(b) management plans for the surface facilities sites, that include:</p> <ul style="list-style-type: none"> a detailed description of water management systems for each site, including: <ul style="list-style-type: none"> clean water diversion systems; erosion and sediment controls; and any water storages; measures to minimise potable water use and to reuse and recycle water; a Water Response Plan, which describes the measures and/or procedures that would be implemented to: <ul style="list-style-type: none"> investigate, notify and mitigate any ground or surface water exceedances; minimise, prevent or offset any adverse impacts to ground or surface water resources; provide compensatory water supply to any owner of privately-owned land whose water supply is adversely impacted (other than an impact that is negligible) as a result of the project; and 	<p>The SWMP was approved by the secretary on 27 June 2018.</p> <p>The SWMP generally addresses the requirements of the condition, excluding the issues identified below.</p> <p>The SWMP does not include a Water Response Plan however the plan refers to the relevant extraction and subsidence management plans which include Trigger Action Response Plans (TARP) for water impacts.</p> <p>Spill response procedures and emergency response plan were sighted by the auditor that address the requirements of a Water Response Plan, these are not captured in the SWMP and these documents are not referred to in the SWMP. Through discussions it is understood that in the event of a risk to impacting the surface water management system, BSO have the ability to interlock dams, and move water around site as needed, but this is not a documented process.</p>	ANC	<p>The SWMP needs to be updated to include potable water minimisation controls in SWMP. Update the SWMP to include details of interlocking of dams to control water.</p>

Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
	<ul style="list-style-type: none"> measures to comply with surface water discharge limits; implementation of any pollution reduction program relating to mine water discharges from Brennans Creek Dam and identification of 5, 7 and 10 year commitments to substantially reduce the impacts on biota of salinity and other pollutants in such discharges; and monitoring and reporting procedures including: <ul style="list-style-type: none"> collection of baseline data on surface water quality in creeks and other waterbodies that could potentially be affected by the project; and surface water and stream health impact assessment criteria. <p><i>Note: This plan must be suitably integrated with the Water Management Plans that form part of Extraction Plans.</i></p>	<p>Recently completed Appin North water movement/management figure has been completed. An opportunity to include this in the SWMP to demonstrate how surface water can be controlled around the site. Appin West also have a figure. Appin East doesn't have this plan.</p> <p>The SWMP does not adequately address "potable water minimisation controls". Controls are in place, such as the water filtration plant at Appin West, replaces Sydney Water use. Plans for Appin North to also have filtration plant that will also reduce need for Sydney Water use.</p> <p>The PRP relating to the semi-closed loop system for washery water is ongoing. Refer to EPL condition U1.1.</p>		

West Cliff Coal Emplacement Management Plan

4.17.	<p>The Proponent shall prepare and implement a West Cliff Coal Wash Emplacement Area Management Plan for the project to the satisfaction of the Secretary. This plan must be prepared in consultation with OEH and be submitted to the Secretary for approval by the end of June 2013. This plan must include:</p> <p>(a) detailed design plans which include options for reducing, avoiding and/or managing impacts on Aboriginal heritage sites in and adjacent to the southwestern fringe of the proposed Stage 4 footprint (including sites 52-2-2228/3617, 52-2-1373, 52-2-3533/3613 and 52-2-3506);</p> <p>(b) management strategies to ensure no impacts to Aboriginal heritage site 52-2-3505 other than negligible impacts, including consideration of potential staged development of the emplacement and/or buffer areas;</p> <p>(c) management strategies for the protection and conservation of <i>Persoonia hirsuta</i>;</p> <p>(d) management strategies for the protection and conservation of the Broad-headed Snake and the Southern Brown Bandicoot;</p> <p>(e) a comprehensive water monitoring program for the emplacement;</p> <p>(f) provide for progressive rehabilitation of the emplacement area, including through:</p> <ul style="list-style-type: none"> maximising opportunities for natural regeneration; maximising retention of suitable habitat species; appropriate weed and pest control strategies; and planting only endemic species in habitat mixes appropriate for soil, slope and aspect 	<p>As required by 4.17(a) and as stated in the WCCWEAMP, detailed design plans for Stage 4 are not included in the plan. It is understood that these plans are still being developed, as Stage 4 has yet to commence.</p> <p>As per figure Plan 5 – Cultural Heritage Plan site 52-2-3505 is currently proposed to be avoided, along with 52-2-2228/3617 and 52-2-3506.</p> <p>It is understood that the plan was submitted and approved by the Secretary in 2016. The plan was then submitted to the Federal Government for approval under EPBC and due to the length of time taken to review asked for the date to be updated to 2017. The revision number remained the same and no updates to the plan were made.</p> <p>The plan otherwise addresses the requirements of this condition.</p>	Obs-C	Ensure that detailed design plans for Stage 4, when developed, are included in the WCCWEAMP.
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Traffic Management Plan

4.26.	<p>The Proponent shall update the approved Traffic Management Plan for the project to the satisfaction of the Secretary. This plan must be:</p> <p>(a) prepared in consultation with the RMS, WCC, WSC and the CaCC;</p> <p>(b) submitted to the Secretary for approval by 31 January 2017;</p> <p>(c) propose an appropriate program and schedule of works for any intersection upgrades to be undertaken or contributed to by the Proponent over the life of the project, including an upgrade of the intersection of West Cliff Mine Access Road and Appin Road that is generally in accordance with the requirements of the RMS and that is to be completed before the Level of Service at this intersection drops below LOS C; and</p> <p>include strategies to manage construction traffic, including road closure protocols, community consultation and measures to avoid potential road safety conflicts with other road users.</p>	<p>The TMP was approved by the Secretary on 26 July 2018. It was advised that consultation for the plan was completed at the time the plan was originally developed. No material changes were made to the 2017 update and the plan was approved without request for further consultation.</p> <p>The TMP does not include a/any schedule of works for intersection upgrades. States "The program and schedule of upgrade works for the intersection will be prepared by RMS", and it is understood that no intersection works were undertaken for the period, none proposed currently.</p> <p>The plan does not include details of the upgrade of the intersection of West Cliff Mine Access Road and Appin Road. This work was completed prior to the audit period, and</p>	Obs - C	<p>Suggested that condition 4.26 is updated to remove the requirement around details for upgrade "of the intersection of West Cliff Mine Access Road and Appin Road", as this has been completed and is no longer relevant.</p> <p>Suggest TMP is updated to include a commitment to develop and detail construction traffic requirements for each construction project.</p>
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Item No	Assessment Requirement	Comment	Audit Classification	Response/Action
		<p>therefore no longer relevant. It is suggested this condition is updated to remove this requirement.</p> <p>The TMP does not adequately address construction traffic requirements. It was advised this is generally captured by a construction management plan developed for any relevant construction activities.</p>		

4. CONCLUSION

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

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

Table 4.1 Summary of Audit Findings

Review	Non-compliances (NC)	Administrative non-compliance (ANC)	Observations (Obs NC)	Observations (Obs C)
Statutory Instruments	12	11	1	3
Implementation of Plans	-	3	-	2

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

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

Table A.1: Compliance with Ministers Conditions of Approval PA 08_0150 (Modification 2 issued October 2016)

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
SCHEDULE 2 – ADMINISTRATIVE CONDITIONS					
Obligation to Minimise Harm to the Environment					
2.1.	In addition to meeting the specific performance criteria established under this approval, 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.	This audit	The audit team observed inadequate storage of chemicals, oils and waste oil including bunds filled with water and other debris, bunds with insufficient capacity and drains to sumps blocked by mud at the maintenance workshops, laydown areas and waste storage areas at Appin East and West. A bund, sump and oily water management procedure has been developed and it is understood a review of facilities has been conducted in accordance with the procedure. Actions are to be prioritised and implemented on a risk basis and capital availability.	Obs-NC	Implement the actions from the review.
Terms of Approval					
2.2.	The Proponent shall carry out the project generally in accordance with the: (a) EA; (b) Statement of Commitments; (c) PPR; and (d) conditions of this approval. <i>Note: The general layout of the project is shown in Appendices 2 to 4</i>	This audit	Noted	Note	
2.3.	If there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	Note	Noted	Note	
2.4.	The Proponent shall comply with any reasonable and feasible requirements of the Secretary arising from the Department's assessment of: (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with the conditions of this approval; and (b) the implementation of any actions or measures contained in these documents.	Note	Noted	Note	
LIMITS ON APPROVAL					
Mining Operations					
2.5.	The Proponent may carry out mining operations on the site until 31 December 2041. <i>Note: Under this Approval, the Proponent is required to rehabilitate the site and perform additional undertakings to the satisfaction of either the Secretary or the Executive Director Mineral Resources. Consequently this approval will continue to apply in all other respects other than the right to conduct mining operations until the rehabilitation of the site and these additional undertakings have been carried out satisfactorily.</i>	BSO Mining Operations Plan 1 October 2012 to 30 September 2019, extended to September 2020.	Noted	C	
Coal Extraction and Production					
2.6.	The Proponent shall not: (a) extract more than 10.5 million tonnes of ROM coal from the site in a financial year, or	BSO Annual Review FY19	The Annual Reviews indicated ROM volumes of:	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	(b) transport more than 9.3 million tonnes of product coal from the site in a financial year.		FY19 – 3.660 MT FY18 – 1.771 MT FY17 – 3.99 MT Transport volumes of: FY19 – 3.037 MT FY18 – 1.381 MT FY17 – 5.73 MT		

Appin Ventilation Shaft No. 6

2.6A.	The Proponent may operate Appin Ventilation Shaft No. 6 until 31 December 2041, unless otherwise agreed by the Secretary. <i>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 bore and operate the ventilation shaft until the site has been properly rehabilitated.</i>	Note	Noted	Note	
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Hours of Operation

2.7.	The Proponent may undertake mining operations and mine ventilation activities 24 hours a day, 7 days a week.	Note	Noted	Note															
2.7A	The Proponent shall comply with the construction and operating hours listed in Table 1A for the Appin Ventilation Shaft No.6: <i>Table 1A: Construction and operating hours</i>	Interview with Lead Environment	Ventilation Shaft 6 was completed prior to the audit period, August 2015.	C															
<table border="1"> <thead> <tr> <th>Activity</th> <th>Hours (other than for emergency purpose)</th> </tr> </thead> <tbody> <tr> <td><u>Construction</u> Road and site access*, site preparation, liner construction, spoil management, drilling of boreholes, provision of services, related activities, post construction rehabilitation.</td> <td>7.00am to 6.00pm, Monday to Saturday No works on Sunday or Public Holidays</td> </tr> <tr> <td>Shaft drilling and lining and water management works. Any works that are inaudible at residential premises.</td> <td>24 hours per day, 7 days per week</td> </tr> <tr> <td><u>Operation of Ventilation Shaft</u> Including commissioning of fans</td> <td>24 hours per day, 7 days per week</td> </tr> <tr> <td><u>Operation of Service Boreholes</u> Delivery of concrete to the site and associated surface operations</td> <td>24hrs per day, 7 days per week</td> </tr> <tr> <td>Delivery of other materials to the site and associated surface operations</td> <td>7.00am to 6.00pm, Monday to Saturday</td> </tr> <tr> <td>Provision of supplies, consumables or utilities to underground</td> <td>24hrs per day, 7 days per week</td> </tr> </tbody> </table> <p><i>Notes:</i></p> <ul style="list-style-type: none"> *Some road works potentially requiring traffic management measures, such as cutting in the access road to Menangle Road, line marking the intersection and installation of asphaltic concrete, may be undertaken outside these hours (subject to Council's approval) to take advantage of reduced traffic volumes. 						Activity	Hours (other than for emergency purpose)	<u>Construction</u> Road and site access*, site preparation, liner construction, spoil management, drilling of boreholes, provision of services, related activities, post construction rehabilitation.	7.00am to 6.00pm, Monday to Saturday No works on Sunday or Public Holidays	Shaft drilling and lining and water management works. Any works that are inaudible at residential premises.	24 hours per day, 7 days per week	<u>Operation of Ventilation Shaft</u> Including commissioning of fans	24 hours per day, 7 days per week	<u>Operation of Service Boreholes</u> Delivery of concrete to the site and associated surface operations	24hrs per day, 7 days per week	Delivery of other materials to the site and associated surface operations	7.00am to 6.00pm, Monday to Saturday	Provision of supplies, consumables or utilities to underground	24hrs per day, 7 days per week
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> 'Emergency purposes' refers to instances where the cessation of construction or operating activities would have the potential to generate serious harm to the environment or serious safety issues. Should these activities be conducted outside of the hours permitted, a report must be provided to the Department within 7 days of the event containing relevant information and/or to demonstrate the specific emergency purposes and circumstances at the time 				
SURRENDER OF CONSENTS AND APPROVALS					
2.8.	<p>By 31 December 2012, or as otherwise agreed by the Secretary, the Proponent shall surrender all existing development consents and project approvals for mining operations relied on by the Proponent for the site (other than this approval) in accordance with Sections 75YA and 104A of the EP&A Act.</p> <p><i>Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of a consent or approval should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.</i></p>	Note	Current DA supersedes all previous consents. Surrender occurred prior to the current audit period.	NT	
2.9.	Prior to the surrender of these consents and/or approvals, the conditions of this approval (including any notes) shall prevail to the extent of any inconsistency with the conditions of these consents and/or approvals.	Note	As above.	NT	
Structural Adequacy					
2.10.	<p>The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structure, that are part of the project are constructed in accordance with:</p> <p>(a) the relevant requirements of the BCA; and</p> <p>(b) any additional requirements of the MSB where the building or structure is located on land within declared Mine Subsidence Districts.</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. Part 8 of the EP&A Regulation sets out the requirements for the certification of the project. 	<p>Interview with Lead Environment</p> <p>Construction Certificate No. 10/0232-01 dated 18/05/2016</p> <p>Occupation Certificate No. 10/0232-06 dated 12/10/2017</p>	<p>The Approvals team develops Stakeholder Requirement Specification that outlines this condition. South32 project managers are then accountable for delivery in accordance with this document.</p> <p>Construction and occupancy certificates were sighted for new structures at the water filtration plant at Appin West.</p>	C	
Demolition					
2.11.	The Proponent shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601-2001: <i>The Demolition of Structures</i> , or its latest version.	Interview with Lead Environment	Advised that there was none. The above specification sets out this condition requirement.	NT	
Operation Of Plant And Equipment					
2.12.	<p>The Proponent shall ensure that all the plant and equipment used on site is:</p> <p>(a) maintained in a proper and efficient condition; and</p> <p>(b) operated in a proper and efficient manner.</p>	<p>Work Instruction – 1WMech Insp Sewer Pump</p> <p>1WMech Insp Sewer Pump completed work order</p> <p>Interview with Surface Planner</p> <p>Interview with Environment Specialist</p>	<p>A SAP maintenance system is in place for preventative maintenance scheduling, execution and close out. A review of scheduled versus completed is done every Monday and rescheduling undertaken as necessary.</p> <p>Evidence of maintenance of subcontractor vehicles also sighted.</p> <p>New maintenance plans are being developed for bund checks, but have not yet been finalised and added to SAP.</p>	Obs - C	Ensure maintenance plans and preventative maintenance schedules are set up in SAP for bund checks and new metering at LDP24.

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	(c)		<p>New metering at LDP24 is currently undergoing commissioning and will also need maintenance plans developed and added to SAP maintenance system.</p> <p>All personnel have access to system to add maintenance requests.</p> <p>The environment team conduct weekly and monthly inspections at Appin East and West. Inspections are recorded in G360. The Environment Specialists can raise maintenance work orders directly from G360 during the inspection.</p>		

Staged Submissions of Strategies, Plans or Programs

2.13.	<p>With the approval of the Secretary, the Proponent may submit any strategies, plans or programs required by this approval on a progressive basis.</p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times; and If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program. 	Noted	Noted	C	
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Strategic Biodiversity Offsets

2.14.	<p>If the proponent is required to provide a biodiversity offset pursuant to this approval (including any biodiversity offset that is required under the conditions of a subordinate approval issued in accordance with this approval), the Secretary may, in consultation with OEHL, accept in satisfaction of the requirement for the biodiversity offset, the provision of land that has conservation values which exceed the conservation values required to meet the relevant offsetting requirement.</p> <p>If the Secretary accepts such an offset under this condition, the Secretary shall issue a written statement to the proponent advising:</p> <p>(a) the details of the proposed offset land;</p> <p>(b) the offset requirements that are being met;</p> <p>(c) the conservation values that have been relied upon to meet the offsetting requirements;</p> <p>(d) that in the opinion of the Secretary:</p> <p>(i) the land has conservation values in addition to those that have been relied upon to meet the offsetting requirement in condition 14(b); or</p> <p>(ii) if the land has been subject to a previous statement from the Secretary under this condition, confirmation that the land continues to have conservation values in addition to those that have been relied upon to meet the previous offsetting requirement or that there are no further conservation values available in respect of the land.</p> <p>If the Secretary has issued a statement under this condition, the proponent can rely on that statement and the residual conservation values that the land subject to the statement may hold, to meet further offsetting requirement(s) that may be required under this approval or the development consent for the Dendrobium Coal Mine (60-3-2001).</p> <p>The Secretary's statement under this condition can be relied on a number of times in respect of the same land until all of the conservation values of the land the subject of the</p>	NSW Dept of Planning and Environment Letter of Approval dated 16 Dec 2016	Offset approved	C	
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	Secretary's statement have been relied upon to meet offsetting requirements under this approval or the development consent for the Dendrobium Coal Mine (60-3-2001). The proponent shall make suitable arrangements to provide appropriate long-term security for the biodiversity offset area(s) accepted under this condition, within 2 years of the date of the Secretary's statement in respect of that land, unless otherwise agreed with the Secretary.				

SCHEDULE 3 – SPECIFIC ENVIRONMENTAL CONDITIONS – UNDERGROUND MINING

SUBSIDENCE

PERFORMANCE MEASURES – NATURAL AND HERITAGE FEATURES, ETC.

3.1.	<p>The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 1, to the satisfaction of the Secretary.</p> <p><i>Table 1: Subsidence Impact Performance Measures</i></p> <table border="1"> <thead> <tr> <th colspan="2">Watercourses</th> </tr> </thead> <tbody> <tr> <td>Nepean River</td> <td>Negligible environmental consequences including: <ul style="list-style-type: none"> negligible diversion of flows or changes in the natural drainage behaviour of pools; negligible gas releases and iron staining; and negligible increase in water cloudiness. </td> </tr> <tr> <td>Georges River</td> <td>Negligible environmental consequences including: <ul style="list-style-type: none"> negligible diversion of flows or changes in the natural drainage behaviour of pools; negligible gas releases and iron staining; and negligible increase in water cloudiness Over at least 80% of the stream length subject to vertical subsidence >20 mm. No subsidence impact or environmental consequence greater than minor. </td> </tr> <tr> <td>Other Watercourses</td> <td>No greater subsidence impact or environmental consequences than predicted in the EA and PPR.</td> </tr> <tr> <th colspan="2">Land</th> </tr> <tr> <td>Dharawal State Conservation Area</td> <td>Negligible environmental consequences.</td> </tr> <tr> <td>Cliffs of "special significance" (ie cliffs longer than 200 m and/or higher than 40 m; and cliff-like rock faces higher than 5 m that constitute waterfalls)</td> <td>Negligible environmental consequences (that is occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing, that in total do not impact more than 0.5% of the total face area of such cliffs within any longwall mining domain).</td> </tr> <tr> <td>Other cliffs flanking the Nepean River</td> <td>Negligible environmental consequences (that is occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing, that in total do not impact more than 0.5% of the total face area of such cliffs within any longwall mining domain).</td> </tr> <tr> <td>Other cliffs</td> <td>Minor environmental consequences (that is occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing, that in total do not impact more than 3% of the total face area of such cliffs within any longwall mining domain).</td> </tr> </tbody> </table>	Watercourses		Nepean River	Negligible environmental consequences including: <ul style="list-style-type: none"> negligible diversion of flows or changes in the natural drainage behaviour of pools; negligible gas releases and iron staining; and negligible increase in water cloudiness. 	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Other cliffs	Minor environmental consequences (that is occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing, that in total do not impact more than 3% of the total face area of such cliffs within any longwall mining domain).	<p>Nepean River End of Panel (EoP) Reports for LW707, 901 & 902. Information from Coordinator Environment for LW708 (no EoP available as mining is not yet completed).</p> <p>Georges River Drawings in Appendix A of Mod 3A EIS</p> <p>Other Water Courses EoP Reports for LW707, 901 & 902. Information from Coordinator Environment for LW708 (no EoP available as mining is not yet completed).</p> <p>Dharawal Drawings in Appendix A of Mod 3A EIS</p> <p>All Cliffs EoP Reports for LW707, 901 & 902. Information from Coordinator Environment for LW708 (no EoP available as mining is not yet completed).</p>	<p>Nepean River</p> <ul style="list-style-type: none"> 707: No adverse impacts reported. Gas emissions which activated during previous panels ceased during LW707. 708: South 32 have advised that no impacts to the Nepean River or associated watercourses have been identified for LW708 to date 901: 26 new gas release zones during panel, all reported as level 1 TARP triggers (<3000L/s). Water levels remained near baseline. No indications of significant cloudiness or iron staining. 902: 6 new gas release zones during LW902 (All Level 1, <3000L/s). No indications of significant cloudiness or iron staining. <p>Georges River Not in the areas of influence for the panels under assessment. River located at least 3 km from LW707, and further from LW708, 901 and 902.</p> <p>Other Water Courses None reported for LW707, 708, 901 or 902</p> <p>Dharawal Not in the area of influence for the panels under assessment. Area is 4 to 5 km from LW707, further from others.</p> <p>All Cliffs</p> <ul style="list-style-type: none"> 707: No observed impacts 708: No observed impacts. 901: No impacts observed 	C	
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However, the SMP for 705-710 identifies 18 Aboriginal sites within the 705-710 subsidence assessment area. South 32 have advised that these areas are not inspected as they are artefact sites that are not susceptible to subsidence impacts. ● 901 & 902 EoP: Bradcorp 1 site is within the study area. ● 901: The landowner refused access during mining of 901 so conditions could not be verified. However, there was no damage reported to cliffs immediately north and on this basis impact to Bradcorp 1 was deemed to be negligible by South 32. ● 902: No impacts observed. <p>Historic Heritage</p> <ul style="list-style-type: none"> ● 705-710 SMP lists historical heritage items as: <i>Upper Canal Water Supply System, Gilbulla, The Mountbatten Group</i> ● 707 EoP Report: No observed impacts for Gilbulla. Upper Canal or Mountbatten Group not in zone of influence ● 708: Mountbatten Group, Gilbulla and Upper Canal not in zone of influence. ● 901-904 SMP identifies Douglas Park Railway Cottage as only item in assessment area ● 901: South 32 report that several attempts were made to access the property but were not contacted by the resident to enable access. Thus 		
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations				
	<p>Notes:</p> <p>1) The Proponent will be required to define more detailed performance indicators (including impact assessment criteria) for each of these performance measures in the various management plans that are required under this approval (see condition 5 below).</p> <p>2) Measurement and/or monitoring of compliance with performance measures and performance indicators is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in which the feature or characteristic is located. These methods are to be fully described in the relevant management plans. In the event of a dispute over the appropriateness of proposed methods, the Secretary will be the final arbiter.</p> <p>3) The only cliffs of special significance known to occur within the site are termed A7_0088, A7_0102, A8_0001 and A8_0030 in the EA.</p> <p>4) The requirements of this condition only apply to the impacts and consequences of mining operations undertaken following the date of this approval.</p> <p>5) In the case of the Dharawal State Conservation Area, the Secretary's satisfaction can only be expressed following consultation with OEH.</p> <p>6) Broughtons Pass Weir is also subject to performance measures set out in Table 2.</p> <p>7) Listings of State or National heritage significance may be made before or after the date of this approval.</p> <p>8) An Aboriginal heritage site of special significance has cultural and/or archaeological values which are considered to hold exceptionally high value, based on assessment of characteristics including size, complexity and quality of the site; its setting within the landscape; and associated cultural and historical contexts for Aboriginal people (see the Bulli Seam Operations PAC Report, July 2010). The only Aboriginal heritage feature within the site accepted as holding special significance as at the date of this approval is 52-2-5305. However, other sites may be identified as a result of studies required for Extraction Plans.</p>	<p>First Workings Information from Coordinator Environment</p> <p>Second Workings Information from Coordinator Environment</p>	<p>inspections could not be undertaken. No issues have been reported by the resident.</p> <ul style="list-style-type: none"> 902: Same comments are per LW901 <p>First Workings South 32 have advised there are no instances of subsidence due to the collapse of first workings in the assessment area.</p> <p>Second Workings South 32 have advised that Secondary extraction has only been undertaken within the nominated extraction areas.</p>						
Offsets									
3.2.	<p>If the Proponent exceeds the performance measures in Table 1 and the Secretary determines that:</p> <p>(a) it is not reasonable or feasible to remediate the impact or environmental consequence; or</p> <p>(b) remediation measures implemented by the Proponent have failed to satisfactorily remediate the impact or environmental consequence;</p> <p>(c) then the Proponent shall provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Secretary.</p> <p>Note: Any offset required under this condition must be proportionate with the significance of the impact or environmental consequence.</p>	Information from Approvals Manager	BSO advised that no offsets have been required due to the exceedance of performance measures in Table 1.	C					
Performance Measures – Built Features									
3.3.	<p>The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 2, to the satisfaction of the Secretary.</p> <p>Table 2: Subsidence Impact Performance Measures</p> <table border="1"> <thead> <tr> <th colspan="2">Built Features</th> </tr> </thead> <tbody> <tr> <td> <p>Key public infrastructure:</p> <ul style="list-style-type: none"> Main Southern Railway; Hume Highway; and Key WaterNSW infrastructure (Nepean Tunnel, Cataract Tunnel, Upper Canal, Broughtons Pass Weir and other weirs) </td> <td> <p>Always safe and serviceable. Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.</p> </td> </tr> </tbody> </table>	Built Features		<p>Key public infrastructure:</p> <ul style="list-style-type: none"> Main Southern Railway; Hume Highway; and Key WaterNSW infrastructure (Nepean Tunnel, Cataract Tunnel, Upper Canal, Broughtons Pass Weir and other weirs) 	<p>Always safe and serviceable. Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.</p>	EoP Reports for LW707, 901 & 902 and commentary from Principal Infrastructure Protection & Legacy Sites	<p>Key Public Infrastructure</p> <ul style="list-style-type: none"> LW707 (Ref. T4 of EoP report): MSR – Minor track warps were repaired, tracks reported to have remained safe and serviceable. Hume Hw – humps formed on road but were remediated and reported to have remained S&S. No impacts reported for Water NSW items. LW708: Only 708A has been mined to date and is not within zone of 	C	
Built Features									
<p>Key public infrastructure:</p> <ul style="list-style-type: none"> Main Southern Railway; Hume Highway; and Key WaterNSW infrastructure (Nepean Tunnel, Cataract Tunnel, Upper Canal, Broughtons Pass Weir and other weirs) 	<p>Always safe and serviceable. Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.</p>								

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Other public infrastructure (including water supply pipelines; high pressure gas pipelines and the gas distribution network; electricity transmission and distribution lines; telecommunications cables and optical fibre networks; roads, trails and associated structures). Houses, industrial premises, swimming pools, farm dams and other built features or improvements	Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repaired or fully compensated, or else the damaged built feature or damaged infrastructure component must be replaced										
Public Safety											
Public safety	Negligible additional risk										

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
			Public Safety No issues reported		
3.4	Any dispute between the Proponent and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 2 is to be settled by the Secretary, following consultation with the MSB and the Executive Director Mineral Resources. Any decision by the Secretary shall be final and not subject to further dispute resolution under this approval.		The only disputes in respect to claims are in relation to value of compensation, not the performances measures detailed in the tables above.	C	

Extraction Plans

3.5.	<p>The Proponent shall prepare and implement an Extraction Plan for first and second workings within each longwall mining domain to the satisfaction of the Secretary. Each extraction plan must:</p> <p>(a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;</p> <p>(b) be approved by the Secretary before the Proponent carries out any of the second workings covered by the plan;</p> <p>(c) include detailed plans of existing and proposed first and second workings and any associated surface development;</p> <p>(d) include detailed performance indicators for each of the performance measures in Tables 1 and 2;</p> <p>(e) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this approval;</p> <p>(f) describe the measures that would be implemented to ensure compliance with the performance measures in Tables 1 and 2, and manage or remediate any impacts and/or environmental consequences;</p> <p>(g) include a Built Features Management Plan, which has been prepared in consultation with DRE and the owners of affected public infrastructure, to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings, and which:</p> <ul style="list-style-type: none"> addresses in appropriate detail all items of key public infrastructure and other public infrastructure and all classes of other built features; has been prepared following appropriate consultation with the owner/s of potentially affected feature/s; recommends appropriate pre-mining mitigatory measures to reduce subsidence impacts; recommends appropriate remedial measures and includes commitments to mitigate, repair, replace or compensate all predicted impacts on potentially affected built features in a timely manner; and in the case of all key public infrastructure, and other public infrastructure except roads, trails and associated structures, reports external auditing for compliance with ISO 31000 (or alternative standard agreed with the infrastructure owner) and provides for annual auditing of compliance and effectiveness during extraction of longwalls which may impact the infrastructure; <p>(h) include a Water Management Plan, which has been prepared in consultation with OEH, WaterNSW and DPI Water, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on watercourses and aquifers, including:</p> <ul style="list-style-type: none"> surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality; a program to monitor and report stream flows and assess any changes resulting from subsidence impacts; a program to monitor and report groundwater inflows to underground workings; and 	<p>Extraction Plans for LW901-904 (2014) Subsidence Management plan for LW705-710 (2008) SMP approval 28/9/12 EP approval 10/9/14</p>	<p>a) Specialist and consultants have been used in the compilation of relevant study components (provided as various Annexures to the main reports). Cardo were the Principal consultant who have compiled both overall reports. It is not stated in the report if Cardo or the specialist consultants are "endorsed by the Secretary".</p> <p>b) Approval sighted</p> <p>c) 705-710: Shows plan of first and second workings (Fig 1.1, main report) 901-904: Whilst the location of the Longwall panels are shown on most plans, in the main report and Annexures, the first workings only appear to be shown in Figure 5.1 of the Eco-Engineering report in Annex C.</p> <p>d) Various performance indicators are provided in the relevant management plans and the TARPs. More discussion in sections below for the individual management plans.</p> <p>e) 705-710 SMP: Published in 2008. An SMP that is substantially consistent with this condition and which is approved by DRE prior to 30 September 2012 is taken to satisfy the requirements of this condition. 901-904 EP: Published 2014.</p> <p>f) There have been no revisions of the subsidence management plans since their initial compilations. However, there is note in some of the end of panel reports that some revised work has been undertaken. For example, 902 EOP report mentions "revised subsidence predictions" for the HCCL. 705-710: Strategies discussed in Appendices relating to individual items and</p>	C	
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> • a program to predict, manage and monitor impacts on groundwater bores on privately-owned land; (i) include a Biodiversity Management Plan, which has been prepared in consultation with OEH and DPI (Fisheries), which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species, populations and their habitats; endangered ecological communities; and water dependent ecosystems, including (for Appin Areas 7, 8 and 9): • additional targeted surveys for threatened species, sufficient to identify any actions required to protect significant populations from potential impacts; (j) include a Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general, with a specific focus on cliffs and steep slopes; (k) include a Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders for both Aboriginal and historic heritage, to manage the potential environmental consequences of the proposed second workings on both Aboriginal and non-Aboriginal heritage items, and which: <ul style="list-style-type: none"> • includes additional investigations (such as surveys and current register searches) for Aboriginal heritage items (including previously known sites) and historic heritage items, sufficient to identify the significance (including "special significance") of all sites which may be impacted by subsidence and to identify any actions required to ensure that the performance measures in Table 1 are met; and • is prepared in accordance with the relevant requirements for preparation of the Heritage Management Plan required under condition 23 of Schedule 4; (l) include a Public Safety Management Plan, which has been prepared in consultation with DRE, to ensure public safety in the mining area; (m) include a subsidence monitoring program, which has been prepared in consultation with DRE, OEH and WaterNSW, to: <ul style="list-style-type: none"> • provide data to assist with the management of the risks associated with subsidence; • validate the subsidence predictions; • analyse the relationship between the predicted and resulting subsidence effects and predicted and resulting impacts under the plan and any ensuing environmental consequences; and • inform the contingency plan and adaptive management process; (n) include a regional seismic event monitoring program, which has been prepared in consultation with DRE, and which includes analysis of outcomes and proposed triggers for review of potential correlations with mining operations; (o) include a contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of any performance measure in Tables 1 and 2, or where any such exceedance appears likely; (p) proposes appropriate revisions to the Rehabilitation Management Plan required under condition 33 of Schedule 4; and (q) include a program to collect sufficient baseline data for future Extraction Plans. <p><i>Notes: To identify the longwall mining domains referred to in this condition, see Appendix 3. An SMP that is substantially consistent with this condition and which is approved by DRE prior to 30 September 2012 is taken to satisfy the requirements of this condition.</i></p>		<p>subsidence assessments from MSEC</p> <p>901-904: Strategies discussed in Appendices relating to individual items and subsidence assessments from MSEC</p> <p>g) 705-710: Individual plans are provided for the Main Southern Railway, Public roads, The Hume Motorway, Power Infrastructure and Telstra infrastructure.</p> <p>901-904: One single plan covering items discussed in the 901-904 EP.</p> <p>h) 705-710: Appendix B & H for ground and surface water</p> <p>901-904: Annexure C and main extraction plan report</p> <p>i) Additional information in main SMP/EP reports 705-710: Appendix C & D of SMP</p> <p>901-904: Annex D of EP</p> <p>j) Additional information in main SMP/EP reports 705-710: Cliff Slope management plan adequate addresses requirements, 901-904: Annex E of EP</p> <p>k) Additional information in main SMP/EP reports 705-710: Appendix C & D of SMP</p> <p>901-904: Annex D of EP</p> <p>l) Additional information in main SMP/EP reports 705-710: Updated plan in 2015 from original version in 2012 to include LW707-710 information..</p> <p>901-904: Annex G of EP</p> <p>m) Additional information in main SMP/EP reports 705-710: There is central monitoring strategy, which is underpinned by several sub reports, for specific structures</p> <p>901-904: Annex B of EP</p> <p>n) Additional information in main SMP/EP reports Regional Seismic Monitoring program prepared in 2014. Information provided shows last seismic report undertaken in Feb 2019 which includes overall results on mining plans and timings</p> <p>o) Refs Table 24.1 (Area 7 SMP) and Table 5.2 (Area 9 EP)</p> <p>p) Rehabilitation requirements are addressed</p>		

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
			<p>q) For the management plans provided there appears to be adequate baseline data collection. Not able to assess baseline data collection for management plans which have not been supplied.</p> <p>Whilst there is general conformance with the consent condition, requirements for auditing, as listed in some of the plans, are not consistent with the CoA. For example 705-710 Main Southern Rail Plan only specifies a review at the end of each panel, not annually as specified in the conditions. Likewise with the Public Road Management Plan for 701-710.</p>		
3.6.	<p>The Proponent shall ensure that the management plans required under condition 5(g)-(l) above include:</p> <p>(a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this approval; and</p> <p>(b) a detailed description of the measures that would be implemented to remediate predicted impacts.</p>	Information from Coordinator Environment	The management plans developed address this condition.	C	
First Workings					
3.7.	<p>The Proponent may carry out first workings within the project area, other than in accordance with an approved extraction plan, provided that DRE is satisfied that the first workings are designed to remain stable and non-subsiding, except insofar as they may be impacted by approved second workings.</p> <p><i>Note: The intent of this condition is not to require an additional approval for first workings, but to ensure that first workings are built to geotechnical and engineering standards sufficient to ensure long term stability, with zero resulting subsidence impacts.</i></p>		Survey information provided by South32 shown mining is carried out in accordance with proposal	C	
Payment of Reasonable Costs					
3.8.	The Proponent shall pay all reasonable costs incurred by the Department to engage suitably qualified, experienced and independent experts to review the adequacy of any aspect of an Extraction Plan.	Interview with Approvals Manager	None required to date.	NT	
Improved Understanding and Prediction of Subsidence Impacts					
3.9.	<p>The Proponent shall prepare and implement a program to improve its prediction and understanding of subsidence impacts (in particular sub-surface impacts and impacts on groundwater resources), to the satisfaction of the Secretary. This program must be prepared in consultation with DRE and be submitted to the Secretary for approval by 30 September 2012 and must include proposals for:</p> <p>(a) testing (including core testing and in situ testing) to further define the mechanical, hydrogeological and geochemical properties of rock strata within each longwall domain, including:</p> <ul style="list-style-type: none"> testing and validation of assumptions regarding regional continuity of modelled hydraulic properties (including mass porosity and permeability); identifying hydraulic properties of rock strata close to water-dependent ecosystems; and identifying the presence and distribution of iron-bearing minerals that might contribute to surface water quality impairment; 	<p>BSO Project Environmental Research Program, September 2012</p> <p>Consultation letters to DPI, DRE, OEH and SCA</p> <p>Interview with Approvals Manager</p>	<p>ERP addresses the requirements. South32 advised that the ERP was submitted to the Department on 19 September 2012 but have not received approval to-date. The ERP has been implemented and Extraction Plans updated to include the results.</p>	ANC	Recommend to confirm with DPIE that the ERP is approved or confirm the actions necessary to obtain approval.

No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations
	<p>(b) installation of a regional network of deep pore pressure monitoring bores with vertical arrays of pore pressure transducers to assess and quantify the height and impacts of subsurface fracturing;</p> <p>(c) a census of boreholes which may be impacted by subsidence, the gathering of relevant borehole and groundwater quality data and a regular monitoring program;</p> <p>(d) regular enhancement, calibration and verification of the project's regional groundwater model, and the further development of this model on a mining-domain scale; and</p> <p>(e) regular recalibration of methodologies and models used for subsidence effect and impact prediction, as they are applied within the project area.</p> <p><i>Note: Results of this program are to be incorporated within subsequent Extraction Plans, including the subplans required under condition 5(g)-(l) above.</i></p>				

Improved Understanding and Prediction of Environmental Consequences on Significant Natural Features

3.10.	<p>The Proponent shall prepare and implement a Research Program to the satisfaction of the Secretary and allocate \$1,000,000 in total to this program for expenditure over a period of seven years from the date of the program's approval. This program must be prepared in consultation with OEH, WaterNSW and DRE, be submitted to the Secretary for approval by 30 September 2012, and be:</p> <p>(a) directed at research into improving the prediction, assessment, remediation and/or avoidance of subsidence impacts and environmental consequences on significant natural features in the Project Area; and</p> <p>(b) targeted at genuine research, as opposed to implementing the matters required by this approval.</p>	<p>BSO Project Environmental Research Program, September 2012</p> <p>Consultation letters to DPI, DRE, OEH and SCA</p> <p>Interview with Approvals Manager</p>	<p>ERP addresses these requirements. South32 advised that the ERP was submitted to the Department on 19 September 2012 but have not received approval to-date. The ERP has been implemented and Extraction Plans updated to include the results.</p>	-	Refer above
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SCHEDULE 4 – SPECIFIC ENVIRONMENTAL CONDITIONS – GENERAL

Noise

Noise Impact Assessment Criteria

4.1.	<p>From the end of June 2013, the Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 1 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.</p> <p><i>Table 1: Interim Noise Criteria dB(A)</i></p> <table border="1"> <thead> <tr> <th colspan="2">Location</th> <th>Day</th> <th>Evening</th> <th colspan="2">Night</th> </tr> <tr> <th>Area</th> <th>Receiver Number</th> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{A1} (1 min)</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Appin Township</td> <td>136, 137, 139, 142, 143</td> <td>44</td> <td>44</td> <td>44</td> <td rowspan="3">52</td> </tr> <tr> <td>135</td> <td>43</td> <td>43</td> <td>43</td> </tr> <tr> <td>100-134, 141, 146-160, 194-187, 200-209, 211, 236-278, 283-284</td> <td>42</td> <td>42</td> <td>42</td> </tr> </tbody> </table> <p><i>Notes to Tables 1, 2 and 3:</i></p> <ul style="list-style-type: none"> To identify the locations referred to in Table 1, 2 and 3, refer to Appendix 5; and 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. <p>However, these criteria do not apply if the Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.</p>	Location		Day	Evening	Night		Area	Receiver Number	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)	Appin Township	136, 137, 139, 142, 143	44	44	44	52	135	43	43	43	100-134, 141, 146-160, 194-187, 200-209, 211, 236-278, 283-284	42	42	42		Outside audit period	NT	
Location		Day	Evening	Night																											
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations																																																																																																
4.2.	<p>From the end of December 2014, the Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.</p> <p><i>Table 2: Noise Criteria dB(A)</i></p> <table border="1"> <thead> <tr> <th colspan="2">Location</th> <th>Day</th> <th>Evening</th> <th colspan="2">Night</th> </tr> <tr> <th>Area</th> <th>Receiver Number</th> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{A1} (1 min)</th> </tr> </thead> <tbody> <tr> <td>Appin West Receivers south-west of Appin West</td> <td>1-7, 9-11, 13, 184, 188-189</td> <td>39</td> <td>39</td> <td>35</td> <td>49</td> </tr> <tr> <td>Appin West receivers near Hume Highway</td> <td>185-187, 190</td> <td>35</td> <td>35</td> <td>35</td> <td>53</td> </tr> <tr> <td rowspan="2">All other Appin West Receivers</td> <td>14, 26</td> <td>45</td> <td>45</td> <td>35</td> <td rowspan="2">53</td> </tr> <tr> <td>15-25, 27-48, 50-56</td> <td>43</td> <td>43</td> <td>35</td> </tr> <tr> <td rowspan="4">Appin No.3 Receivers</td> <td>58, 67, 71, 72</td> <td>41</td> <td>41</td> <td>41</td> <td rowspan="4">49</td> </tr> <tr> <td>68, 74, 75</td> <td>40</td> <td>40</td> <td>40</td> </tr> <tr> <td>69, 70, 76</td> <td>39</td> <td>39</td> <td>39</td> </tr> <tr> <td>217-218, 233, 279-282</td> <td>35</td> <td>35</td> <td>35</td> </tr> <tr> <td rowspan="4">Appin No.1 and No.2 Receivers</td> <td>82, 91, 216</td> <td>42</td> <td>42</td> <td>42</td> <td rowspan="4">50</td> </tr> <tr> <td>83, 85</td> <td>41</td> <td>41</td> <td>41</td> </tr> <tr> <td>78, 84, 86-90, 199</td> <td>40</td> <td>40</td> <td>40</td> </tr> <tr> <td>212-215, 226, 228-230, 232, 234, 235</td> <td>35</td> <td>35</td> <td>35</td> </tr> <tr> <td rowspan="3">Appin Township</td> <td>136, 137, 139, 142, 143</td> <td>44</td> <td>44</td> <td>44</td> <td rowspan="3">52</td> </tr> <tr> <td>135</td> <td>43</td> <td>43</td> <td>43</td> </tr> <tr> <td>All other privately owned property</td> <td>44</td> <td>44</td> <td>44</td> </tr> <tr> <td>Douglas Park</td> <td>All privately-owned residences</td> <td>45</td> <td>45</td> <td>39</td> <td>49</td> </tr> <tr> <td></td> <td>All other privately-owned land (excluding receivers in Table 3)</td> <td>35</td> <td>35</td> <td>35</td> <td>45</td> </tr> </tbody> </table> <p>However, these criteria do not apply if the Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.</p>	Location		Day	Evening	Night		Area	Receiver Number	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)	Appin West Receivers south-west of Appin West	1-7, 9-11, 13, 184, 188-189	39	39	35	49	Appin West receivers near Hume Highway	185-187, 190	35	35	35	53	All other Appin West Receivers	14, 26	45	45	35	53	15-25, 27-48, 50-56	43	43	35	Appin No.3 Receivers	58, 67, 71, 72	41	41	41	49	68, 74, 75	40	40	40	69, 70, 76	39	39	39	217-218, 233, 279-282	35	35	35	Appin No.1 and No.2 Receivers	82, 91, 216	42	42	42	50	83, 85	41	41	41	78, 84, 86-90, 199	40	40	40	212-215, 226, 228-230, 232, 234, 235	35	35	35	Appin Township	136, 137, 139, 142, 143	44	44	44	52	135	43	43	43	All other privately owned property	44	44	44	Douglas Park	All privately-owned residences	45	45	39	49		All other privately-owned land (excluding receivers in Table 3)	35	35	35	45	<p>BSO 14-day monitoring report, EPL 2504, 3 August 2017</p> <p>Annual Review 2019 Annual Review 2018 Annual Review 2017</p>	<p>Attended noise monitoring conducted on a quarterly basis.</p> <p>Noise levels were above the assessment criteria on three occasions during 2019. Exceedances of assessment criteria were recorded at Appin No. 1 & 2 in June and September and at Vent shaft 6 in March 2019.</p> <p>Investigations into the exceedances did not identify any significant issues with the vent fans however there is a plan to replace attenuators and inlet vanes to determine if that will resolve the issue.</p>	NC	Continue to investigate sources of noise exceedances and implement corrective actions.
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations																			
Construction Noise																								
4.2A	The Applicant shall ensure that the noise generated by construction activities relating to the Appin East Mine Safety Gas Management Project is managed in accordance with the requirements of the Interim Construction Noise Guideline (DECC, 2009), as may be updated from time to time.	Interview with Lead Environment	Construction completed prior to audit period.	NT																				
4.2B	<p>The Proponent shall ensure that the construction noise generated by the Appin Ventilation Shaft No. 6 project, does not exceed the noise impact assessment criteria set out in Table 2A at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.</p> <p><i>Table 2A: Construction noise criteria dB(A)</i></p> <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th>Day</th> <th>Evening</th> <th colspan="2">Night</th> </tr> <tr> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>L_{Aeq} (15 min)</th> <th>LA1 (1 min)</th> </tr> </thead> <tbody> <tr> <td>All privately owned residences (7.00am to 6.00pm, Monday to Saturday and 8.00 am to 1.00 pm Saturday)</td> <td>50</td> <td>45</td> <td>39</td> <td>49</td> </tr> <tr> <td>All privately owned residences (outside the above hours)</td> <td>45</td> <td>45</td> <td>39</td> <td>49</td> </tr> </tbody> </table>	Location	Day	Evening	Night		L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	LA1 (1 min)	All privately owned residences (7.00am to 6.00pm, Monday to Saturday and 8.00 am to 1.00 pm Saturday)	50	45	39	49	All privately owned residences (outside the above hours)	45	45	39	49	Interview with Lead Environment	Construction of vent shaft 6 was completed prior to the audit period.	NT	
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Noise Mitigation																								
4.3	<p>Upon receiving a written request from the owner of any residence listed in Table 3, the Proponent shall implement noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. These measures must be reasonable and feasible. If within 3 months of receiving this request from the owner, the Proponent and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.</p> <p><i>Table 3: Land where noise mitigation measures are available on request</i></p> <table border="1"> <thead> <tr> <th>Receiver Number</th> </tr> </thead> <tbody> <tr> <td>57,60, 63, 64, 66, 79, 80, 138, 140, 144, 165</td> </tr> </tbody> </table>	Receiver Number	57,60, 63, 64, 66, 79, 80, 138, 140, 144, 165	Interview with Specialist Environment	No written request received.	NT																		
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Operating Conditions																								
4.4.	<p>The Proponent shall:</p> <p>(a) implement best management practice, including all reasonable and feasible noise mitigation measures, to minimise the construction, operational and road traffic noise generated by the project;</p> <p>(b) operate a comprehensive noise management system on site that uses real-time noise monitoring data for mining operations and the implementation of noise mitigation measures to ensure compliance with the relevant conditions of this approval; and</p> <p>(c) regularly assess the real-time noise monitoring to ensure compliance with the relevant conditions of this approval, to the satisfaction of the Secretary.</p>	<p>BSO Noise Management Plan, August 2018</p> <p>Complaints report September 2019</p>	<p>Complaints were received:</p> <ul style="list-style-type: none"> • 20/04/17 • 30/04/17 • 05/05/17 • 19/05/17 x2 • 23/05/17 • 14/06/17 • 24/06/17 • 03/07/17 • 18/07/17 • 19/10/17 • 23/03/18 • 12/04/19 • 25/04/19 	C																				

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
			<ul style="list-style-type: none"> 22/07/19 <p>A number of these relate to the Gas drainage project, which was completed in September 2017. These works involved gas removal via temporary above ground infrastructure, now the gas is drained via underground.</p> <p>Vent shaft 2 changes as outlined above, due to exceedances are the only noise changes.</p> <p>Generally complaints have been related to Vent Shaft 6 related to portable compressors. Environment team provides advice to community team that manage the complaints.</p> <p>Some instances:</p> <ul style="list-style-type: none"> Limited hours or operations Remove them 		

Noise Management Plan

4.5.	<p>The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with EPA and WSC, and submitted to the Secretary for approval by 30 September 2012;</p> <p>(b) include provisions to ensure that the road haulage fleet attains and maintains best practices in both equipment and operations;</p> <p>(c) seek to minimise road traffic noise generated by employee commuter vehicles on public roads, particularly Douglas Park Drive and Macarthur Road;</p> <p>(d) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval;</p> <p>(e) outline procedures to manage responses to any complaints or issues raised by the owners of affected residences; and</p> <p>(f) include a noise monitoring program that:</p> <ul style="list-style-type: none"> uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the project; and includes a protocol for determining exceedances of the relevant conditions of this approval. 	<p>BSO Noise Management Plan, August 2018</p> <p>DPIE Approval letter dated 26 July 2018</p>	<p>It is understood the date of the NMP was updated by the document controller prior to publishing to the system – the actual date of the document pre-dates the Department approval.</p>	ANC	<p>Ensure those responsible for publishing documents are aware that they are approved documents.</p>
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Road Traffic Noise Mitigation

4.6.	<p>If after the end of June 2013, road traffic noise generated by the project (including employee vehicles) results in an exceedance by more than 2 dB(A) of the NSW criteria for road traffic noise on Douglas Park Drive or Macarthur Road at any residence on privately-owned land, then the Proponent shall, upon receiving a written request from the landowner, implement reasonable and feasible noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.</p>	<p>Interview with the Lead Environment</p>	<p>No requests during the audit period.</p>	NT	
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AIR QUALITY & GREENHOUSE GAS

Odour

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
4.7.	The Proponent shall ensure that no offensive odours are emitted from the site, as defined under the POEO Act.	Complaints report September 2019 Air Quality, Greenhouse Gas & Energy Management Plan, August 2018	Four odour complaints were received during the audit period. A further odour assessment for the proposed vent shaft 7 is to be completed.	C	

Greenhouse Gas Emissions

4.8.	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.	Air Quality, Greenhouse Gas & Energy Management Plan, August 2018 NGER data FY18, FY19 and FY20	Majority of greenhouse gas emissions are direct emissions of methane. The Appin Flaring Project is registered under the Emissions Reduction Fund. The Air Quality, Greenhouse Gas and Energy Management Plan describes the greenhouse gas minimisation programs. A decarbonisation program is described in the FY19 Annual Review with a target of carbon net neutrality by 2050.	C	
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Air Quality Criteria

4.9.	<p>The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the particulate emissions generated by the project do not exceed the criteria listed in Tables 4, 5 and 6 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.</p> <p><i>Table 4: Long term criteria for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^dCriterion</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 < µm (PM10)</td> <td>Annual</td> <td>^a30 µg/m³</td> </tr> </tbody> </table> <p><i>Table 5: Short term criterion for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^dCriterion</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><i>Table 6: Long term criteria for deposited dust</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust levels</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td>^cDeposited dust</td> <td>Annual</td> <td>^b 2 g/m²/month</td> <td>^a 4 g/m²/month</td> </tr> </tbody> </table> <p><i>Notes for Tables 4-6:</i></p> <ul style="list-style-type: none"> <i>a Total impact (ie incremental increase in concentrations due to the project plus background concentrations due to other sources);</i> <i>b Incremental impact (ie incremental increase in concentrations due to the project on its own);</i> <i>c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and</i> 	Pollutant	Averaging period	^d Criterion	Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³	Particulate matter < µm (PM10)	Annual	^a 30 µg/m ³	Pollutant	Averaging period	^d Criterion	Particulate matter < 10 µm (PM10)	24 hour	^a 50 µg/m ³	Pollutant	Averaging period	Maximum increase in deposited dust levels	Maximum total deposited dust level	^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month	<p>BSO 14-day monitoring report, EPL 2504, 3 August 2017</p> <p>Annual Review 2019 Annual Review 2018 Annual Review 2017</p>	<p>The maximum average PM₁₀ compliance limit was exceeded on four occasions during the audit period. All maximums were assessed as associated with bush fires and hazard reduction burns in the area.</p>	C	
Pollutant	Averaging period	^d Criterion																										
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³																										
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No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> <i>d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed to by the Secretary in consultation with EPA.</i> 				

Air Quality Acquisition Criteria

4.10.	<p>If the particulate matter emissions generated by the project exceed the criteria in Tables 7, 8 and 9 at any residence on privately-owned land or on more than 25 percent of any privately owned land, then upon receiving a written request for acquisition from the landowner the Proponent shall acquire the land in accordance with the procedures in Conditions 5 - 6 of Schedule 5.</p> <p><i>Table 7: Long term acquisition criteria for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>^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><i>Table 8: Short term acquisition criteria for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>^d Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>^a150 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>^a50 µg/m³</td> </tr> </tbody> </table> <p><i>Table 9: Long term acquisition criteria for deposited dust</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust levels</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td>^cDeposited dust</td> <td>Annual</td> <td>^b2g/m²/ month</td> <td>^a4g/m²/ month</td> </tr> </tbody> </table> <p><i>Notes for Tables 7 - 9:</i></p> <ul style="list-style-type: none"> <i>a Total impact (ie incremental increase in concentrations due to the project plus background concentrations due to other sources);</i> <i>b Incremental impact (ie incremental increase in concentrations due to the project on its own);</i> <i>c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and</i> <i>d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed to by the Secretary in consultation with EPA.</i> 	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 150 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³	Pollutant	Averaging period	Maximum increase in deposited dust levels	Maximum total deposited dust level	^c Deposited dust	Annual	^b 2g/m ² / month	^a 4g/m ² / month	Interview with Lead Environment	No acquisition requests have been received.	NT	
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 150 µg/m ³																													
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³																													
Pollutant	Averaging period	Maximum increase in deposited dust levels	Maximum total deposited dust level																												
^c Deposited dust	Annual	^b 2g/m ² / month	^a 4g/m ² / month																												

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Operating Conditions					
4.11.	<p>The Proponent shall:</p> <p>(a) implement best practice air quality management on site, including all reasonable and feasible measures to minimise the off-site odour, fume and dust emissions generated by the project, including from any spontaneous combustion on site,</p> <p>(b) minimise any visible air pollution generated by the project; and</p> <p>(c) regularly assess the air quality 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.</p>	<p>Interview with Lead Environment</p> <p>Site observations</p>	<p>Water sprays are used on some areas e.g. Appin East around stockpiles.</p> <p>Wheel wash is used at Appin East and North.</p> <p>Sweeper truck is used along Wedderburn Rd and Appin Rd as required.</p> <p>All trucks are washed on exit when hauling.</p> <p>Appin North has water carts in use around the emplacement. South Coast Equipment do all of the handling and therefore can call up the water cart as needed.</p> <p>Some complaints at vent shaft 6, especially when stone dusting (this is a periodic activity, some effects are limited in duration). Trailing wet stone dusting.</p>	C	
Air Quality & Greenhouse Management Plan					
4.12.	<p>The Proponent shall prepare and implement a detailed Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with EPA, and submitted to the Secretary for approval by 30 September 2012;</p> <p>(b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, including consideration of applying a real-time air quality management system that employs both reactive and proactive mitigation measures;</p> <p>(c) describe the measures that would be implemented to minimise the release of greenhouse gas emissions from the site; and</p> <p>(d) include an air quality monitoring program that uses a combination of high volume samplers and dust deposition gauges to evaluate the performance of the project, and includes a protocol for determining exceedances with the relevant conditions of this approval.</p>	<p>Air Quality, Greenhouse Gas & Energy Management Plan, August 2018</p> <p>Interview with Lead Environment</p>	<p>It was advised that consultation for the plan was completed at the time the plan was originally developed. No material changes were made during the 2018 update and the plan was approved without further request for consultation.</p> <p>The Air Quality, Greenhouse Gas & Energy Management Plan contains a commitment to undertake routine sensory odour assessments however it was confirmed that these are no longer conducted.</p>	ANC	The process for assessing odour should be reviewed and plan updated accordingly.
Meteorological Monitoring					
4.13.	<p>During the life of the project, the Proponent shall ensure that there is a suitable meteorological station operating in the vicinity of the site that:</p> <p>(a) complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline; and</p> <p>(b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the NSW Industrial Noise Policy.</p>	<p>Air Quality, Greenhouse Gas & Energy Management Plan, August 2018</p> <p>Copy of Master Sheet.xlsx</p> <p>Site Inspection</p>	<p>Weather stations are installed at Appin North, Appin West and Ventilation Shaft No. 6 site. Some stations observed in the field and data for all stations sighted.</p>	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Soil and Water					
<i>Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Proponent is required to obtain the necessary water licences for the project.</i>					
Compensatory Water Supply					
4.14.	<p>The Proponent shall provide a compensatory water supply to any owner of privately-owned land whose water supply is adversely impacted (other than an impact that is negligible) as a result of the project, in accordance with the approved Surface Water Management Plan.</p> <p>The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the project. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.</p> <p>If the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.</p> <p>If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent shall provide alternative compensation to the satisfaction of the Secretary.</p>	<p>Interview with Approvals Manager</p> <p>Compensatory Water Supply Log, 23/10/19</p> <p>Subsidence Review meeting Minutes, 16/10/19</p>	<p>It is understood that BSO receive approximately half a dozen compensatory water requests per year. These have been historically handled through the subsidence advisory board. However, the new process is that the claims are now received directly by BSO.</p> <p>Short term solutions including water truck takes water to affected landholders. Long term solutions can include new bore/s, drilling deeper at current bore.</p> <p>Claims are reviewed and tracked through the monthly Subsidence Review Meeting.</p> <p>Currently there is one case that has been referred to the Secretary for resolution and is currently with the department for consideration.</p>	Obs - C	Ensure BSO continues to work with DPIE to resolve compensatory water dispute.
Surface Water Discharges					
4.15.	The Proponent shall ensure that all surface water discharges from the site (including from the Brennans Creek Dam) comply with the discharge limits (both volume and quality) set for the project in any EPL.		Refer to EPL P1.3, L2.4, L3.1.	NC	Refer Annex B.1 EPL Compliance Table
Surface Water Management Plan					
4.16.	<p>The Proponent [must] update and implement the Surface Water Management Plan for the project to the satisfaction of the Secretary. This plan must be prepared in consultation with DPI Water and EPA by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary, and submitted to the Secretary for approval by 31 January 2017. This plan must include:</p> <p>(a) a comprehensive water balance for the project, that includes details of:</p> <ul style="list-style-type: none"> • sources and security of water supply and water make; • water use; and • water discharges; and <p>(b) management plans for the surface facilities sites, that include:</p> <ul style="list-style-type: none"> • a detailed description of water management systems for each site, including: <ul style="list-style-type: none"> - clean water diversion systems; - erosion and sediment controls; and - any water storages; • measures to minimise potable water use and to reuse and recycle water; • a Water Response Plan, which describes the measures and/or procedures that would be implemented to: <ul style="list-style-type: none"> - investigate, notify and mitigate any ground or surface water exceedances; - minimise, prevent or offset any adverse impacts to ground or surface water resources; 	<p>BSO Surface Water Management Plan, June 2018</p> <p>Approval letter 27 June 2018</p> <p>Pollution Incident Response Management Plan, October 2019</p> <p>Spill Management Procedure IMCP0183, September 2019</p> <p>Spill response Procedure ICHP0235, November 2013</p> <p>Appin Emergency Response Plan, March 2019</p> <p>Appin North Surface Water Management Figure</p> <p>Appin West Surface Water Stormwater Dam Operation Procedure, APNP0015, April 2019</p>	<p>The SWMP was approved by the secretary on 27 June 2018.</p> <p>The SWMP generally addresses the requirements of the condition, excluding the issues identified below.</p> <p>The SMP does not include a Water Response Plan however the plan refers to the relevant extraction and subsidence management plans which include Trigger Action Response Plans (TARP) for water impacts. Spill response procedures and emergency response plan were sighted that address the requirements of a Water Response Plan, these are not captured in the SWMP and these documents are not referred to in the SWMP. Through discussions it is understood that in the event of a risk to impacting the surface water management system, BSO have the ability to interlock dams, and move water around site as needed, but this is not a documented process.</p>	ANC	The SWMP needs to be updated to include potable water minimisation controls in SWMP. Update the SWMP to include details of interlocking of dams to control water.

No	Assessment Requirement	Reference/Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> - provide compensatory water supply to any owner of privately-owned land whose water supply is adversely impacted (other than an impact that is negligible) as a result of the project; and • measures to comply with surface water discharge limits; • implementation of any pollution reduction program relating to mine water discharges from Brennans Creek Dam and identification of 5, 7 and 10 year commitments to substantially reduce the impacts on biota of salinity and other pollutants in such discharges; and • monitoring and reporting procedures including: <ul style="list-style-type: none"> - collection of baseline data on surface water quality in creeks and other waterbodies that could potentially be affected by the project; and - surface water and stream health impact assessment criteria. <p><i>Note: This plan must be suitably integrated with the Water Management Plans that form part of Extraction Plans.</i></p>		<p>Recently completed Appin North water movement/management figure has been completed. An opportunity to include this in the SWMP to demonstrate how surface water can be controlled around the site. Appin West also have a figure. Appin East doesn't have this plan.</p> <p>The SWMP does not adequately address "potable water minimisation controls". Controls are in place, such as the water filtration plant at Appin West, replaces Sydney Water use. Plans for Appin North to also have filtration plant that will also reduce need for Sydney Water use.</p> <p>The PRP relating to the semi-closed loop system for washery water is ongoing. Refer to EPL condition U1.1.</p>		

WEST CLIFF COAL WASH EMPLACEMENT AREA

West Cliff Coal Wash Emplacement Area Management Plan

4.17.	<p>The Proponent shall prepare and implement a West Cliff Coal Wash Emplacement Area Management Plan for the project to the satisfaction of the Secretary. This plan must be prepared in consultation with OEH and be submitted to the Secretary for approval by the end of June 2013. This plan must include:</p> <ul style="list-style-type: none"> (a) detailed design plans which include options for reducing, avoiding and/or managing impacts on Aboriginal heritage sites in and adjacent to the southwestern fringe of the proposed Stage 4 footprint (including sites 52-2-2228/3617, 52-2-1373, 52-2-3533/3613 and 52-2-3506); (b) management strategies to ensure no impacts to Aboriginal heritage site 52-2-3505 other than negligible impacts, including consideration of potential staged development of the emplacement and/or buffer areas; (c) management strategies for the protection and conservation of <i>Persoonia hirsuta</i>; (d) management strategies for the protection and conservation of the Broad-headed Snake and the Southern Brown Bandicoot; (e) a comprehensive water monitoring program for the emplacement; (f) provide for progressive rehabilitation of the emplacement area, including through: <ul style="list-style-type: none"> • maximising opportunities for natural regeneration; • maximising retention of suitable habitat species; appropriate weed and pest control strategies; and • planting only endemic species in habitat mixes appropriate for soil, slope and aspect 	<p>West Cliff Coal Wash Emplacement Area Management Plan, July 2017</p> <p>DPIE approval letter November 2016</p> <p>Interview with Lead Environment</p>	<p>As required by 4.17(a) and as stated in the WCCWEAMP, detailed design plans for Stage 4 are not included in the plan. It is understood that these plans are still being developed, as Stage 4 has yet to commence.</p> <p>As per figure Plan 5 – Cultural Heritage Plan site 52-2-3505 is currently proposed to be avoided, along with 52-2-2228/3617 and 52-2-3506.</p> <p>It is understood that the plan was submitted and approved by the Secretary in 2016. The plan was then submitted to the Federal Government for approval under EPBC and due to the length of time taken to review asked for the date to be updated to 2017. The revision number remained the same and no updates to the plan were made.</p> <p>The plan otherwise addresses the requirements of this condition.</p>	Obs-C	<p>Ensure that detailed design plans for Stage 4, when developed, are included in the WCCWEAMP.</p>
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West Cliff Coal Wash Emplacement Area Biodiversity Offset Strategy

4.18.	<p>The Proponent shall provide a suitable biodiversity offset strategy to compensate for the impacts of Stage 4 of the West Cliff Coal Wash Emplacement Area, to the satisfaction of the Secretary. This offset strategy must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with OEH; (b) be submitted to the Secretary for approval by the end of December 2012, or as otherwise agreed by the Secretary; and (c) fulfil "maintain or improve" and seek to fulfil "like for like or better" conservation outcomes for the vegetation associations and the <i>Persoonia hirsuta</i> impacted by clearing. 	<p>West Cliff Coal Wash Emplacement Area Management Plan, July 2017</p> <p>Interview with Specialist Environment</p>	<p>The offset plan is also managed through the federal EPBC approval.</p> <p>It is understood that the <i>Persoonia hirsuta</i> population had more recently been impacted by climatic conditions, however BSO were undertaken all necessary steps to manage the offset area. In addition, were also undertaking</p>	C	<p>Ensure that revised management plans are provided to relevant stakeholders for consultation prior to submission for approval.</p>
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
			a seedling planting/translocation trial, sighted at Appin North.		
4.19.	The Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas by 31 December 2012, or other date agreed by the Secretary, to the satisfaction of the Secretary.	Interview with Lead Environment	It is understood that the offset area, which is located at Appin North, is not located on freehold land and is owned by the Crown. Therefore long-term security is at the discretion of the State.	NV	
Underground Coal Wash Emplacement Trial					
4.20.	The Proponent shall prepare and undertake an Underground Coal Wash Emplacement Trial for the project to the satisfaction of the Secretary. The design of the trial must: <ul style="list-style-type: none"> (a) be undertaken in consultation with OEH; (b) be submitted to the Secretary for approval by the end of December 2012; (c) contain a two year program to undertake both pilot scale and demonstration scale trials of underground coal wash disposal; (d) include commitments for ongoing development and/or implementation of underground emplacement options following this two-year trial; and (e) include 6 monthly progress reporting to the Department and OEH. 	DPIE correspondence Interview with Lead Environment	Correspondence was sighted from DPIE approving deferral of the trial for 5 years, this was in 2014. BSO at the time of the audit was preparing correspondence to the DPIE to provide an update and to discuss next steps with the Department.	NV	
PROJECT SURFACE INFRASTRUCTURE MANAGEMENT					
Gas Drainage Management Plan					
4.21.	The Proponent shall prepare and implement a Gas Drainage Management Plan in respect of construction and use of future gas drainage infrastructure (ie for any gas drainage not subject to approval at the date of this instrument) to the satisfaction of the Secretary. This plan must be submitted to the Secretary for approval prior to the construction of any future gas drainage infrastructure and must include details of the proponent's commitments regarding: <ul style="list-style-type: none"> (a) community consultation; (b) landholder agreements; (c) assessment of noise, air quality, traffic, biodiversity, heritage, public safety and other impacts in accordance with approved methods; (d) avoidance of significant impacts and minimisation of impacts generally; (e) flaring or use of drained hydrocarbon gases, wherever practicable; (f) achievement of applicable standards and goals; (g) mitigation and/or compensation for significant noise, air quality and visual impacts; and (h) rehabilitation of disturbed sites. 	BSO Gas Drainage Management Plan, November 2016 DPIE Approval Letter dated 31 January 2017 Gas Management Plans: Appendix A, Appin Longwalls 706-708, May 2014 Approval letter 22 May 2014 Appendix B – Appin Longwall 01 MRD Borehole, Sept 2015 Approval letter 24 September 2015	The GDMP was approved by the Secretary on 31 January 2017. Appendix A was approved in May 2014 and Appendix B in September 2015. The plan addresses the requirements of this condition.	C	
Surface Activities Management Plan					
4.22.	The Proponent shall prepare and implement a Surface Activities Management Plan in respect of construction and use of service boreholes, pipelines, electrical infrastructure, works to public infrastructure, communications equipment and monitoring equipment, to the satisfaction of the Secretary. This plan must: <ul style="list-style-type: none"> (a) be submitted to the Secretary for approval by 30 April 2017, unless the Secretary agrees otherwise; and (b) include the following: <ul style="list-style-type: none"> • a community consultation strategy; • a protocol for landholder agreements; • commensurate assessment of noise, air quality, traffic, biodiversity, heritage, public safety and other impacts in accordance with approved methods; 	BSO Surface Activities Management Plan, February 2017 DPIE approval letter dated 1 March 2018	The SAMP was approved by the Secretary on 1 March 2018. The plan addresses the requirements of this condition.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> measures to avoid and/or minimise impacts; measures to achieve performance with applicable standards and goals; mitigation measures and/or compensation for significant noise, air quality and visual impacts at privately-owned residences; and measures for the rehabilitation of disturbance. 				
Upper Canal					
4.23.	The Proponent shall not cause any damage to the Upper Canal during the construction and operation of the Appin East Mine Gas Safety Management Project.	<p>Interview with Lead Environment</p> <p>Property Conditions surveys, Australian Dilapidations, January and September 2017.</p>	Construction complete in September 2017, there are currently no surface works. Review of the post-construction dilapidations survey confirm no impact to the Upper Canal.	C	
4.23A.	<p>Prior to construction of the Appin East Mine Gas Safety Management Project, the Proponent shall:</p> <p>(a) undertake a dilapidation survey of the Upper Canal, in consultation with WaterNSW and the Heritage Division;</p> <p>(b) prepare final detailed design plans in consultation with WaterNSW; and</p> <p>(c) undertake vibration monitoring for all earthworks undertaken within 25 metres of the Upper Canal, to the satisfaction of the Secretary.</p>	Correspondence with WaterNSW in 2017	<p>Consultation of the modification for the pipeline was undertaken with OEH, but nothing specific for the Heritage Division. OEH made no comments on the Upper Canal in their submissions on the MOD. No evidence of further OEH or Heritage Division consultation was provided.</p> <p>Historical Heritage assessment attached to the MOD states that there is only one heritage site at this location and that impacts to this would be minor and that no further heritage assessment is required prior to commencement of the works.</p> <p>Extensive consultation and communication with WaterNSW across 2017, including in relation to the following:</p> <ul style="list-style-type: none"> dilapidation survey detail design plans vibration monitoring monitoring results and photos 	ANC	No further action required – historic NC

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
4.23B.	<p>Following the completion of construction of the Appin East Mine Gas Safety Management Project, the Proponent shall:</p> <p>(a) undertake a dilapidation survey of the Upper Canal in consultation with WaterNSW and the Heritage Division; and</p> <p>(b) repair, or pay the full costs associated with repairing, any damage to the Upper Canal caused by the project in consultation with WaterNSW and the Heritage Division, to the satisfaction of the Secretary.</p>	Correspondence with WaterNSW in 2017	<p>Extensive consultation and communication with WaterNSW across 2017, including in relation to the following:</p> <ul style="list-style-type: none"> dilapidation survey detail design plans vibration monitoring monitoring results and photos <p>No consultation with Heritage Division on completion of the pipeline was provided.</p>	ANC	No further action required – historic NC

HERITAGE

Heritage Management Plan

4.24.	<p>The Proponent shall update the approved Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with OEH, the Aboriginal community, Council, any local historical organisations and relevant landowners;</p> <p>(b) be submitted to the Secretary for approval by 31 January 2017;</p> <p>(c) include the following program/procedures for managing Aboriginal heritage management within the project area:</p> <ul style="list-style-type: none"> recording, salvaging, excavating and/or managing the Aboriginal sites and potential archaeological deposits within the site; conserving, managing, and monitoring the Aboriginal sites outside the site; managing the discovery of any new Aboriginal objects or skeletal remains during the project; maintaining and managing access to archaeological sites by the Aboriginal community; and ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage within the project area. <p>(d) include the following program/procedures for managing other heritage on site:</p> <ul style="list-style-type: none"> preparing conservation management plans and/or photographic and archival recording of potentially affected heritage items; making the conservation management plans and photographic and archival recording publicly available for buildings or structures of State or National heritage significance once they are completed; protection and monitoring of heritage items outside the site; baseline dilapidation surveys of all heritage items potentially affected by subsidence and/or blasting; monitoring, notifying and managing the effects of subsidence and/or blasting on potentially affected heritage items (including the Mountbatten Group); and additional archaeological excavation and/or recording of any significant heritage items requiring demolition. <p><i>Note: This plan must be suitably integrated with Heritage Management Plans that form part of Extraction Plans, and the West Cliff Coal Wash Emplacement Area Management Plan.</i></p>	<p>Heritage Management Plan, January 2017</p> <p>DPIE approval letter dated 13 September 2018</p> <p>Site observations</p> <p>Interview with Lead Environment</p>	<p>The HMP was approved by the Secretary on 13 September 2018.</p> <p>It was advised that consultation for the plan was completed at the time the plan was originally developed. No material changes were made to the plan in the 2017 updated and the plan was approved without request for further consultation.</p> <p>The audit team sighted the identification of Aboriginal outcrop at Appin North – identified by orange netting.</p> <p>West Cliff Emplacement management plan includes a section on Aboriginal heritage management.</p> <p>Access has not been requested to any Aboriginal sites.</p> <p>Future Works will be undertaken as a project with an HMP for each project.</p> <p>Monitoring of effects of subsidence reported in the end of panel reports. No reported impacts.</p>	C	
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
TRANSPORT					
Monitoring of Coal Transport					
4.25.	The Proponent shall: (a) keep accurate records of the amount of coal transported from the site (on a daily basis); and (b) make these records publicly available on its website at the end of each financial year.	bulli-seam-operations-daily-coal-transport-tonnages-(fy2016).xlsx https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents	FY19 daily transport quantities are provided on website.	C	
Traffic Management Plan					
4.26.	The Proponent shall update the approved Traffic Management Plan for the project to the satisfaction of the Secretary. This plan must be: (a) prepared in consultation with the RMS, WCC, WSC and the CaCC; (b) submitted to the Secretary for approval by 31 January 2017; (c) propose an appropriate program and schedule of works for any intersection upgrades to be undertaken or contributed to by the Proponent over the life of the project, including an upgrade of the intersection of West Cliff Mine Access Road and Appin Road that is generally in accordance with the requirements of the RMS and that is to be completed before the Level of Service at this intersection drops below LOS C; and (d) include strategies to manage construction traffic, including road closure protocols, community consultation and measures to avoid potential road safety conflicts with other road users.	Traffic Management Plan BSO, January 2017 DPIE approval letter dated 26 July 2018	The TMP was approved by the Secretary on 26 July 2018. No material changes were made to the 2017 update and the plan was approved without request for further consultation. The TMP does not include a/any schedule of works for intersection upgrades. States "The program and schedule of upgrade works for the intersection will be prepared by RMS", and it is understood that no intersection works were undertaken for the period, none proposed currently. The plan does not include details of the upgrade of the intersection of West Cliff Mine Access Road and Appin Road. This work was completed prior to the audit period, and therefore no longer relevant. It is suggested this condition is updated to remove this requirement. The TMP does not adequately address construction traffic requirements. It was advised this is generally captured by a construction management plan developed for any relevant construction activities.	Obs-C	Suggested that condition 4.26 is updated to remove the requirement around details for upgrade "of the intersection of West Cliff Mine Access Road and Appin Road", as this has been completed and is no longer relevant. Suggest TMP is updated to include a commitment to develop and detail construction traffic requirements for each construction project.
4.26A.	The Proponent shall ensure that safe access to Ventilation Shaft No.6 is provided from public roads.	Traffic Management Plan BSO, January 2017	Plan states access was built as part of construction and aligns to RMS guidelines. Safe access was sighted.	C	
VISUAL					
Visual Amenity and Lighting					
4.27.	The Proponent shall: (a) minimise the visual impacts, and particularly the off-site lighting impacts, of the main infrastructure area and associated ancillary surface works; (b) take all practicable measures to further mitigate off-site lighting impacts from the project; and (c) ensure that all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting</i> , to the satisfaction of the Secretary.	Interview with Lead Environment Site Observations	No lighting complaints. Site was observed to be generally screened. Locations (north, west) Existing pit tops and associated lighting have been in place for long periods, with little changes. No known issues with vent shafts	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
WASTE					
4.28.	The Proponent shall: (a) minimise the waste (including coal reject) generated by the project; and (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of, to the satisfaction of the Secretary.	Site Observations Email and report to Andrew Couldridge EPA, dated 7/8/19 Bund, Sump and Oily Water Separator management procedure, 11/9/19 IMCP0184	Two incidents were reported to the EPA related to issues of waste being inappropriately disposed at the site: 1. Contents of reagent bund removed and placed at the slurry ponds 2. Oil separation pit cleaned out and disposed at Appin North pit top Following the incidents the WMP has been reviewed but not yet updated. A maintenance strategy for maintenance of pits and oil separators is to be developed. A procedure for bund, sump and oily water maintenance has been developed and includes requirements for inspection and maintenance and assessment of historic bunds for capacity. Waste is managed by Cleanaway and a new contract for Cleanaway to manage the area at Appin East and Appin West has recently been negotiated. Cleanaway will issue a notice if there is contamination of the waste streams. A Cleanaway representative will be on site at Appin West full time and another representative will be shared between Appin East and North.	NC	Ensure Waste Management Plan is updated and approved.
4.29.	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 by 30 September 2012.	Waste Management Plan BSO, May 2017 DPIE approval letter dated 26 July 2018	Reviewed following recent incidents but not yet updated.	Obs - C	Ensure Waste Management Plan is updated and approved.
BUSHFIRE MANAGEMENT					
4.30.	The Proponent shall: (a) ensure that the project is suitably equipped to respond to any fires on site; and (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the surrounding area.	Interview with Environment Lead	Fire hydrants are available at each pit top. RFS attends site periodically to understand the site aspects and location of fire hydrants. Illawarra coal doesn't have the ability to provide equipment to support fighting fires, except hydrants, but could provide trained personnel, see below statement. ERT team is in place, who are trained in fire response, in particular to underground fires, but this could be applied to support RFS or emergencies services if called upon.	C	

REHABILITATION

Rehabilitation Objectives

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations																		
4.31.	<p>The Proponent shall rehabilitate the site to the satisfaction of the Executive Director Mineral Resources. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA and the PPR, and comply with the objectives in Table 10.</p> <p><i>Table 10: Rehabilitation Objectives</i></p> <table border="1"> <thead> <tr> <th>Feature</th> <th>Objective</th> </tr> </thead> <tbody> <tr> <td>Mine site (as a whole)</td> <td>Safe, stable & non-polluting</td> </tr> <tr> <td>Portals and vent shafts</td> <td>To be decommissioned and made safe and stable. Retain habitat for threatened species (eg bats), where practicable</td> </tr> <tr> <td>Watercourses of 3rd order or above subject to subsidence impacts</td> <td>Restore pre-mining surface flow and pool holding capacity as soon as reasonably practicable Hydraulically and geomorphologically stable, with riparian vegetation that is the same or better than prior to mining</td> </tr> <tr> <td>Other watercourses subject to subsidence impacts</td> <td>Hydraulically and geomorphologically stable, with riparian vegetation that is the same or better than prior to mining</td> </tr> <tr> <td>Cliffs</td> <td>No additional risk to public safety compared to prior to mining</td> </tr> <tr> <td>Other land affected by the project</td> <td>Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of: <ul style="list-style-type: none"> • local native plant species (unless the Executive Director Mineral Resources agrees otherwise); and • a landform consistent with the surrounding environment </td> </tr> <tr> <td>Built features damaged by mining operations</td> <td>Repair to pre-mining condition or equivalent unless <ul style="list-style-type: none"> • the owner agrees otherwise; or • the damage is fully restored, repaired or compensated for under the <i>Mine Subsidence Compensation Act 1961</i>. </td> </tr> <tr> <td>Community</td> <td>Ensure public safety Minimise the adverse socio-economic effects associated with mine closure</td> </tr> </tbody> </table> <p><i>Notes:</i></p> <p>1) These rehabilitation objectives apply to all subsidence impacts and environmental consequences caused by mining taking place after the date of this approval; and to all project surface infrastructure part of the project, whether constructed prior to or following the date of this approval.</p> <p>2) Rehabilitation of subsidence impacts and environmental consequences caused by mining which took place prior to the date of this approval may be subject to the requirements of other approvals (eg under a mining lease or a Subsidence Management Plan approval) or the Proponent's commitments.</p> <p>3) In the case of the West Cliff Emplacement Area, final landform may be significantly different from that existing prior to mining, but must still be safe, stable and non-polluting and generally consistent with the surrounding landforms.</p>	Feature	Objective	Mine site (as a whole)	Safe, stable & non-polluting	Portals and vent shafts	To be decommissioned and made safe and stable. Retain habitat for threatened species (eg bats), where practicable	Watercourses of 3 rd order or above subject to subsidence impacts	Restore pre-mining surface flow and pool holding capacity as soon as reasonably practicable Hydraulically and geomorphologically stable, with riparian vegetation that is the same or better than prior to mining	Other watercourses subject to subsidence impacts	Hydraulically and geomorphologically stable, with riparian vegetation that is the same or better than prior to mining	Cliffs	No additional risk to public safety compared to prior to mining	Other land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of: <ul style="list-style-type: none"> • local native plant species (unless the Executive Director Mineral Resources agrees otherwise); and • a landform consistent with the surrounding environment 	Built features damaged by mining operations	Repair to pre-mining condition or equivalent unless <ul style="list-style-type: none"> • the owner agrees otherwise; or • the damage is fully restored, repaired or compensated for under the <i>Mine Subsidence Compensation Act 1961</i>. 	Community	Ensure public safety Minimise the adverse socio-economic effects associated with mine closure	<p>BSO Mining Operations Plan 1 October 2012 to 30 September 2019</p> <p>Annual Review 2018</p> <p>West Cliff Coal Wash Emplacement Area Management Plan, July 2017</p> <p>Interview with Lead Environment</p> <p>Site Observations</p>	<p>Emplacement area rehabilitation works were sighted to be ongoing and completed on a progressive basis. Also rehabilitated during the audit period, was a number of well pads. Well pads sighted and had been rehabilitated.</p>	C	
Feature	Objective																						
Mine site (as a whole)	Safe, stable & non-polluting																						
Portals and vent shafts	To be decommissioned and made safe and stable. Retain habitat for threatened species (eg bats), where practicable																						
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Community	Ensure public safety Minimise the adverse socio-economic effects associated with mine closure																						

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Progressive Rehabilitation					
4.32.	The Proponent shall carry out the rehabilitation of the site progressively, that is, as soon as reasonably practicable following disturbance.	Site Observations	Progressive rehabilitation was sighted on the emplacement areas, with Stage 3 nearing completion. The southern aspects of Stage 3 had been shaped, capped and topsoil spread. Seeding is proposed to occur shortly of this area.	C	
Rehabilitation Management Plan					
4.33.	<p>The Proponent shall prepare and implement a Rehabilitation Management Plan for the project, with specific reference to all surface facilities sites, to the satisfaction of the Executive Director Mineral Resources. This plan must:</p> <p>(a) be prepared in consultation with the Department, OEH, DPI Water, Council and the CCC;</p> <p>(b) be prepared in accordance with any relevant DRE guideline and be consistent with the rehabilitation objectives in the EA and in Table 11;</p> <p>(c) provide for detailed mine closure planning, including measures to minimise socio-economic effects due to mine closure, to be conducted prior to the site being placed on care and maintenance;</p> <p>(d) build, to the maximum extent practicable, on the other management plans required under this approval; and</p> <p>(e) be submitted to the Executive Director Mineral Resources for approval by 30 September 2012.</p> <p><i>Note: The Rehabilitation Management Plan should address all land impacted by the project, whether prior to or following the date of this approval.</i></p>	<p>BSO Mining Operations Plan 1 October 2012 to 30 September 2019</p> <p>MOP Approval letter, 29 November 2012</p> <p>MOP Extension Approval, 2019</p>	<p>MOP states that the plan was submitted to all of the agencies, excluding the CCC, as this stakeholder had not been formed at the time of the development of the MOP.</p> <p>An extension to the MOP period was sought by BSO and the Resources Regulator approved this on 12 June 2019.</p> <p>The MOP includes details of closure and rehabilitation including proposed final land use.</p>	C	
BIODIVERSITY					
Appin East Mine Gas Safety Management Project					
4.34.	By 31 January 2017, the Proponent shall enter into a suitable arrangement to offset the clearing of Cumberland Plain Woodland to develop the Appin East Mine Gas Drainage Project, to the satisfaction of the Secretary.	<p>BSO Biodiversity Management Plan, March 2019</p> <p>DPIE approval letter dated 1 March 2018</p>	<p>Offset area located at ventilation shaft 6</p> <p>The offset strategy is part of the Biodiversity Management Plan(Attachment 2) which was approved by DPIE on 23 March 2019.</p>	C	
Ventilation Shaft No.6					
4.35.	<p>The Proponent shall prepare and implement a biodiversity offset strategy to compensate for the impact of Ventilation Shaft No. 6 on Cumberland Plain Woodland. The offset strategy must:</p> <p>(a) be prepared in consultation with OEH and to the satisfaction of the Secretary;</p> <p>(b) incorporate at least 8.7 hectares of existing Cumberland Plain Woodland vegetation; and</p> <p>(c) make suitable arrangements to protect and manage this offset area in perpetuity.</p> <p><i>Note: The 8.7 hectare size for the Biodiversity Offset Area identified above is based on Cumberland Plain Woodland vegetation on shale (HN529) in good condition. An equivalent minimum offset for Cumberland Plain Woodland on flats vegetation (HN528) in good condition is 9.4 hectares.</i></p>	<p>BSO Biodiversity Management Plan, March 2019</p>	<p>Biodiversity Management Plan – Attachment 1. The condition requirements are addressed in the management plan.</p> <p>For management in perpetuity would depend on whether the Crown require it be managed.</p>	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Biodiversity Management Plan					
4.36.	<p>The Proponent shall prepare and implement a Biodiversity Management Plan for the Appin East Mine Gas Safety Management Project and Ventilation Shaft No. 6, to the satisfaction of the Secretary. The plan must:</p> <p>(a) be prepared in consultation with OEH, and submitted to the Secretary for approval by 31 January 2017;</p> <p>(b) describe how the implementation of offsets would be integrated with the overall rehabilitation of the site;</p> <p>(c) include:</p> <ul style="list-style-type: none"> (i) a description of the short, medium and long term measures that would be implemented to: • implement offset strategy; and • manage the remnant vegetation and habitat on the site and in the offset areas; (ii) detailed performance and completion criteria for the implementation of the offset strategy; (iii) details of vegetation clearing protocols, including procedures to: • minimise the amount of the clearing required; • compensate the loss of hollow-bearing trees for the Appin East Mine Gas Safety Management Project; and • translocate the Cumberland Plain Snail (<i>Meridolum corneovirens</i>) affected by the clearing of Cumberland Plain Woodland for the Applin East Mine Gas Safety Management Project; (iv) (details of location and timing of tree screenings to minimise visual impacts of the project; (v) a description of the measures that would be implemented in ongoing 5 year periods, including the procedures to be implemented to: • implement revegetation and regeneration within disturbed areas; • minimise the clearing of native vegetation; • control weeds and feral pests; • manage grazing and agriculture on site; and • control unauthorised access; (vi) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria; (vii) a description of the potential risks to successful revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and (viii) details of who would be responsible for monitoring, reviewing, and implementing the plan. 	<p>BSO Biodiversity Management Plan, March 2019</p> <p>DPIE approval letter dated March 2019.</p>	<p>The updated BMP was approved by the Secretary on 23 March 2019.</p> <p>It was advised that consultation for the plan was completed at the time the plan was originally developed. No material change as made in the 2019 update and the plan was approved by the Secretary without request for further consultation.</p> <p>The BMP addresses the requirements of this condition.</p>	C	

SCHEDULE 5 – ADDITIONAL PROCEDURES

Notification of Landowners

5.1.	<p>As soon as practicable after obtaining monitoring results showing:</p> <p>(a) an exceedance of any relevant criteria in schedule 4, the Proponent shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and</p> <p>(b) an exceedance of any relevant air quality criteria in schedule 4, the Proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).</p>	<p>Example of letter to community regarding noise exceedance – Ref Noise non-compliance – 11 September 2019, signed Amanda Blunt, Community Specialist</p>	<p>Following exceedance of noise criteria on three occasions in 2019 BSO sent a letter advising residences that there was a non-compliance at vent shaft No. 2. The letter advised the BSO was investigating options to reduce noise in the area and provided the community call line number and email address.</p> <p>No air quality exceedances reported.</p>	C	
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Independent Review					
5.2.	<p>If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 4, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land.</p> <p>If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Proponent shall:</p> <p>(a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:</p> <ul style="list-style-type: none"> • consult with the landowner to determine his/her concerns; • conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 4; and • if the project is not complying with these criteria then identify the measures that could be implemented to ensure compliance with the relevant criteria; and <p>(b) give the Secretary and landowner a copy of the independent review.</p>	Interview with Lead Environment	No Secretary requests during the audit period.	NT	
5.3.	<p>If the independent review determines that the project is complying with the relevant criteria in Schedule 4, then the Proponent may discontinue the independent review with the approval of the Secretary.</p> <p>If the independent review determines that the project is not complying with the relevant impact assessment criteria in Schedule 4, and that the project is primarily responsible for this non-compliance, then the Proponent shall:</p> <p>(a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until the project complies with the relevant criteria; or</p> <p>(b) secure a written agreement with the landowner to allow exceedances of the relevant criteria,</p> <p>to the satisfaction of the Secretary.</p> <p>If the independent review determines that any relevant acquisition criteria in schedule 4 are being exceeded and that the project is primarily responsible for this non-compliance, then upon receiving a written request from the landowner, the Proponent shall acquire all or part of the landowner's land in accordance with the procedures in Conditions 4-5 below.</p>	Interview with Lead Environment	See above	NT	
Land Acquisition					
5.4.	<p>Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:</p> <p>(a) the current market value of the landowner's interest in the land at the date of this written request, as if the land was unaffected by the project, having regard to the:</p> <ul style="list-style-type: none"> • existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and • presence of improvements on the land and/or any approved building or structure which has been physically commenced on the land at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of any additional noise mitigation measures under Condition 6 of Schedule 4; <p>(b) the reasonable costs associated with:</p> <ul style="list-style-type: none"> • relocating within the Wollondilly local government area, or to any other local government area determined by the Secretary; and • obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and <p>(c) reasonable compensation for any disturbance caused by the land acquisition process.</p>	Interview with Lead Environment	No written requests for land acquisitions	NT	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>If the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired within 28 days after the Proponent makes its written offer, then either party may refer the matter to the Secretary for resolution.</p> <p>Upon receiving such a request, the Secretary will request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:</p> <ul style="list-style-type: none"> consider submissions from both parties; determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above; prepare a detailed report setting out the reasons for any determination; and provide a copy of the report to both parties. <p>Within 14 days of receiving the independent valuer's report, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.</p> <p>However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Secretary for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Secretary will determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above, the independent valuer's report, the detailed report disputing the independent valuer's determination, and any other relevant submissions.</p> <p>Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Secretary's determination.</p> <p>If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land shall cease, unless the Secretary determines otherwise.</p>				
5.5.	The Proponent shall pay all reasonable costs associated with the land acquisition process described in Condition 4 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.	Interview with Lead Environment	As above	NT	

SCHEDULE 6 – ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

6.1.	<p>The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:</p> <ol style="list-style-type: none"> be submitted to the Secretary for approval by 30 September 2012; provide the strategic framework for environmental management of the project; identify the statutory approvals that apply to the project; describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; describe the procedures that would be implemented to: <ul style="list-style-type: none"> keep the local community and relevant agencies informed about the operation and environmental performance of the project; receive, handle, respond to, and record complaints; resolve any disputes that may arise during the course of the project; 	<p>BSO Environmental Management Strategy, March 2017</p> <p>Approval letter dated 26 July 2018</p>	<p>The EMS doesn't include "copies of any strategies, plans and programs approved under the conditions of this approval" but does list all relevant plans and these are generally available online with the EMS.</p>	ANC	Suggest request removal or reword of condition 6.1 (f) dot point 1
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> respond to any non-compliance; respond to emergencies; and (f) include: <ul style="list-style-type: none"> copies of any strategies, plans and programs approved under the conditions of this approval; and a clear plan depicting all the monitoring required to be carried out under the conditions of this approval. 				

Management Plan Requirements

6.2.	<p>The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <p>(a) detailed baseline data;</p> <p>(b) a description of:</p> <ul style="list-style-type: none"> the relevant statutory requirements (including any relevant approval, licence or lease conditions); any relevant limits or performance measures/criteria; the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; <p>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</p> <p>(d) a program to monitor and report on the:</p> <ul style="list-style-type: none"> impacts and environmental performance of the project; effectiveness of any management measures (see c above); <p>(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;</p> <p>(f) a program to investigate and implement ways to improve the environmental performance of the project over time;</p> <p>(g) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> incidents; complaints; non-compliances with statutory requirements; and exceedances of the impact assessment criteria and/or performance criteria; and <p>(h) a protocol for periodic review of the plan.</p> <p><i>Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i></p>	Review of management plans	Management plans generally meet this requirement, except as where otherwise identified in this report. It is noted that South32 has developed a management plan review log and plan reviews are now documented.	C	
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Adaptive Management

6.3.	<p>The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedules 3 and 4. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.</p> <p>Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:</p> <p>(a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;</p>	Interview with Lead Environment Notification to DPIE for noise exceedances.	With reference to the noise exceedances identified above, action to address this is ongoing. The report submitted to the department states that the investigations are ongoing and options are not known at the time of the reporting. Department has not requested anything further and BSO have made no commitments to submit options once these are identified.	C	
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	(b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and (c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.				
Annual Review					
6.4.	By 30 September 2012, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must: (a) describe the development (including any rehabilitation) that was carried out in the past financial year, and the development that is proposed to be carried out over the next year; (b) include a comprehensive review of the monitoring results and complaints records of the project over the past financial year, which includes a comparison of these results against the: <ul style="list-style-type: none"> relevant statutory requirements, limits or performance measures/criteria; requirements of any plan or program required under this approval; monitoring results of previous years; and relevant predictions in the EA; (c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance; (d) identify any trends in the monitoring data over the life of the project; (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and (f) describe what measures will be implemented over the current financial year to improve the environmental performance of the project.	Annual Review 2019 Annual Review 2018 Annual Review 2017 DPIE letters for FY17 and FY18	Contents of the Annual reviews satisfy the requirements of this condition. Response from DPIE sighted for FY 17 and 18. No response has been received at the time of the audit for FY19 review.	C	
Revisions of Strategies, Plans and Programs					
6.5.	Within 3 months of: (a) the submission of an annual review under Condition 4 above; (b) the submission of an incident report under Condition 7 below; (c) the submission of an audit report under Condition 9 below; and (d) any modification to the conditions of this approval, (unless the conditions require otherwise), The Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary. <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 project.</i>	2019 Governance Reviews.xlsx	Management plan reviews have generally been conducted on an annual basis however some reviews are overdue. Reviews have not been conducted following submission of incident reports. It is noted that South32 has developed a management plan review log and plan reviews are now documented.	ANC	Ensure management plans are reviewed and revised as required by this condition.
Community Consultative Committee					
6.6.	The Proponent shall establish and operate a new Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. This CCC must be operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version), and be operating by 30 September 2012. <i>Notes:</i> <ul style="list-style-type: none"> The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval. 	CCC Minutes of Meeting: <ul style="list-style-type: none"> January, April, June 2019 January, March, May, July, October, November 2018 August, September 2017 	Evidence of CCC was sighted.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<ul style="list-style-type: none"> In accordance with the guideline, the Committee should be comprised of an independent chair and appropriate representation from the Proponent, Council, recognised environmental groups and the local community. 				
REPORTING					
Incident Reporting					
6.7.	The Proponent shall notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the project, the Proponent shall notify the Secretary and any other relevant agencies 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, and such further reports as may be requested.	Notification to DPIE 19 October 2018	Ferric chloride discharge. Initial notification was to EPA hotline. – refer to EPL for details. Letter to EPA (7 day report) was provided on 5/11. Incident occurred on the 18 th October. DPIE was notified on Friday 19 th October along with other agencies but was not provided with a report until 5 November.	ANC	Ensure DPIE is provided with a written report within 7 days of the date of the incident.
Regular Reporting					
6.8.	The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.	https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents	Annual reviews, management plans, monitoring results and complaints are published	C	
INDEPENDENT ENVIRONMENTAL AUDIT					
6.9.	By the end of December 2013, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must: (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals); (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals. <i>Note: This audit team must be led by a suitably qualified auditor and include experts in any field specified by the Secretary.</i>	BSO Conditions of Approval Independent Environmental Audit & EPBC Compliance Audit, 21 March 2017	Previous audit reported sighted. This audit also satisfies this condition.	C	
6.10.	Within 6 weeks of the completion 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.	Email to Department 27 March 2017	Audit report was submitted on 27 March 2017, slightly later than 6 weeks. Was due on 17 March 2017. No evidence that response plan was submitted as required by condition. Incorrect response plan is currently published online.	ANC	No further action, historical ANC. Ensure response plan is developed and submitted with this IEA.

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Access to Information					
6.11.	<p>From 30 June 2012, the Proponent shall:</p> <p>(a) make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> • the documents referred to in Condition 2 of Schedule 2; • all current statutory approvals for the project; • all approved strategies, plans and programs required under the conditions of this approval; • a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs; • a complaints register, updated on a monthly basis; • minutes of CCC meetings; • the annual reviews of the project; • any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit; • any other matter required by the Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>	<p>https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents</p>	<p>Website contains most of the required information. It was identified that the Surface Activities Management Plan, was not published on the website. This was corrected during the audit period. It was also identified that some plans, including the Heritage Management Plan, had been updated but the revised versions not yet published. These were also corrected during the audit.</p>	C	

Table A.2 Statement of Commitments Compliance Table

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Proposed Project Environmental Management, Monitoring and Reporting					
	<p>ICHPL Commitment</p> <p>ICHPL will undertake a study into the potential subsidence related impacts on the steep slopes of Razorback Range (incorporating Donalds Ridge), focussing on steep slopes near roads and structures. The study will seek input from structural and geotechnical engineers and subsidence engineers, and will be conducted in consultation with the Wollondilly Shire Council (WSC) and landholders. The results of this assessment will be incorporated into management and mitigation measures (if required) as a component of future Extraction Plans to maintain the roads and structures in a safe and serviceable manner throughout the mining period.</p> <p>This study will include aspects such as:</p> <ul style="list-style-type: none"> • Identification of structures, dams and roads that lie in close proximity to steep slopes. • Site investigation and landslide risk assessment of structures near steep slopes by a qualified geotechnical engineer. • Site investigation and structural assessment of structures where recommended by the geotechnical engineer. This will include recommendations to mitigate against potential impacts. <p>Menangle Road and Remembrance Drive cross the Razorback Range. ICHPL will develop management strategies, in consultation with the WSC, to manage the risks of down slope movement of surface soils and rock falls in the vicinity of these roads.</p>	<p>BSO Environmental Research Program, September 2012</p> <p>Land Management Plans</p> <p>Interview with Approvals Manager</p> <p>Subsidence Review Meeting 16 October 2019</p>	<p>BSO has developed an ERP to implement research to further develop understanding of the subsidence related impacts. This includes research into:</p> <ul style="list-style-type: none"> • Rivers, streams and riparian areas • Groundwater Dependent Ecological Communities such as upland swamps • Cliffs, overhangs and steep slopes <p>A slope stability assessment was completed in 2013. Predicted outcomes from mining activities are included in the Land Management Plans, annexed to the Extraction Plans. Monitoring for slope stability is undertaken as required.</p>	C	
Registered Production Bores					
	<p>ICHPL Commitment</p> <p>Over the Project life, ICHPL will:</p> <ul style="list-style-type: none"> • Confirm, where the landholder consents, the location of landholder bores and report these details in relevant Extraction Plans. • Develop a comprehensive groundwater monitoring programme to measure the actual groundwater effects of the Project (including triggers for investigation). • Monitor the spread of groundwater depressurisation effects. • If, in the event groundwater monitoring and investigation determines that an adverse Project-induced effect on the productive yield of a landholder's bore is occurring, implement appropriate contingency measures, for the period during which such effects continue (determined in consultation with the affected landholder), which could include: <ul style="list-style-type: none"> ○ lowering of the pumps in the landholder's affected bore; ○ deepening of the landholder's affected bore; ○ development of a new bore(s); ○ provision of an alternative water supply (i.e. of at least the same standard of quality and quantity as the landholder's bore prior to the land being affected by the Project), the nature of which would depend on the location of the affected landholder and the availability of nearby sources; or ○ if the above measures cannot be implemented, provision of compensation to the affected landholder for any loss of bore productivity arising from the Project-induced effects. <p>The contingency measures referred to above will be aimed at ensuring the landholder continues to have a water supply of at least the same standard of quality and quantity as the landholder's bore prior to the land being affected by the Project.</p> <p>If, in the event groundwater monitoring and investigation determines that Project-related subsidence effects have resulted in physical damage to the bore (e.g. shearing resulting in the bore casing being affected) or in-hole pump sets, contingency measures and/or compensation for the physical damage will be determined in consultation with the Mine Subsidence Board.</p>	<p>Bulli Seam Operations</p> <p>Groundwater Data Analysis to mid-2013</p> <p>(Appin and West Cliff Areas)</p>	<p>Groundwater bores have been installed to contribute to the regional groundwater model and monitoring has been conducted.</p> <p>Compensatory water claims are managed as detailed above.</p>	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations												
Riparian Use																	
	<p>ICHPL Commitment Over the Project life, with the approval of the relevant landholders, ICHPL will:</p> <ul style="list-style-type: none"> Confirm, where the landholder consents, the location of stream pools that are used for stock watering and domestic supply and report these details in relevant Extraction Plans. Develop a comprehensive surface water monitoring programme to measure the actual subsidence effects of the Project (including triggers for investigation) on these sources of riparian water supply. If, in the event surface water monitoring and investigation determines that an adverse Project-induced effect on the yield from pools is occurring, implement appropriate contingency measures, for the period during which such effects continue (determined in consultation with the affected landholder), which could include: <ul style="list-style-type: none"> provision of an alternative water supply, the nature of which would depend on the location of the affected landholder and the availability of nearby sources; or if the above measures cannot be implemented, provision of compensation to the affected landholder for any loss of water supply arising from Project-induced effects. <p>The contingency measures referred to above will be aimed at maintaining the landholder's water supply to a standard consistent with that prior to Project related subsidence impacts.</p>	<p>Interview with Approvals Manager Extraction plans</p>	<p>Water monitoring management plan is attached to the extraction plans. There are no stream pools but a number of small farm dams. Claims related to subsidence are managed in the same way as bores.</p>	C													
Research, Offset and Compensatory Measures																	
	<p>ICHPL Commitment ICHPL commits to implementing the research, offset and compensatory measures outlined in Table SOC-2 (below).</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Activity</th> <th>Financial Contribution</th> </tr> </thead> <tbody> <tr> <td colspan="2"><i>Research Programmes</i></td> </tr> <tr> <td>Streams:</td> <td></td> </tr> <tr> <td>Non-systematic subsidence effects and associated environmental consequences in significant watercourses.</td> <td>\$250,000</td> </tr> <tr> <td> <ul style="list-style-type: none"> Techniques for remediating stream bed fracturing </td> <td></td> </tr> <tr> <td>Total</td> <td>\$250,000</td> </tr> </tbody> </table>	Activity	Financial Contribution	<i>Research Programmes</i>		Streams:		Non-systematic subsidence effects and associated environmental consequences in significant watercourses.	\$250,000	<ul style="list-style-type: none"> Techniques for remediating stream bed fracturing 		Total	\$250,000	<p>Interview with Approvals Manager</p>	<p>Georges river rehabilitation plan was completed prior to the audit period.</p>	NT	
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Total	\$250,000																
Underground Emplacement Pilot Trial																	
	<p>ICHPL Commitment ICHPL will fund and commence development of a pilot-scale research and development trial for underground coal wash emplacement technology at the Project, to the satisfaction of the Secretary. The trial will draw upon available information/technical data from similar investigations and trials in the Southern Coalfield and internationally. The results of the trial will be used to inform a value analysis of the feasibility of a portion of the coal wash being emplaced underground at the Project. The value analysis will include consideration of aspects such as:</p> <ul style="list-style-type: none"> practical application and mine safety for underground emplacement at the Project design volumes/rates; infrastructure requirements (including supporting equipment) for underground emplacement; water and other materials consumption/use requirements; and consideration of benefits/costs of underground emplacement versus ongoing surface emplacement at the West Cliff pit top. 		<p>Refer above CoA 4.20</p>	NV													

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
Compensatory Land Package					
	<p>ICHPL Commitment Consistent with the approved compensatory land package for the Stage 3 Coal Wash Emplacement, ICHPL commits to the provision of a compensatory land package for the Project that will include:</p> <ul style="list-style-type: none"> transfer of at least 130 ha of native bushland (ratio of 2:1) from ICHPL to the NSW State Government; selection of suitable bushland for transfer; funding for costs associated with transferring the relevant land title to the NSW State Government; and funding for minor site improvement works if required. 	Interview with Approvals Manager	598 ha at Maddens Plains was transferred to the NSW Government for reservation as nature reserve or national park. The area contains significant tracts of native bushland including Upland Swamp, Exposed Sandstone Scribbly Gum Forest and Sandstone Gully Apple-Peppermint Forest.	C	
Hairy Geebung					
	<p>ICHPL Commitment ICHPL commits to sponsoring the following ecological initiatives, which are aimed at providing a better understanding of the local population of <i>P. hirsuta</i> and its management:</p> <ul style="list-style-type: none"> A research programme with the aim of increasing the density of <i>P. hirsuta</i> in the area north of the Stage 4 Coal Wash Emplacement. Seed for the programme will be collected from the core area and propagated by a suitable local institution (such as the Mt. Annan Botanic Garden). Research programmes to determine the most appropriate measures to protect the <i>P. hirsuta</i> population. These will be incorporated into the Biodiversity Management Plan. It is proposed that such a programme involve an institution such as the University of Wollongong, which has considerable expertise in this area. 	Site observations Interview with Environment Specialist	BSO has engaged with the Mount Annan Botanic Gardens and the University of Wollongong to conduct research into the genetics and ecology of <i>P. hirsuta</i> .	C	
Southern Brown Bandicoot					
	<p>ICHPL Commitments ICHPL commits to implementing a number of ecological initiatives for the Southern Brown Bandicoot, aimed at:</p> <ul style="list-style-type: none"> assisting with the protection, rehabilitation and enhancement of known or potential Southern Brown Bandicoot habitats; and collecting information to better understand the extent, distribution, density and population dynamics of the local Southern Brown Bandicoot population. <p>The initiatives will include the following measures:</p> <ul style="list-style-type: none"> Erosion and sediment control works (e.g. at fire trail stream crossings) to improve known or potential Southern Brown Bandicoot habitat. Implementation of feral animal control measures within and around known and potential Southern Brown Bandicoot habitats <ul style="list-style-type: none"> consistent with a "Priority 1 Action" from the Southern Brown Bandicoot Recovery Plan (NSW Department of Environment and Conservation [DEC], 2006a). Active revegetation/regeneration of appropriate shrub and groundcover species at known and potential Southern Brown Bandicoot habitat areas. Measures to reduce disturbances in known and potential Southern Brown Bandicoot habitat (e.g. reduce motorbike activity or rehabilitation of unnecessary tracks to limit feral animal access into Southern Brown Bandicoot habitats). Undertaking or sponsoring targeted surveys for the Southern Brown Bandicoot – consistent with a "Priority 1 Action" from the Southern Brown Bandicoot Recovery Plan (DEC, 2006a). Sponsoring a research program designed to collect information on habitat preference (e.g. preferred vegetative structure, species, position on slope, aspect, etc.) to better understand what constitutes optimal habitat for the Southern Brown Bandicoot at the northern extremities of its range. Sponsoring a research program designed to monitor the response of the Southern Brown Bandicoot to feral animal control – consistent with a "Priority 1 Action" from the Southern Brown Bandicoot Recovery Plan (DEC, 2006a). 	Bulli Seam Operations Southern Brown Bandicoot Management Plan 2017	The Management Plan includes the measures required by this commitment.	C	

<ul style="list-style-type: none">• Placing captured animals from within the Stage 4 Coal Wash Emplacement Area in any relevant Southern Brown Bandicoot captive breeding programme (in consultation with the Department of Environment and Climate Change [DECC] and following any applicable approvals).• Opportunities and options available to inform local communities of the conservation significance of the Southern Brown Bandicoot<ul style="list-style-type: none">○ consistent with a “Priority 2 Action” from the Southern Brown Bandicoot Recovery Plan (DEC, 2006a).• Opportunities to involve local community groups in survey and monitoring for the Southern Brown Bandicoot – consistent with a “Priority 2 Action” from the Southern Brown Bandicoot Recovery Plan (DEC, 2006a).				
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Table B.1 POEO EPL_2504 Compliance Table

*Note: Shaded conditions were removed from the latest variation of the EPL issued 2 September 2109

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations																
1 Administrative Conditions																					
A1. What the licence authorises and regulates																					
A1.1	<p>This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.</p> <p>Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition</p> <table border="1"> <thead> <tr> <th>Scheduled Activity</th> <th>Fee Based Activity</th> <th>Scale</th> </tr> </thead> <tbody> <tr> <td>Coal Works</td> <td>Coal works</td> <td>> 5000000 T annual handing capacity</td> </tr> <tr> <td>Mining for coal</td> <td>Mining for coal</td> <td>> 5000000 T annual handing capacity</td> </tr> <tr> <td>Waste disposal (application to land)</td> <td>Waste disposal by application to land</td> <td>Any capacity</td> </tr> </tbody> </table>	Scheduled Activity	Fee Based Activity	Scale	Coal Works	Coal works	> 5000000 T annual handing capacity	Mining for coal	Mining for coal	> 5000000 T annual handing capacity	Waste disposal (application to land)	Waste disposal by application to land	Any capacity	<p>BSO Daily Coal Transport tonnages FY19 Annual Review FY17, FY18, FY19</p>	<p>Extracted: FY17 – 3.995 MT FY18 – 1.771 MT FY19 – 3.660 MT Transported: FY19 – 3.037 MT FY18 – 1.381 MT FY17 – 5.73 MT</p>	C					
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A2 Premises or plant to which the licence applies																					
A2.1	<p>The licence applies to the following premises:</p> <table border="1"> <tr> <td>Premises Details</td> </tr> <tr> <td>3. APPIN COLLIERY - NORTH (AND WESTCLIFF COAL PREP PLANT)</td> </tr> <tr> <td>WEDDERBURN ROAD</td> </tr> <tr> <td>APPIN</td> </tr> <tr> <td>NSW 2560</td> </tr> <tr> <td>THE AREAS BORDERED IN ORANGE ON MAP TITLED "WEST CLIFF AND NORTH CLIFF MINE", DATED MAY 2010 AND HELD ON EPA FILE LIC06/433-06. THIS AREA INCLUDES BOTH THE ABOVE GROUND AND APPROVED BELOW GROUND AREAS.</td> </tr> <tr> <td>1. APPIN COLLIERY - EAST</td> </tr> <tr> <td>OFF APPINROAD</td> </tr> <tr> <td>APPIN</td> </tr> <tr> <td>NSW 2560</td> </tr> <tr> <td>THE AREAS BORDERED IN ORANGE ON MAP TITLED "APPIN EAST PIT TOP", DATED MAY 2010 AND HELD ON EPA FILE LIC06/433-06. THIS AREA INCLUDES BOTH THE ABOVE GROUND AND APPROVED BELOW GROUND AREAS.</td> </tr> <tr> <td>2. APPIN COLLIERY - WEST</td> </tr> <tr> <td>DOUGLAS PARK DRIVE</td> </tr> <tr> <td>DOUGLAS PARK</td> </tr> <tr> <td>NSW 2569</td> </tr> <tr> <td>THE AREAS BORDERED IN ORANGE ON MAP TITLED "APPIN WEST PIT TOP", DATED MAY 2010 AND HELD ON EPA FILE LIC06/433-06. THIS AREA INCLUDES BOTH THE ABOVE GROUND AND APPROVED BELOW GROUND AREAS. THE RED HATCHED AREA ON THE MAP TITLED "ENERGY DEVELOPMENTS LIMITED EPL PREMISES" IS NOT PART OF THE PREMISES.</td> </tr> </table>	Premises Details	3. APPIN COLLIERY - NORTH (AND WESTCLIFF COAL PREP PLANT)	WEDDERBURN ROAD	APPIN	NSW 2560	THE AREAS BORDERED IN ORANGE ON MAP TITLED "WEST CLIFF AND NORTH CLIFF MINE", DATED MAY 2010 AND HELD ON EPA FILE LIC06/433-06. THIS AREA INCLUDES BOTH THE ABOVE GROUND AND APPROVED BELOW GROUND AREAS.	1. APPIN COLLIERY - EAST	OFF APPINROAD	APPIN	NSW 2560	THE AREAS BORDERED IN ORANGE ON MAP TITLED "APPIN EAST PIT TOP", DATED MAY 2010 AND HELD ON EPA FILE LIC06/433-06. THIS AREA INCLUDES BOTH THE ABOVE GROUND AND APPROVED BELOW GROUND AREAS.	2. APPIN COLLIERY - WEST	DOUGLAS PARK DRIVE	DOUGLAS PARK	NSW 2569	THE AREAS BORDERED IN ORANGE ON MAP TITLED "APPIN WEST PIT TOP", DATED MAY 2010 AND HELD ON EPA FILE LIC06/433-06. THIS AREA INCLUDES BOTH THE ABOVE GROUND AND APPROVED BELOW GROUND AREAS. THE RED HATCHED AREA ON THE MAP TITLED "ENERGY DEVELOPMENTS LIMITED EPL PREMISES" IS NOT PART OF THE PREMISES.	<p>Interview with Environmental Lead</p>	<p>Mining activities only undertaken within CCL724 and 767 during the audit period.</p>	C	
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations				
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A3. Other activities									
A3.1	<p>This licence applies to all other activities carried on at the premises, including:</p> <ul style="list-style-type: none"> • Ancillary Activity <ul style="list-style-type: none"> ○ Energy generation ○ Resource Recovery 	Note	Noted	Note					
A4. Information supplied to the EPA									
A4.1	<p>Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to:</p> <p>a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and</p> <p>b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.</p>	Note	Noted	Note					

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations																																																				
2. Discharges to Air and Water and Applications to Land																																																									
P1. Location of monitoring/discharge points and areas																																																									
P1.1	The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point. Air	BSO 14-day Monitoring Report, September 2019	Current monitoring points are included in the 14 day monitoring report.	C																																																					
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No	Assessment Requirement				Reference/ Evidence	Comments	Compliance Status	Recommendations
	No.	Type of monitoring point	Type of Discharge point	Location description				
	30	Dust Monitoring	-	Dust Gauge "AW-DD2" is located at the junction of the mine access road and Douglas Park Drive at Appin West. lat. long. -34.216847 150.722905				
	31	Dust Monitoring	-	Dust Gauge "W-DD1" is located at the junction of Wedderburn Rd and Appin Rd at Appin North. lat. long. -34.237619 150.833065				
	32	Dust Monitoring	-	Dust Gauge "W-DD3" is located at the pit top south site at Appin North. lat. long. -34.231528 150.829625				
	33	Dust Monitoring	-	Dust Gauge "AW-DD8" is located next to Brennan Creek dam at Appin North. lat. long. -34.207160 150.803994				
	34	Dust Monitoring	-	Dust Gauge "W-DD10" is located on Wedderburn Road next to the product stockpiles at Appin North. lat. long. -34.224207 150.827109				
	35	PM10 Monitoring	-	Photometer "W-PF1" is located at the junction of Appin Road and Wedderburn Road at Appin North. lat. long. -34.236380 150.833600				
P1.2	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.				Note	Noted	Note	
P1.3	The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.							
	Water and Land				BSO 14-day Monitoring Report, September 2019	Current monitoring points are included in the 14 day monitoring report. Irrigation ceased (Point 20) prior to the audit period.	C	
	EPA I.D.	Type of Monitoring Point	Type of Discharge Point	Location Description				
	1		Discharge to waters	Overflow spillway on Brennans Creek dam. lat. long. -34.208164 150.802663				
	3		Discharge to utilisation area	Spray irrigation of sewage treated effluent on grassed utilisation area. lat. long. -34.229709 150.828461				
	4	Discharge Quality Monitoring. Volume Monitoring		Sampling tap in settling chamber of sewage treatment plant. lat. long. -34.231323 150.829629				
	10	Discharge to waters Discharge quality monitoring Volume monitoring	Discharge to waters Discharge quality monitoring Volume monitoring	Pipe discharge outlet from Brennans Creek dam to the creek. lat. long. -34.206432 150.802706				
	11	Ambient water quality monitoring		Georges River approximately 50 metres upstream of the confluence with Brennans Creek. lat. long. -34.204883 150.798824				
	12	Ambient water quality monitoring		Georges River approximately 50 metres downstream of the confluence with Brennans Creek. lat. long. -34.204099 150.798345				

No	Assessment Requirement				Reference/ Evidence	Comments	Compliance Status	Recommendations
EPA I.D.	Type of Monitoring Point	Type of Discharge Point	Location Description					
13	Volume monitoring		Flow monitoring location for point 10 discharge lat. long. -34.207050 150.803135					
18	Discharge to waters. Discharge quality and volume monitoring	Discharge to waters. Discharge quality and volume monitoring	Underflow from the stormwater filter lagoon discharging through a v-notch weir. lat. long. -34.210467 150.796312					
19	Discharge to waters. Discharge quality and volume monitoring.	Discharge to waters. Discharge quality and volume monitoring.	Dyna Sand Filter outlet for treated stormwater. lat. long. -34.211010 150.795734					
20	Discharge to land. Discharge quality and volume monitoring. (Spray Irrigation Discharge) - Appin East Colliery.	Discharge to land. Discharge quality and volume monitoring. (Spray Irrigation Discharge) - Appin East Colliery.	Envirocycle Irrigation Area as indicated by highlighted area labelled "LDP20" on map titled "Appin East Pit Top" dated May 2010.					
21		Discharge to Waters	Overflow spillway from main stormwater dam. lat. long. -34.211103 150.7954162010.					
22	Discharge to utilisation area. Water quality monitoring. Volume Monitoring.	Discharge to utilisation area. Water quality monitoring. Volume Monitoring.	The 100mm poly pipe from the secondary stabilisation lagoon of the sewage treatment plant which discharges to the utilisation area. lat. Long. - 34.217742 150.716151					
23	Discharge to waters Water quality monitoring Discharge volume monitoring	Discharge to waters Water quality monitoring Discharge volume monitoring	Piped discharge outlet for stormwater. lat. long. -34.220956 150.719136					
24	Discharge to waters Water quality monitoring. Discharge volume monitoring	Discharge to waters Water quality monitoring. Discharge volume monitoring	Piped discharge outlet for mine water. lat. long. -34.220870 150.719059					
25		Discharge to waters	Overflow spillway on sand filtration dam wall. lat. long. -34.220617 150.718679					
36	Discharge to waters. Discharge quality monitoring - Douglas Park Vent Shaft No.6	Discharge to waters. Discharge quality monitoring - Douglas Park Vent Shaft No.6	Piped discharge outlet from stormwater dam. lat. long. -34.180977 150.718149					
37		Discharge to waters - Douglas Park Vent Shaft No.6	Overflow spillway on stormwater dam. lat. long. -34.180598 150.718110					

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
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3. Limit Conditions

L1. Pollution of Waters

L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	BSO 14-day Monitoring Report, September 2019 Annual Report FY17, FY18, FY19	Non-compliances with water quality limits were reported to the EPA during the reporting period. Two Penalty Notices were issued by the EPA in February 2019 for failing to maintain or operate equipment in a proper and efficient manner and for causing pollution of waters due to discharges of ferric chloride to the Georges River.	NC	No further action
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L2. Concentration limits

L2.1	For each monitoring/discharge point or utilisation area specified in the tables below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	BSO 14-day Monitoring Report, September 2019 Annual Report FY17, FY18, FY19	As above	NC	As above
L2.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	Note	Noted	Note	
L2.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the tables.	Note	Noted	Note	
L2.4	Water and/or Land Concentration Limits:				

Point 3

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Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																								
Biochemical oxygen demand	milligrams per litre	30			50																								
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Point 10

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No	Assessment Requirement						Reference/ Evidence	Comments	Compliance Status	Recommendations
	Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit				
	Chemical oxygen demand	milligrams per litre		50						
	Cobalt (dissolved)	micrograms per litre		20						
	Copper (dissolved)	micrograms per litre		18						
	Lead (dissolved)	micrograms per litre		6						
	Manganese (dissolved)	micrograms per litre		40						
	Nickel (dissolved)	micrograms per litre		200						
	Oil and Grease	milligrams per litre					10			
	pH	pH						6.5 - 9.3		
	Total suspended solids	milligrams per litre						50		
	Zinc (dissolved)	milligrams per litre		84						

Point 18

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Reference/ Evidence	Comments	Compliance Status	Recommendations	
										Oil and Grease
pH	pH									
Total suspended solids	Milligram per litre									

Point 19

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit	Reference/ Evidence	Comments	Compliance Status	Recommendations	
										Oil and Grease
pH	pH									
Total suspended solids	Milligram per litre									

No	Assessment Requirement						Reference/ Evidence	Comments	Compliance Status	Recommendations																								
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Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																													
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Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit																													
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L2.5	For Point 10: The 80th percentile concentration limit for electrical conductivity is 2000 microsiemens per centimeter. The 80th percentile concentration limit for total dissolved solids is 1900 milligrams per litre.	BSO 14-day Monitoring Report, September 2019 Annual Report FY17, FY18, FY19	Exceedances of the electrical conductivity limit were reported during the audit period, however exceedances were within the allowable limit.	C																															
L3. Volume and mass limits																																			
L3.1	For each discharge point or utilisation area specified below (by a point number), the volume/mass of: a) liquids discharged to water; or; b) solids or liquids applied to the area; must not exceed the volume/mass limit specified for that discharge point or area.	BSO 14-day Monitoring Report, September 2019 Annual Report FY17, FY18, FY19	Exceedances of the maximum allowable flow volumes were recorded at LDP24: <ul style="list-style-type: none"> 3 June 2019 – 3.46 ML/day discharged. 8 June 2019 – 3.34 ML/day discharged. 	NC	No further action required as discharge volumes were subsequently increased in the EPL variation issued on 2 September 2019.																														
	<table border="1"> <thead> <tr> <th>Point</th> <th>Unit of Measure</th> <th>Volume/Mass Limit</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>18</td> <td>kilolitres per day</td> <td>1000</td> <td></td> <td></td> </tr> <tr> <td>19</td> <td>kilolitres per day</td> <td>2000</td> <td></td> <td></td> </tr> <tr> <td>20</td> <td>kilolitres per day</td> <td>13</td> <td></td> <td></td> </tr> <tr> <td>22</td> <td>kilolitres per day</td> <td>80</td> <td>KL/month</td> <td>93000</td> </tr> <tr> <td>24</td> <td>kilolitres per day</td> <td>3000</td> <td>kilolitres per day</td> <td>4700</td> </tr> </tbody> </table>	Point	Unit of Measure	Volume/Mass Limit			18	kilolitres per day	1000			19	kilolitres per day	2000			20	kilolitres per day	13			22	kilolitres per day	80	KL/month	93000	24	kilolitres per day	3000	kilolitres per day	4700				
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24	kilolitres per day	3000	kilolitres per day	4700																															

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations															
L4. Waste																				
	<p>The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.</p> <p>Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.</p> <p>Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.</p> <p>This condition does not limit any other conditions in this licence.</p> <table border="1"> <thead> <tr> <th>Code</th> <th>Waste</th> <th>Description</th> <th>Activity</th> <th>Other Limits</th> </tr> </thead> <tbody> <tr> <td>NA</td> <td>General or Specific exempted waste</td> <td></td> <td></td> <td>NA</td> </tr> <tr> <td>NA</td> <td>Coal washery rejects</td> <td></td> <td></td> <td>NA</td> </tr> </tbody> </table>	Code	Waste	Description	Activity	Other Limits	NA	General or Specific exempted waste			NA	NA	Coal washery rejects			NA	<p>BSO 14-day Monitoring Report, September 2019 Annual Report FY17, FY18, FY19 Interview with Environmental lead</p>	<p>Coal washery rejects are received from Dendrobium and drilling muds from exploration.</p>	C	
Code	Waste	Description	Activity	Other Limits																
NA	General or Specific exempted waste			NA																
NA	Coal washery rejects			NA																

4. Operating Conditions

O.1 Activities must be carried out in a competent manner

O1.1	<p>Licensed activities must be carried out in a competent manner. This includes:</p> <p>a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and</p> <p>b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.</p>	<p>Interview with Environmental Lead</p> <p>Site observations</p> <p>Bund, Sump and Oily Water Separator Management Procedure (IMCP0184 11/9/19)</p>	<p>A formal warning letter was issued by the EPA in March 2019 for failure to bund a flocculant tank at Appin North. A temporary bund was placed at the tank. The tank has since been decommissioned.</p> <p>The audit team observed potentially inadequate storage of chemicals, oils and waste oil including bunds filled with water and other debris, bunds with insufficient capacity and drains to sumps blocked by mud at the maintenance workshops, laydown areas and waste storage areas at Appin East and West. A bund, sump and oily water management procedure has been developed and it is understood a review of facilities has been conducted in accordance with the procedure. Actions are to be prioritised and implemented on a risk basis and capital availability.</p> <p>Two incidents were reported to the EPA related to issues of waste being inappropriately disposed at the site:</p> <ol style="list-style-type: none"> 1. Contents of reagent bund removed and placed at the slurry ponds 2. Oil separation pit cleaned out and disposed at Appin North pit top <p>No further action was taken by the EPA.</p>	Obs	Implement the actions of the review.
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O2. Maintenance of plant and equipment

O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity:	Annual Report FY17, FY18, FY19	BSO reported a non-compliance with condition O2.1 relating to the discharge of	NC	Ensure maintenance plans and
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No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	Work Instruction – 1WMech Insp Sewer Pump 1WMech Insp Sewer Pump completed work order Interview with Surface Planner Interview with Environment Specialist	ferric chloride into the Georges River in October 2018. The incident resulted from replacement of a pump taken out of service for maintenance with a pump that discharged at a higher rate and caused overdosing of the sediment dam at Point 19. A SAP maintenance system is in place for preventative maintenance scheduling, execution and close out. A review of scheduled versus completed is done every Monday and rescheduling undertaken as necessary. Evidence of maintenance of subcontractor vehicles also sighted. New maintenance plans are being developed for bund checks, but have not yet been finalised and added to SAP. New metering at LDP24 is currently undergoing commissioning and will also need maintenance plans developed and added to SAP maintenance system.		preventative maintenance schedules are set up in SAP for bund checks and new metering at LDP24.

O3. Dust

O3.1	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Site observations	No visible dust observed. Water carts observed at construction site at Appin West and water spray at truck loading at Appin East.	C	
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O4. Effluent application to land

O4.1	Effluent application must not occur in a manner that causes surface runoff.	Interview with Environment Specialist Site observations	The effluent application area is included in the monthly inspection conducted by the Environment Team to ensure there is no run-off or pooling for effluent. Application was not taking place at the time of the audit.	C	
O4.2	Spray from effluent application must not drift beyond the boundary of the premises.	Interview with Environment Specialist	Prevention of drift is managed by planning of the irrigation including placement of the irrigator and the use of buffer zones enforced by the Council.	C	
O4.3	The quantity of effluent/solids applied to the utilisation area must not exceed the capacity of the area to effectively utilise the effluent/solids. For the purpose of this condition, 'effectively utilise' include the use of the effluent/solids for pasture or crop production, as well as the ability of the soil to absorb the nutrient, salt, hydraulic load and organic material.	Interview with Environment Specialist	Rates of application are controlled by the Environment Specialist and the area is inspected monthly.	C	

5. Monitoring and Recording Conditions

M1. Monitoring records

M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Note	Note		
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form;	14-day monitoring report DustTrak data	Monitoring records are maintained back to 2012.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.				
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Chain of Custody (CoC) records	CoCs for water and air monitoring in 2018 don't capture time, however 2019 water and air CoCs were sighted that captured all of these details. Water and air CoCs have been corrected during the audit period. No further action.	C	

M2. Requirement to monitor concentration of pollutants discharged

M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency:	Note	As below	Note																					
M2.2	Air Monitoring Requirements: Points 14,15,16,17,26,29,30,31,32,33,34	Air Quality Monitoring Procedure	Air quality monitoring procedure references the 2016 standard	C																					
	<table border="1"> <thead> <tr> <th>Pollutant</th> <th>Unit of measure</th> <th>Frequency</th> <th>Sampling Method</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Ash</td> <td>Grams per square meter per month</td> <td>Monthly</td> <td>Australian Standard 3580.10.1-2003</td> <td>AS/NZS 3580.10.1:2016</td> </tr> <tr> <td>Combustible solids</td> <td>Grams per square meter per month</td> <td>Monthly</td> <td>Australian Standard 3580.10.1-2003</td> <td>AS/NZS 3580.10.1:2016</td> </tr> <tr> <td>Insoluble Solids</td> <td>Grams per square meter per month</td> <td>Monthly</td> <td>Australian Standard 3580.10.1-2003</td> <td>AS/NZS 3580.10.1:2016</td> </tr> </tbody> </table>	Pollutant	Unit of measure	Frequency	Sampling Method	Sampling Method	Ash	Grams per square meter per month	Monthly	Australian Standard 3580.10.1-2003	AS/NZS 3580.10.1:2016	Combustible solids	Grams per square meter per month	Monthly	Australian Standard 3580.10.1-2003	AS/NZS 3580.10.1:2016	Insoluble Solids	Grams per square meter per month	Monthly	Australian Standard 3580.10.1-2003	AS/NZS 3580.10.1:2016				
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Points: 27,28,35

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Pollutant	Unit of measure	Frequency	Sampling Method										
PM10	Micrograms per cubic metre	Monthly	Continuously										

M2.3 Water and/or Land Monitoring Requirements

Point 4

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Pollutant	Unit of measure	Frequency	Sampling Method																		
Biochemical oxygen demand	Milligrams per litre	Monthly during discharge	Grab sample																		
Oil and Grease	Milligrams per litre	Monthly during discharge	Grab sample																		
pH	pH	Monthly during discharge	Grab sample																		

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
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Point 10

Pollutant	Unit of measure	Frequency	Sampling Method	BSO 14-day Monitoring Report, September 2019	Samples were collected at the required frequency during the audit period.	C	
Conductivity	Microsiemens per centimeter	Continuous during discharge	In line instrumentation				
pH	pH	Continuous during discharge	In line instrumentation				
Turbidity	Nephelometric turbidity units (NTU)	Continuous during discharge	In line instrumentation				

Point 10,24

Pollutant	Unit of measure	Frequency	Sampling Method	BSO 14-day Monitoring Report, September 2019	Samples were collected at the required frequency during the audit period. No specific procedure for water quality monitoring. All locations are identified in the surface water management plan.	C	
Alkalinity (as calcium carbonate)	Milligrams per litre	Monthly during discharge	Grab sample				
Aluminium (dissolved)	Milligrams per litre	Monthly during discharge	Grab sample				
Arsenic (dissolved)	Micrograms per litre	Monthly during discharge	Grab sample				
Bicarbonate alkalinity	Milligrams per litre	Monthly during discharge	Grab sample				
Cadmium (dissolved)	Micrograms per litre	Monthly during discharge	Grab sample				
Chemical oxygen demand	Milligrams per litre	Monthly during discharge	Grab sample				
Cobalt (dissolved)	Micrograms per litre	Monthly during discharge	Grab sample				
Copper (Dissolved)	Micrograms per litre	Monthly during discharge	Grab sample				
Lead (dissolved)	Micrograms per litre	Monthly during discharge	Grab sample				
Manganese (dissolved)	Micrograms per litre	Monthly during discharge	Grab sample				
Nickel (dissolved)	Micrograms per litre	Monthly during discharge	Grab sample				
Nitrogen (ammonia)	Micrograms per litre	Monthly during discharge	Grab sample				
Oli and Grease	Milligrams per litre	Monthly during discharge	Grab sample				
Nitrogen (total)	Micrograms per litre	Monthly during discharge	Grab sample				
Oxidised nitrogen	Micrograms per litre	Monthly during discharge	Grab sample				
Total dissolved solids	Milligrams per litre	Monthly during discharge	Grab sample				
Total suspended solids	Milligrams per litre	Monthly during discharge	Grab sample				
Zinc (dissolved)	Micrograms per litre	Monthly during discharge	Grab sample				

No	Assessment Requirement				Reference/ Evidence	Comments	Compliance Status	Recommendations
Point 11								
	Pollutant	Unit of measure	Frequency	Sampling Method	BSO 14-day Monitoring Report, September 2019	Samples were collected at the required frequency during the audit period.	C	
	Conductivity	Microsiemens per centimeter	Monthly during discharge	Grab sample				
	pH	pH	Monthly during discharge	Grab sample				
	Total suspended solids	Milligrams per litre	Monthly during discharge	Grab sample				
Point 12								
	Pollutant	Unit of measure	Frequency	Sampling Method	BSO 14-day Monitoring Report, September 2019	Samples were collected at the required frequency during the audit period.	C	
	Conductivity	Microsiemens per centimeter	Monthly during discharge	Grab sample				
	pH	pH	Monthly during discharge	Grab sample				
	Total suspended solids	Milligrams per litre	Monthly during discharge	Grab sample				
Point 18								
	Pollutant	Unit of measure	Frequency	Sampling Method	BSO 14-day Monitoring Report, September 2019	No discharge during the audit period	NT	
	Oli and Grease	Milligrams per litre	Monthly during discharge	Grab sample				
	pH	pH	Monthly during discharge	Grab sample				
	Total suspended solids	Milligrams per litre	Monthly during discharge	Grab sample				
Point 19								
	Pollutant	Unit of measure	Frequency	Sampling Method	BSO 14-day Monitoring Report, September 2019	Samples were collected at the required frequency during the audit period.	C	
	Oli and Grease	Milligrams per litre	Monthly during discharge	Grab sample				
	pH	pH	Monthly during discharge	Grab sample				
	Total suspended solids	Milligrams per litre	Monthly during discharge	Grab sample				
Point 20								
	Pollutant	Unit of measure	Frequency	Sampling Method	BSO 14-day Monitoring Report, September 2019 Interview with Environmental Lead	Removed from current EPL. Former irrigation area and will not be utilised again. No discharge during the audit period.	NT	
	Biochemical oxygen demand	Milligrams per litre	Monthly during discharge	Grab sample				
	Oli and Grease	Milligrams per litre	Monthly during discharge	Grab sample				
	pH	pH	Monthly during discharge	Grab sample				

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations																				
Point 22																									
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Pollutant	Unit of measure	Frequency	Sampling Method																						
Biochemical oxygen demand	Milligrams per litre	Monthly during discharge	Grab sample																						
Oli and Grease	Milligrams per litre	Monthly during discharge	Grab sample																						
pH	pH	Monthly during discharge	Grab sample																						
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Oli and Grease	Milligrams per litre	Monthly during discharge	Grab sample																						
pH	pH	Monthly during discharge	Grab sample																						
Total suspended solids	milligrams per litre	Monthly during discharge	Grab sample																						
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Total suspended solids	Milligrams per litre	Monthly during discharge	Grab sample																						
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Total suspended solids	Milligrams per litre	Monthly during discharge	Grab sample																						

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>Note: The monitoring results collected at Point 4 in compliance with Condition M2.1 can be used to determine compliance with the concentration limit specified in Condition L3.3 for discharge from Point 3.</p> <p>Note: For discharge point 10, discharge point 11 and discharge point 12, the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1 on the same day during a 4 hour period. The licensee must use the sampling method, units of measure and sample at the frequency specified opposite in the other columns. All samples must be representative.</p> <p>Note: Within a week of receiving monitoring results showing that any pollutant concentration measured at point 10 exceeds the 90 percentile limit for that pollutant, the licensee must notify the EPA of the result and must take a further sample to be analysed for that pollutant. The monitoring must continue weekly until the measured concentration is below the 90 percentile limit. The results from weekly sampling required by this note are not to be used to determine compliance with licence limits.</p>				
M3. Testing methods – concentration limits					
M3.1	<p>Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:</p> <p>a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or</p> <p>b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or</p> <p>c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.</p>	Air Quality Monitoring Procedure	Monitoring is undertaken in accordance with required methodologies. Analysis is conducted by a NATA accredited laboratory (ALS).	C	
M3.2	<p>Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.</p> <p>Note: <i>The Protection of the Environment Operations (Clean Air) Regulation 2010</i> requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".</p>	BSO Surface Water Management Plan ICHMP 0235, June 2018	Water quality analysis is conducted by a NATA accredited laboratory (ALS).	C	
M4. Recording of pollution complaints					
M4.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Stakeholder database	Complaints are recorded in an online database	C	
M4.2	<p>The record must include details of the following:</p> <p>a) the date and time of the complaint;</p> <p>b) the method by which the complaint was made;</p> <p>c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;</p> <p>d) the nature of the complaint;</p> <p>e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and</p> <p>f) if no action was taken by the licensee, the reasons why no action was taken.</p>	<p>Complaints report September 2019</p> <p>Stakeholder database</p> <p>Call log</p>	<p>The published complaints report captures date, nature and action.</p> <p>The stakeholder database was sighted and captures name, contact details and method of contact when a complaint is made.</p> <p>The call log from the call centre also captures a number of these details including time.</p>	C	
M4.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Site Observations	Documentum has complaint records going back over 4 years.	C	
M4.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Complaints report September 2019	The complaints register is available online and full complaint records are available on Documentum.	C	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations						
M5. Telephone complaints line											
M5.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	Interview with environmental Lead	The complaints line is operated 24/7. Auditor called and confirmed the complaints line was in place.	C							
M5.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	https://www.south32.net/our-business/australia/illawarra-metallurgical-coal Illawarra Coal Community News, August 2019	Complaints/community line available on the website. Newsletter also sighted that contains the community call line details and states it is 24/7.	C							
M5.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.	Note	Noted	Note							
M6. Requirements to monitor volume or mass											
M6.1	For each discharge point or utilisation area specified below, the licensee must monitor: a) the volume of liquids discharged to water or applied to the area; b) the mass of solids applied to the area; c) the mass of pollutants emitted to the air; at the frequency and using the method and units of measure, specified below.	Note	Noted	Note							
	POINT 4 <table border="1"> <thead> <tr> <th>Frequency</th> <th>Unit of measure</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Continuous</td> <td>Kilolitres per day</td> <td>In line instrumentation</td> </tr> </tbody> </table>	Frequency	Unit of measure	Sampling method	Continuous	Kilolitres per day	In line instrumentation	BSO 14-day monitoring report, September 2019 Annual Reviews FY17, FY18, FY19	Monitoring report indicates manual readings taken from January to December 2017 as flow meters were being replaced. EPA was not notified of the change of sampling method Illawarra Coal now maintains a Correspondence Register to record all correspondence with regulators and it was sighted that issues with monitoring equipment was now being notified to the EPA.	ANC	Ensure issues with sampling equipment are notified to the EPA.
Frequency	Unit of measure	Sampling method									
Continuous	Kilolitres per day	In line instrumentation									
	POINT 10 <table border="1"> <thead> <tr> <th>Frequency</th> <th>Unit of measure</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Continuous</td> <td>Kilolitres per day</td> <td>In line instrumentation</td> </tr> </tbody> </table>	Frequency	Unit of measure	Sampling method	Continuous	Kilolitres per day	In line instrumentation	BSO 14-day monitoring report, September 2019	Continuous monitoring of the volume of liquids discharged was undertaken throughout the audit period at times of discharge.	C	
Frequency	Unit of measure	Sampling method									
Continuous	Kilolitres per day	In line instrumentation									
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Continuous during discharge	Kilolitres per day	In line instrumentation									
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Frequency	Unit of measure	Sampling method									
Continuous during discharge	Kilolitres per day	In line instrumentation									

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations			
	POINT 20	BSO 14-day monitoring report, September 2019 Annual Reviews FY17, FY18, FY19	No discharge during the audit period	NT				
	Frequency					Unit of measure	Sampling method	
	Continuous during discharge					Kilolitres per day	In line instrumentation	
	POINT 22							
	Frequency					Unit of measure	Sampling method	
	Continuous during discharge					Kilolitres per day	In line instrumentation	
	POINT 24	BSO 14-day monitoring report, September 2019 Annual Reviews FY17, FY18, FY19	Monitoring report indicates manual readings taken from January to December 2017 as flow meters were being replaced. Refer above.	-	Refer above,			
	Frequency					Unit of measure	Unit of measure	Sampling method
	Continuous during discharge					Kilolitres per day	KL/month per day	Flow meter and continuous logger
	POINT 24	BSO 14-day monitoring report, September 2019 Annual Reviews FY17, FY18, FY19	Continuous monitoring of the volume of liquids discharged was undertaken throughout the audit period at times of discharge.	C				
	Frequency					Unit of measure	Sampling method	
	Continuous					Kilolitres per day	Flow meter and continuous logger	
M6.2	The monitoring results collected at Point 4 in compliance with Condition M6.1 can be used to determine compliance with the volume limit specified in Condition L4.1 for discharge from Point 3.	Note	Noted	Note				

6. Reporting Conditions

R1. Annual returning documents

R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: 1. a Statement of Compliance, 2. a Monitoring and Complaints Summary, 3. a Statement of Compliance - Licence Conditions, 4. a Statement of Compliance - Load based Fee, 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan, 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and 7. a Statement of Compliance - Environmental Management Systems and Practices. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	Annual Returns FY16, FY17, FY18, FY19	Annual Returns have been submitted to the EPA.	C	
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	Note	Noted	Note	
R1.3	Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.	EPL2504	The licence has not been transferred during the audit period	NT	
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.	EPL2504	The licence has not been surrendered during the licence period.	NT	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	Annual Returns FY16, FY17, FY18, FY19	Annual Returns have been submitted within the specified timeframe.	C	
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Annual Returns FY16, FY17, FY18, FY19	Copies of Annual returns were available.	C	
R1.7	Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	Annual Returns FY16, FY17, FY18, FY19	Annual Returns have been signed by two directors.	C	
R2 Notification of environmental harm					
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	Incident report to EPA Interview with Environmental Lead	Refer to condition L1.1 re ferric chloride incident. Initial notification was to the hotline.	C	
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	Incident report to EPA.	Refer to condition L1.1 re ferric chloride incident. The incident occurred on 18 /10 and the 7 day written notification was provided on 5/11.	ANC	Ensure notification is undertaken as required.
R3. Written Report					
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Interview with Environmental Lead	A show cause was issued for the ferric chloride release incident and the unbanded flocculant tank.	C	
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Show Cause Response ,10 December 2018	BSOs response was submitted on 10 December 2019.	C	
R3.3	The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.	Show Cause Response ,10 December 2018	As above		
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	Interview with Environmental Lead	No further request was received.	NT	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations																				
7. General Conditions																									
G1. Copy of licence kept at the premises or plant																									
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Interview with Environmental Lead.	The licence can be accessed at all sites via the website, iPick (internal document management system) or the environmental staff at each location also have a copy.	C																					
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Interview with Environmental Lead.	See above.	C																					
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises	Interview with Environmental Lead.	See above.	C																					
G2. Signage																									
G2.1	Each monitoring and discharge point must be clearly marked by a sign that indicates the EPA point identification number.	Site Observations	A number of monitoring and discharge points were observed to have signage with the EPA ID.	C																					
G3. Other general conditions																									
G3.1	Pollution Reduction Programs (PRP's) – Completed (West Cliff and North Cliff Collieries)		Note	PRPs 1 to 11, 17, 11, 18, 21 to 23 and EIP1 were completed prior to the audit period.	NT																				
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No	Assessment Requirement			Reference/ Evidence	Comments	Compliance Status	Recommendations
	PRP 7 - Brennans Creek Discharge Trial	PRP 7 - Brennans Creek Discharge Trial. Trial controlled discharges of water from Brennans Creek Dam and the Reclaim Pond in an endeavour to minimise the frequency of rain induced uncontrolled releases over the dam spillway.	31-March-2006				
	PRP 8 - Materials Storage	PRP 8 - Materials Storage. Ensure materials are stored at the premises in a way that contains leaks and spills and minimizes odour and dust	30-April-2005				
	PRP 9 - Georges River Ecological Assessment (Conti)	PRP 9 - Georges River Ecological Assessment (Continuation). Further investigate and report on the surface waters receiving mine water discharged from Westcliff Colliery to determine if there is any ecological significant impact.	31-March-2006				
	PRP10 - Reduction in Salinity from Brennans Ck Dam	PRP 10 - Reduction in Salinity from Brennans Creek Dam (LDP 10). Stage 2: Investigation of Strategies, Technologies or Works to achieve the salinity discharge limit.. Derive a scientifically justifiable salinity limit that will apply to dry weather dischar	30-March-2010				
	PRP 11 - Investigation into Brine Disposal and Re-use	Investigate options for the beneficial use and disposal of the brine stream from the desalination plant.	31-December-2009				
	PRP17 - Coal Mine Particulate Matter Control Best Practice	Requires licensee to conduct a site specific Best Management Practice (BMP) determination to identify ways to reduce particle emissions	26-September-2012				
	PRP11 - Brennans Creek Discharge Toxicity Study (West Cliff Mine)	A two stage PRP to undertake monitoring to identify the toxic components of minewater discharged from Brenans Creek Dam.	26-July-2012				
	PRP18 - Modification to Brennans Creek Dam off-take	Change the configuration of discharge point 10 from a pipe discharging from the bottom of BCD to a floating off take.	30-June-2013				
	PRP 21 - Implementation of Dust Control Best Management Practices	Implementation of dust control practices identified under PRP 17 - Coal Mine Particulate Matter Control Best Practice	29-January-2015				
	PRP 22 - Investigation to reduce Coal Dust Tracked onto Roads from West Cliff Colliery	Investigation of measures to reduce tracking of coal dust onto Wedderburn and Appin Roads by coal trucks exiting West Cliff Colliery	29-January-2015				
	PRP 23 - Implementation of Dust Control Works on Wedderburn Road	Implementation of dust control works to reduce drag out onto Wedderburn Road identified in previous investigative PRP 22.	30-July-2015				
	EIP1 - Implementation of Dust Control Works on Wedderburn Road	Implementation of dust control works to reduce drag out onto Wedderburn Road identified in previous investigative PRP 22.	31-July-2015				
G3.2	Pollution Reduction Programs (PRPs) - Completed (Appin Colliery)			Note	PRPs 1 to 14 completed prior to audit period.	NT	
G3.3	Pollution Reduction Programs (PRPs) - Completed (Appin West Colliery)			Note	PRPs 1 to 16 completed prior to audit period.	NT	

No	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
8. Pollution Studies and Reduction Programs					
U1. EIP2 Georges River Environmental Improvement Program					
U1.1	<p>AIM: The aim of this Environment Improvement Program (EIP) is to improve water quality and aquatic health in the Georges River downstream of licenced discharge point 10 (Brennans creek discharge).</p> <p>WORKS: The licensee must undertake its commitments to works and activities described in the latest controlled version of the document titled "Illawarra Coal, Bulli Seam Operations, Georges River Environmental Improvement Program". The latest version of the document must be displayed on the licensee's website.</p> <p>In addition to the reporting and consultation commitments in document, the licensee must submit a report to the EPA by the due date recommending licence limits for discharge point 10. DUE DATE: 31 December 2018 DUE DATE: 30 June 2019</p> <p>Note: This EIP follows from Pollution Reduction Programs 19 and 20.</p>	<p>BSO George's River Environmental Improvement Program 2018</p> <p>Interview with Environmental Lead</p> <p>Various correspondence with EPA.</p>	<p>The EIP document is available on the company website.</p> <p>No report has been submitted for 2019.</p> <p>Reports for 2017 and 2018 reviewed. Monitoring of macroinvertebrates and ecotoxicity is continuing.</p> <p>BSO is in discussion with the EPA as to next steps to enable proposed discharge limits at Point 10 to be achieved. It is expected that another water filtration plant will be constructed at Appin East.</p>	NC	<p>No further action – dependent on outcome of negotiation with EPA.</p>

Table C.1 Compliance with Consolidated Coal Leases 724 and 767

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
1. CCL 724 and 767	<p>Notice to Landholders</p> <p>a) Within a period of three months from the date of grant/renewal of this lease or within such further time as the Minister may allow, the lease holder must serve on each landholder of the land a notice in writing indicating that this lease has been granted/renewed and whether the lease includes the surface. An adequate plan and description of the lease area must accompany the notice.</p> <p>If there are ten or more landholders affected, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this lease has been granted/renewed; state whether the lease includes the surface and must contain an adequate plan and description of the lease area.</p>	Interview with Environmental Lead	No lease renewal in the audit period.	NT	
2. CCL 724 and 767	<p>Environmental Harm</p> <p>a) The lease holder must implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of any activities under this lease.</p> <p>b) For the purposes of this condition:</p> <p>i. environment means components of the earth, including:</p> <ul style="list-style-type: none"> • land, air and water, and • any layer of the atmosphere, and • any organic or inorganic matter and any living organism, and • human-made or modified structures and areas, and includes Interacting natural ecosystems that include components referred to in paragraphs (A)-(C). <p>ii. harm to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution, contributes to the extinction or degradation of any threatened species, populations or ecological communities and their habitats and causes impacts to places, objects and features of significance to Aboriginal people.</p>	Observations	<p>Refer to CoA and EPL tables.</p> <p>Erosion and sediment control was noted around construction works. Pit top areas run into stormwater management system.</p>	NC	Refer to CoA and EPL for air and water quality non-compliances.
3. CCL 724 and 767	<p>Mining Operations Plan</p> <p>a) Mining operations must not be carried out otherwise than In accordance with a Mining Operations Plan (MOP) which has been approved by the Director-General.</p> <p>b) The MOP must</p> <p>i. Identify areas that will be disturbed by mining operations;</p> <p>ii. detail the staging of specific mining operations;</p> <p>iii. Identify how the mine will be managed to allow mine closure, including the identification of relevant rehabilitation completion criteria;</p> <p>iv. Identify how mining operations will be carried out in order to prevent and or minimise harm to the environment;</p> <p>v. reflect the conditions of approval under: the Environmental Planning and Assessment Act 1979 the Protection of the Environment Operations Act 1997 and any other approvals relevant to the development including the conditions of this lease; and</p> <p>vi. comply with any relevant guidelines adopted by the Director-General.</p>	<p>BSO Mining Operations Plan, 1 October 2012 to 30 September 2019</p> <p>MOP Extension Approval, 12 June 2019</p>	The MOP addresses the requirements of this condition.	C	

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>c) The leaseholder may apply to the Director General to amend an approved MOP at any time.</p> <p>d) It is not a breach of this condition if:</p> <p>i. the operations constituting the breach were necessary to comply with a lawful order or direction given under the Mining Act 1992; the Environmental Planning and Assessment Act 1979, Protection of the Environment Operations Act 1997, Mine Health and Safety Act 2004</p> <p>Coal Mine Health and Safety Act 2002 and Mine Health and Safety Regulation 2007, Coal Mine Health and Safety Regulation 2006 or the Occupational Health and Safety Act 2000; and</p> <p>i. the Director General had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out.</p> <p>A MOP ceases to have effect 7 years after date of approval or other such period as Identified by the Director-General.</p>				
4. CCL 724 and 767	<p>Environment Management Report</p> <p>a) The lease holder must lodge Environmental Management Reports (EMR) with the Director General annually or at dates otherwise directed by the Director-General.</p> <p>b) The EMR must detail the following:</p> <p>i. the extent to which the conditions of this mining lease and provisions of this Act and <i>Mining Regulation 2010</i>, applicable to activities under this mining lease, have or have not been complied with,</p> <p>ii. particulars of any non-compliance with any such conditions or provisions,</p> <p>iii. the reasons for any such non-compliance,</p> <p>iv. any action taken, or to be taken, to prevent any reoccurrence, or to mitigate the effects, of that non- compliance,</p> <p>v. comply with any relevant guidelines adopted by the Director-General.</p> <p><i>Note: The lease may elect to have the Environment Management Report form part of any Annual review or equivalent required by a condition of approval issued under Part 3A or equivalent of the Environmental Planning and Assessment Act 1979, (NSW)</i></p>	Annual Review FY17, FY18 and FY19	Annual Reviews submitted in accordance with the conditions of Approval satisfy this requirement.	C	
5. CCL 724 and 767	<p>Environmental Incident Report</p> <p>a) The lease holder must report any environmental incidents to the Department. The report must:</p> <p>i. be prepared in accordance with any relevant Departmental guidelines;</p> <p>i. be provided to the Department as soon as practicable after the leaseholder becomes aware of the incident.</p> <p>b) The report referred to in (a) may be provided verbally to the Department but must be followed up by a written report within the timeframe specified by the Department.</p> <p>c) For the purposes of this condition, environmental incident includes:</p> <p>i. any incident causing or threatening material harm to the environment;</p> <p>ii. any breach of Conditions 2 to 8 and 12 to 15;</p> <p>iii. any breach of environment protection legislation; or, iv.a serious complaint from landholders or the public.</p> <p>d) For the purposes of this condition, harm to the environment is material if:</p> <p>i. it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or</p> <p>■ it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, where loss includes the reasonable costs and</p>	Interview with Environmental Lead Incident report	Discharge of ferric chloride to the Georges River was notified to the Department as required.	C	

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.				
6. CCL 724 and 767	Additional Environmental Reports Additional environmental reports may be required from time to time as directed in writing by the Director General and must be lodged as instructed.	Interview with Environmental Lead	None requested	NT	
7 CCL 724 and 767	Rehabilitation Any disturbance as a result of activities under this lease must be rehabilitated to the satisfaction of the Director-General.	MOP Approval letter, 29 November 2012 MOP Extension Approval, 12 June 2019	MOP approved by resources regulator which sets out rehabilitation criteria. No rehabbed areas relinquished.	C	
8. CCL 724 and 767	Subsidence Management a) The lease holder must not commence or undertake underground mining operations that may cause subsidence of the surface other than in accordance with a Subsidence Management Plan approved by the Director-General. b) In cases where an Extraction Plan, or other similar plan accepted for the purposes of this clause by the Director-General, has been approved by the Department of Planning & Infrastructure under the Environment Planning and Assessment Act 1979, the Extraction Plan, or other similar plan, is deemed to satisfy the requirements of a Subsidence Management Plan and is taken to be a Subsidence Management Plan for the purposes of this clause provided that it is prepared with reference to any government guidelines specified as needing to be complied with in respect of the preparation of a Subsidence Management Plan. ■ Subsidence Management Plans as approved shall form part of the Mining Operations Plan required under Condition 3 and will be subject to the Environmental Management Report process as set out under Condition 4.	Subsidence Management Plan Approval, DTIRS, 28/02/12 – LW706-706 Subsidence Management Plan Approval, DTIRS, 28/09/12 – LW707-710 Extraction Plan Approval, DP&E, 10/09/14 – LW901-904	All plans approved prior to commencement of longwall operations.	C	
9. CCL 724 and 767	Working Requirement The lease holder must: a) ensure that at least 149 competent people are efficiently employed in relation to the mining process or mining operations on the lease area OR b) expend on operations carried out in the course of prospecting or mining the lease area, an amount of not less than \$2,607,500 per annum whilst the lease is in force. • The Minister may at any time or times, by instrument in writing served on the lease holder, increase or decrease the expenditure required or the number of people to be employed.	Interview with Environmental Lead	More than 1000 staff including contractors employed by BSO.	C	
10. CCL 724 and 767	Blasting a) Ground vibration The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the lease area does not exceed 10 mm/second and does not exceed 5 mm/second in more than 5% of the total number of blasts over a period of 12 months at any dwelling or occupied premises as the case may be, unless determined otherwise by the Department of Environment, Climate Change and Water. b.) Blast Overpressure The lease holder must ensure that the blast overpressure noise level the lease area does not exceed 120 generated by any blasting within dB (linear) and does not exceed 115 dB (linear) in more than 5% of the total number of blasts over a period of 12 months, at any dwelling or occupied premises, as the case may be, unless determined otherwise by the Department of Environment, Climate Change and Water.	Annual Reviews FY17, FY18, FY19	No surface blasting has taken place during the audit period.	NT	

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
11. CCL 724 and 767	<p>Safety</p> <p>Operations must be carried out in a manner that ensures the safety of persons or stock in the vicinity of the operations. All drill holes shafts and excavations must be appropriately protected, to the satisfaction of the Director-General, to ensure that access to them by persons and stock is restricted. Abandoned shafts and excavations opened up or used by the lease holder must be notified in writing to the Department and filled in or otherwise rendered safe to a standard acceptable to the Director-General.</p>	Interview with Environmental Lead	Security upgrade works were sighted to be occurring, with swipe in gates installed at the entry to each pit top. In addition, fencing around the operational areas will be improved/installed to ensure all personnel are directed through the security gates.	C	
12. CCL 724 and 767	<p>Prevention of soil erosion and pollution</p> <p>Prospecting operations must be carried out in a manner that does not cause or aggravate air pollution, water (including groundwater) pollution, soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan.</p>	Observations	No significant erosion of soil was observed.	C	
13. CCL 724 and 767	<p>Transmission lines, Communication lines and Pipelines</p> <p>Operations must not adversely affect or impair the serviceability, stability or efficiency of any transmission line, communication line, pipeline or any other utility on the lease area without the prior written approval of the Director General and subject to any conditions stipulated.</p>	<p>Interview with Approvals Manager</p> <p>Integral Power Line Management Plan</p> <p>Telstra Management Plan</p>	Management plans are in place to manage potential impacts to utilities.	C	
14. CCL 724 and 767	<p>Roads and Tracks</p> <p>a) The lease holder must pay to the relevant roads authority in control of the road or track the reasonable costs incurred by the roads authority in making good any damage to roads or tracks caused by operations carried out under this lease less any amount paid or payable from the Mine Subsidence Compensation Fund.</p> <p>b) During wet weather the use of any road or track must be restricted so as to prevent damage to the road or track, where such road is susceptible to damage in wet weather.</p> <p>Existing access tracks should be used for all operations where reasonably practicable. New access tracks must be kept to a minimum and be positioned in order to minimise damage to the land, watercourses or vegetation.</p>	RMS Invoice 90008 for June 18 to June 19 – Remittance notice, 27/06/19	<p>For local roads, BSO undertakes the road repairs.</p> <p>Technical committee for RMS that undertake the repairs and then bill each year which BSO pays.</p>	C	
15. CCL 724 and 767	<p>Trees and Vegetation</p> <p>Note:</p> <p>i. The lease holder must not fell trees, strip bark or cut timber on any land subject of this lease without the consent of the landholder who is entitled to the use of the timber- refer to section 166 of the Mining Act 1992.</p> <p>ii. The lease holder must contact Forests NSW and obtain any required permit, licence or approval before taking timber from any Crown land within the lease area. Any clearing not authorised under the Act must comply with the requirements of the Native Vegetation Act 2003. Any clearing or taking of timber on Crown land is subject to the requirements of the Forestry Act 1916.</p>	Interview with Environmental Lead	No clearing undertaken Permit to Disturb is required for clearing and approvals have been granted where required.	C	
17. CCL 724 and 767	<p>Resource Recovery</p> <p>a) Notwithstanding any description of mining methods and their sequence or of proposed resource recovery contained within the Mining Operations Plan, if at any time the Director General is of the opinion that minerals which the lease entitles the lease holder to mine and which are economically recoverable at the time are not being recovered from the lease area, that any such minerals which are being recovered are not being recovered to the extent which should be economically possible or which for environmental reasons are necessary to be recovered, notice in writing to the lease holder may be given requiring the holder to recover such minerals.</p>	Interview with Environmental Lead	No direction received.	NT	

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>b) The notice shall specify the minerals to be recovered and the extent to which they are to be recovered, or the objectives in regard to resource recovery, but shall not specify the processes the lease holder shall use to achieve the specified recovery.</p> <p>The lease holder must, when requested by the Director-General, provide such information as the Director General may specify about the recovery of the mineral resources of the lease area.</p>				
18. CCL 724 and 767	<p>Indemnity</p> <p>The lease holder must Indemnify and keep indemnified the Crown from and against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses which may be brought against the lease holder or which the lease holder may incur in respect of any accident or injury to any person or property which may arise out of the construction, maintenance or working of any workings now existing or to be made by the lease holder within the lease area or in connection with any of the operations notwithstanding that all other conditions of this lease shall in all respects have been observed by the lease holder or that any such accident or injury shall arise from any act or thing which the lease holder may be licensed or compelled to do.</p>	Interview with Administrator Land and Tenures	A Standard Insurance Policy is held by South32 to the value of \$20M per incident	C.	
21. CCL 724 and 767	<p>Security</p> <p>The single security in the sum of \$13,259,000 (CCL 724) \$12,880,907 (CCL 767) must be given and maintained with the Minister by the lease holder for the purpose of ensuring the fulfilment by the lease holder of obligations under Consolidated Coal Lease 724 and Consolidated Coal Lease 767 (Act 1973).</p>	<p>Securities certificate</p> <p>Letter from DPIE confirming receipt of securities certificates.</p>	Appropriate security is in place.	C	
22. CCL 724 and 767	<p>Prescribed Dam</p> <p>a) Notwithstanding any Mining Operation Plan, the lease holder must not mine within any part of the lease area which is within the notification area of the Brennan's Creek Dam without the prior written approval of the Minister and subject to any conditions stipulated.</p> <p>b) Where the lease holder desires to mine within the notification area he or she must:</p> <ol style="list-style-type: none"> i. at least twelve (12) months before mining is to commence or such lesser time as the Minister may permit, notify the Minister of the desire to do so. A plan of the mining system to be implemented must accompany the notice; and ii. provide such information as the Minister may direct. <p>c) The Minister must not, except in the circumstances set out in sub-paragraph (i), grant approval unless sub-paragraph (i) of this paragraph has been complied with. This sub-paragraph is complied with if:</p> <ol style="list-style-type: none"> i. the Dams Safety Committee as constituted by Section 7 of the Dams Safety Act 1978 and the owner of the dam have been notified in writing of the desire to mine referred to in paragraph (b). ii. the notifications referred to in clause (a) are accompanied by a description or plan of the area to be mined. iii. the Director General has complied with any reasonable request made by the Dams Safety Committee or the owner of the dam for further information in connection with the mining proposal. iv. the Dams Safety Committee has made its recommendations concerning the mining proposal or has informed the Minister in writing that It does not propose to make any such recommendations; and v. where the Dams Safety Committee has made recommendations the approval is in terms that are: <ol style="list-style-type: none"> o in accordance with those recommendations; or 	Interview with Environmental Lead	Not mined under this area during this audit period.	C	

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations				
	<ul style="list-style-type: none"> o where the Minister does not accept those recommendations or any of them - in accordance with a determination under sub-paragraph (ii) of this paragraph. vi. Where the Minister does not accept the recommendations of the Dams Safety Committee or where the Dams Safety Committee has failed to make any recommendations and has not informed the Minister in writing that it does not propose to make any recommendations, the approval shall be in terms that are, in relation to matters dealing with the safety of the dam: <ul style="list-style-type: none"> o as determined by agreement between the Minister and the Minister administering the Dams Safety Ad 1978;or o in the event of failure to reach such agreement - as determined by the Premier. d) d. The Minister, on notice from the Dams Safety Committee, may at any time or times: <ul style="list-style-type: none"> i. cancel any approval given where a notice pursuant to Section 18 of the <i>Dams Safety Act 1978</i> is given. ii. suspend for a period of time, alter, omit from or add to any approval given or conditions imposed. 								
23. CCL 724 and 767	<p>Suspension of Mining Operations</p> <p>The holder of a mining lease must not suspend mining operations in the mining area other than In accordance with the consent of the Minister.</p>	Annual Review 2018	Prohibition notice from Resources Regulator during audit period: Suspension commenced in 28 June 2017 to recommenced September 2017, safe operations resuming in October 2017. Illawarra Coal haven't otherwise suspended their own mining operations.	C					
24. CCL 724 and 767	<p>Cooperation Agreement</p> <p>The lease holder must make every reasonable attempt, and be able to demonstrate their attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as:</p> <ul style="list-style-type: none"> ■ Access arrangements ■ Operational interaction procedures ■ Dispute resolution ■ Information exchange ■ Well location ■ Timing of drilling ■ Potential resource extraction conflicts and ■ Rehabilitation issues. 	Interview with Environmental Lead	There is one overlapping petroleum tenure (mostly of Illawarra exploration tenures) but also of BSO.	C					
24. CCL 724	<p>Details of Lands, Purposes</p> <p>The lease holder shall be limited to the following operations and conditions within the specified areas:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Column 1</th> <th style="width: 80%;">Column 2</th> </tr> </thead> <tbody> <tr> <td>Lands shown in blue and Yellow colour on the Plan annexed hereto and marked 'B'.</td> <td> <ol style="list-style-type: none"> 1. Constructing, maintaining or using in connection with mining any of the following namely: - shaft, shaft appurtenances, boreholes, tunnel drive, drain, dam, reservoir, railway tramway, building, machinery, bridge, road, telephone line, magazine, and coal preparation plant. 2. The generation of electricity. 3. The erection, maintenance and use of standards, posts, wires and appliances for the transmission of electricity. </td> </tr> </tbody> </table>	Column 1	Column 2	Lands shown in blue and Yellow colour on the Plan annexed hereto and marked 'B'.	<ol style="list-style-type: none"> 1. Constructing, maintaining or using in connection with mining any of the following namely: - shaft, shaft appurtenances, boreholes, tunnel drive, drain, dam, reservoir, railway tramway, building, machinery, bridge, road, telephone line, magazine, and coal preparation plant. 2. The generation of electricity. 3. The erection, maintenance and use of standards, posts, wires and appliances for the transmission of electricity. 	Site Observations	From site observations only mining associated activities were being undertaken on the surface operational areas. Limitations in observations to Appin North, Appin East and Appin West, Vent shaft 1, 2, 3 and 6.	C	
Column 1	Column 2								
Lands shown in blue and Yellow colour on the Plan annexed hereto and marked 'B'.	<ol style="list-style-type: none"> 1. Constructing, maintaining or using in connection with mining any of the following namely: - shaft, shaft appurtenances, boreholes, tunnel drive, drain, dam, reservoir, railway tramway, building, machinery, bridge, road, telephone line, magazine, and coal preparation plant. 2. The generation of electricity. 3. The erection, maintenance and use of standards, posts, wires and appliances for the transmission of electricity. 								

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
	<p>4. The storing of fuel, machinery, tools, timber or equipment. 5. The dumping or depositing of any overburden, coal, minerals, mine residues or tailings. 6. Erecting dwellings for the use of persons employed on or about a mine or land subject to a lease for mining purposes.</p>				
<p>Land shown Green colour on the Plan annex hereto and marked "B".</p>	<p>coal preparation plant, conveyor systems, 1. Constructing, maintaining or using in connection with mining any of the following namely: adits, bin, borehole, bridge, building, coal preparation plant, conveyor systems, dam, drain, drift, machinery, magazine, railway, reservoir, road, shaft, shaft appurtenances, telephone line, tramway and tunnel. 2. The erection, maintenance and use of standards, posts, wires, and appliances for the transmission of electricity. 3. The dumping or depositing of coal, minerals, mine residues or tailings. 4. The storing of fuel, machinery, tools, timber or equipment in connection with mining. 5. Erecting dwellings for the use of persons employed on or about a mine or land subject to a lease for mining purposes. 6. Laying, maintaining and using a pipeline or cable in connection with mining. 7. Establishing, maintaining and using a nursery and associated facilities for the propagation of plants, shrubs and trees required for the rehabilitation of lands used in connection with mining or mining purposes.</p>				
<p>Land shown in Orange and Red colour on the Plan annexed hereto and marked "8"</p>	<p>1. Constructing, maintaining or using in connection with mining any of the following namely: adits, bin, borehole, bridge, building, coal preparation plant, conveyor systems, dam, drain, drift, jetty, machinery, magazine, railway, reservoir, road, shaft, shaft appurtenances, telephone line, tramway and tunnel. 2. The erection, maintenance and use of standards, posts, wires and appliances for the transmission of electricity. 3. The dumping or depositing of coal, minerals, mine residues or tailings. 4. The storage of fuel, machinery, tools, timber or equipment in connection with mining. 5. Laying, maintaining and using a pipeline or cable in connection with mining. 6. Establishing, maintaining and using a nursery and associated facilities for the propagation of plants, shrubs and trees required for the rehabilitation of lands used in connection with mining or mining purposes. 7. Depositing, with the approval of the Minister: earth, rock, ash, mine wastes or other wastes or other substances in shafts, tunnels or other mine workings for the purpose of filling, stowing or making safe those workings. 8. The generation of electricity</p>				

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations
25. CCL 767	<p>Barriers, Mining and Prospecting Restrictions</p> <p>Unless with the consent of the Minister first had and obtained and subject to such conditions as he may impose the lease holder shall not work or cause to be worked any seam of coal by underground methods within the subject area within the barrier defined as follows:-</p> <p>The land within the zone beneath and adjacent to main Southern and Illawarra Railway enclosed by an angle of draw of 35 degrees from the vertical plane of the boundary parallel to and thirty (30) metres horizontally distant from either side of the railway lands, such angle of draw being measured outwards from the point on the vertical plane of the said boundary at the surface or at the level of the horizontal plane of the railway track, whichever may be the higher, to the floor of the coal seam in. which mining operations are being carried out.</p>	Project Approval 08_0150 Mod 2.0	Project approval permits mining under the railway.	C	
26. CCL 724	<p>Limitations on Mining Areas</p> <p>The lease holder shall not prospect or mine for coal within the areas shown on the plan annexed hereto marked "B" insofar as such areas relate to the strata specified on that plan other than the mining of coal for the purposes of :</p> <p>i. shaft, borehole, tunnel or drive in the area coloured Blue and Yellow.</p> <p>ii. adits, borehole drift, shaft or tunnel in the area coloured Green.</p> <p>adits, borehole, drift, tunnel or shaft in the area coloured Orange and Red.</p>	Interview with Approvals Manager	No mining has taken place in area 'B'.	C	
26. CCL 767	<p>Barriers, Mining and Prospecting Restrictions continued</p> <p>Any approval or consent given by the Minister to the effect that the lease holder may mine for, work, win or remove any coal from those parts of the subject area within the barrier defined in Condition No 25 shall be deemed to be a consent given for the purposes of the said Condition No 25 subject to the same conditions of that approval or consent.</p>	Note	Noted	Note	
27. CCL 724	<p>Restrictions on Mining</p> <p>The lease holder shall also comply with the following additional conditions in respect of that part of the lease within Diagram No.06150, Parishes of Wedderburn and Eckersley.</p> <p>(a) The lease holder shall accept all and any risks to which the lease holder or the lease holder's property may be exposed by reason of existence of the Holsworthy Army Training Area on the excepted surface of the area demised and the lease holder shall save harmless the Commonwealth Government or persons lawfully using the said Training Area from any claims or injuries to the lease holder or the lease holder's servants or workmen which may arise by reason of the use of the said Training Area by persons authorised so to do.</p> <p>(b) Unless with the consent of the Minister first had and obtained and subject to such conditions as the Minister may impose, the lease holder shall not:</p> <p>i. remove any pillars, or</p> <p>ii. carry out mining operations by means of the longwall system within those parts of the area demised shown by Red hatching on the Plan marked "C" as a barrier two hundred (200) metres wide of the streamline of O'Hares Creek traversing the excepted surface of the area demised.</p> <p>c) The lease holder shall not mine for win or remove any coal from that part of the area demised as shown by Yellow on the Plan marked "C" except with the written permission of the Minister first had and obtained and subject to such conditions as he may impose. Provided however that the Minister shall not grant any such permission unless the requirement referred to in Paragraph i) of this condition has been satisfied.</p> <p>The lease holder has been granted the consent of an authority under the Environmental Planning and Assessment Act, 1979 to use the lands within such part of the subject area for the purpose of obtaining coal.</p>	Interview with Environment Lead	Mining operations have not been undertaken in the vicinity of the Holsworthy Army Training Area.	NT	

Tenure / Ref	Assessment Requirement	Reference/ Evidence	Comments	Compliance Status	Recommendations						
27. CCL 767	<p>Limitations on Mining Areas</p> <p>The lease holder shall not prospect or mine for coal within the areas shown on the plan annexed hereto marked "B" insofar as such areas relate to the strata specified on that plan other than the mining of coal for the purposes of :</p> <p>i. a shaft in the stippled areas numbered 2,3,4 and 5, and,</p> <p>ii. a borehole in the stippled area numbered 2</p>	Interview with Approvals Manager	Mining has not taken place in area "B".	C							
28. CCL 724	<p>Minister's Consent for further Mining</p> <p>Any approval or consent given by the Minister including any approval or consent given to the effect that the lease holder may mine for, work, win or remove any coal from those parts of the area demised within the barriers defined in Condition No.27 of this Schedule shall be deemed to be a consent given for the purposes of the said Condition No.27 subject to the same conditions of that approval or consent.</p>	Note	Noted	Note							
28. CCL 767	<p>Restrictions on Mining</p> <p>Unless with the consent of the Minister first had and obtained and subject to such conditions as he may impose, the lease holder shall not mine any coal from within any part of the subject area which is within a marginal zone:</p> <p>(a) Contained by an angle of draw of 35 degrees measured outwards from both sides of the structures of the Nepean and Cataract Tunnels to the point of intersection with the floor of the seam in which mining operations are to be carried out.</p> <p>Contained in an area joining the extremities of each area referred to in paragraph (a) of this condition.</p>	Interview with Approvals manager	Cataract undertaken outside audit period. Nepean not yet occurred.	NT							
29. CCL 724	<p>Mining Beneath Certain Crown Land</p> <p>The lease holder shall not carry out any mining operations in that part of the area demised within or beneath the lands subject of Commonwealth Permissive Occupancy No 200 granted under the Crown Lands Act 1989 (formerly Crown Lands Consolidation Act 1913), to the Commonwealth of Australia unless with the consent of the Minister first had and obtained and subject to such conditions as the Minister may impose.</p>	Interview Environment Lead	No mining beneath Crown land during audit period	NT							
29. CCL 767	<p>Restrictions on Mining - continued</p> <p>Any approval or consent given by the Minister including any approval or consent given to the effect that the lease holder may mine for, work, win or remove any coal from those parts of the subject area within the barrier defined in Condition No 28 shall be deemed to be consent given for the purposes of the Condition No 28 subject to the same conditions of that approval or consent.</p>	Note	Noted	Note							
30. CCL 724	<p>Approval to Mine Beneath Certain Crown Land</p> <p>Any approval or consent given by the Minister including any approval or consent given to the effect that the lease holder may mine for, work, win or remove any coal from those parts of the subject area within the barrier defined in Condition No.29 of this Schedule shall be deemed to be a consent given for the purposes of the said Condition No.29 subject to the same conditions of that approval or consent.</p>	Note	Noted	Note							
30. CCL 767	<p>Details of Lands, Purposes and Additional Conditions</p> <p>The lease holder shall be limited to the following operations and conditions within the specified areas described on the plan annexed hereto and marked "B".</p> <table border="1"> <thead> <tr> <th>Column 1</th> <th>Column 2</th> <th>Column 3</th> </tr> </thead> <tbody> <tr> <td>Lands shown numbered 1 on sheet 1 of the Plan annexed hereto and marked "B"</td> <td>1. The generation of electricity. 2. The erection, maintenance and use of</td> <td>Conditions No's 31 and 32</td> </tr> </tbody> </table>	Column 1	Column 2	Column 3	Lands shown numbered 1 on sheet 1 of the Plan annexed hereto and marked "B"	1. The generation of electricity. 2. The erection, maintenance and use of	Conditions No's 31 and 32	Interview with Approvals Manager	Land is used for the purposes as described.	C	
Column 1	Column 2	Column 3									
Lands shown numbered 1 on sheet 1 of the Plan annexed hereto and marked "B"	1. The generation of electricity. 2. The erection, maintenance and use of	Conditions No's 31 and 32									

Tenure / Ref	Assessment Requirement		Reference/ Evidence	Comments	Compliance Status	Recommendations
Land shown numbered 2 on sheet 2 of the Plan annexed hereto and marked "B"	standards, posts, wires and appliances for the transmission of electricity.	<ol style="list-style-type: none"> 1. Constructing, maintaining or using in connection with mining any of the following namely: borehole, building, dam, drain, drift, machinery, magazine, shaft, shaft appurtenances, and telephone line. 2. The generation of electricity. 3. The erection, maintenance and use of standards, posts, wires, and appliances for the transmission of electricity. 4. The storing of fuel, machinery, tools, timber or equipment in connection with mining. 5. Laying, maintaining and using a pipeline or cable in connection with mining. 6. A purpose which is connected or associated with, or incidental to, a purpose specified in 1, 4 or 5. 				
Land shown numbered 3 on sheet 2 of the Plan annexed hereto and marked "B"	1. Constructing, maintaining or using in connection with mining any of the following namely: building, machinery, road, shaft, shaft appurtenances.	<ol style="list-style-type: none"> 1. Constructing, maintaining or using in connection with mining any of the following namely: building, machinery, road, shaft, shaft appurtenances. 2. The erection, maintenance and use of standards, posts, wires, and appliances for the transmission of electricity. 				
Land shown numbered 4 on sheet 2 of the Plan annexed hereto and marked "B"	1. Constructing, maintaining or using in connection with mining any of the following namely: building, machinery, road, shaft, shaft appurtenances.	2. The erection, maintenance and use of standards, posts, wires, and appliances for the transmission of electricity.				

Tenure / Ref	Assessment Requirement			Reference/ Evidence	Comments	Compliance Status	Recommendations
	Land shown numbered 5 on sheet 2 of the Plan annexed hereto and marked "B"	1. Constructing, maintaining or using in connection with mining an air shaft					
	Land shown numbered 7 on sheet 2 of the Plan annexed hereto and marked "B"	1. The erection, maintenance and use of standards, posts, wires, and appliances for the transmission of electricity					
	Land shown numbered 9 on sheet 2 of the Plan annexed hereto and marked "B"	1. The erection, maintenance and use of standards, posts, wires, and appliances for the transmission of electricity	Condition No's 33 and 34.				
	Land shown numbered 10 on sheet 2 of the Plan annexed hereto and marked "B"	1. Constructing, maintaining or using in connection with mining 2. The erection, maintenance and use of standards, posts, wires and appliances for the transmission of electricity.	Condition No's 35.				
31. CCL 767	The lease holder shall carry on the said works so as not to interfere in any way with any widening of Main Road No.179 and shall comply with any instruction given or which may be given in this regard by the Minister or Director-General.			Note	Noted	Note	
32. CCL 767	Except with the permission of the Minister first had and obtained and subject to such conditions as the Minister considers necessary, the lease holder shall not erect on the subject area any plant for the purpose of generating electricity.			Note	Noted	Note	
33. CCL 767	The lease holder shall indemnify and keep indemnified the Crown and The Council of the City of Greater Wollongong from and against all actions and suits claims and demands of whatever nature and all costs charges and expenses which may be brought against the lease holder or which the lease holder may incur in respect of any accident or injury to any person or property which may arise out of the construction maintenance or working of any workings now existing or to be made by the lease holder within the boundaries of the subject area notwithstanding that the foregoing conditions shall in all respects have been observed by the lease holder or that any such accident or Injury shall arise from any act or thing which the lease holder may be licensed or compelled to do hereunder.			Interview with Environment Lead	Standard Insurance Policy is held by South32 to the value of \$20M per incident.	C	
34. CCL 767	The lease holder shall not erect poles, stanchions or standards on the surface of the subject area unless with the consent of the Minister and subject to such conditions as he may stipulate.			Note	Noted	Note	
35. CCL 767	The lease holder shall not permit any fireplace to be constructed unless protected by stone wallings and fires lit therein shall not be left unattended.			Note	Noted	Note	

Table D.1: Compliance with Environment Protection and Biodiversity Conservation – EPBC 2010/5350

No	Reference/ Evidence	Assessment	Recommendations	Compliance Status
1	Persoonia Hirsuta (Hairy Geebung) The approval holder must legally secure the approved offset area for conservation, including the core population , for the duration of the EPBC approval (15 May 2012), as outlined in the approved <i>Persoonia hirsuta</i> Offset Management Plan under condition 2 of the approval. A copy of the document detailing the legal security provided to the offset area must be submitted to the department by 14 May 2014.			
	Correspondence with DoEE	Outside audit period		NT
2	Persoonia Hirsuta (Hairy Geebung) The person taking the action must provide a plan for the management of the <i>Persoonia hirsuta</i> offset to the Minister for approval no later than 31 December 2012. The <i>Persoonia hirsuta</i> Offset Management Plan must include but not be limited to: a. measures for the conduct of pre-existing land management requirements or obligations in a manner that is compatible with the conservation of the species; b. information about the species' ecology, biology and conservation status to inform appropriate management actions; c. performance objectives and management actions that will enable maintenance and enhancement of <i>Persoonia hirsuta</i> plants and habitat covered by the plan; d. management responsibilities and accountabilities; e. mitigation measures to ensure operation of the action, including fire management and specifically the emplacement of coal wash, does not impact on any of the <i>Persoonia hirsuta</i> plants protected under this plan. This includes but is not limited to impacts associated with dust, shading, sedimentation, erosion or unrestricted access to areas containing <i>Persoonia hirsuta</i> plants; f. an assessment of the baseline <i>Persoonia hirsuta</i> population and distribution, including: i. the number of plants protected and their location; ii. plant and habitat condition; iii. age classes; g. measures for regular monitoring of the status of the <i>Persoonia hirsuta</i> plants and habitat as measured against the baseline population and distribution, including: i. recruitment and survivorship; ii. seedling growth rate; iii. age to reproductive maturity and peak flowering/fruit production; iv. effectiveness of management actions and mitigation measures contained within the plan; and v. impacts of threatening processes; h. the results of the monitoring referred to condition 2 f and g, must be provided to the department within 30 days of every 12 month anniversary of the implementation date of this plan; i. provisions to revise the approved <i>Persoonia hirsuta</i> Offset Management Plan in response to the findings of the research required by conditions 3. Including the submission of the revised <i>Persoonia hirsuta</i> Offset Management Plan to the Minister for approval within 6 months of this research being finalised; and The approved <i>Persoonia hirsuta</i> Offset Management Plan must be implemented. Clearing of native vegetation for the stage 4 coal wash emplacement area must not occur until the <i>Persoonia hirsuta</i> Offset Management Plan has been approved by the Minister.			
	Previous IEA Correspondence with DoEE <i>Persoonia hirsuta</i> Offset Management Plan Version 8 (12 April 2019) (the Plan) West Cliff Coal Wash Emplacement Area Management Plan Version 4.0 (21 July 2017) Field Inspection Monitoring Reports 2017, 2018	Plan approved by letter from DoEE (29 April 2019). Plan provides information on Condition 2a-g, referring to the West Cliff Coal Wash Emplacement Area Management Plan Version 4.0 (21 July 2017) for additional information required by Condition 2e, which is provided by that Plan. Monitoring Reports 2017 and 2018 outline results of field assessment undertaken in December of each year (peak flowering season), and submitted in December of each year. Plan outlines current research program, to be finalised 30 June 2021 (outside audit period). Clearing for Stage 4 has not yet occurred.		C
3	Persoonia Hirsuta (Hairy Geebung) The person taking the action must engage a suitably qualified expert to undertake and make publically available targeted research to inform conservation knowledge of <i>Persoonia hirsuta</i> . The research must: a. document current understanding of <i>Persoonia hirsuta</i> ecology and genetics; b. outline previously documented management and conservation actions; c. investigate: i. pollination biology of <i>Persoonia hirsuta</i> ; ii. requirements of its pollinators; iii. soil seed bank dynamics and the role of various disturbances (including fire) in germination and recruitment; iv. phenology and seasonal growth of <i>Persoonia hirsuta</i> ;			

No	Reference/ Evidence	Assessment	Recommendations	Compliance Status
		<ul style="list-style-type: none"> v. population genetic structure, levels of genetic diversity, minimum viable population size and management actions; vi. impact of dieback disease and control techniques on <i>Persoonia hirsuta</i> and its habitat; and vii. impact of fire on <i>Persoonia hirsuta</i> and its habitat; d. provide a general analysis of threatening processes and available management or mitigation actions; e. a research report to be finalised by no later than 30 June 2021; and f. be made publically available through: <ul style="list-style-type: none"> i. an internet site; and ii. the printing of at least 100 copies of the research and distribution to interested stakeholders including agencies, institutions, libraries and conservation organisations, including the provision of two copies to the department. 		
	<p><i>Persoonia hirsuta</i> Offset Management Plan Version 8 (12 April 2019) (the Plan) Correspondence with DoEE</p>	<p>The Plan outlines research program in Table 4 (the Strategy). The Plan was approved by DoEE (29 April 2019). Final research report due 30 June 2021, outside audit period.</p>		C
4	<p>Shale / Sandstone Transition Forest The person taking the action must implement the approved Bulli Seam Operations Shale / Sandstone Transition Forest Offset Management Plan. The person taking the action must legally secure the offset area for long term conservation purposes by 2 March 2016.</p>			
	<p>Bulli Seam Operations Shale / Sandstone Transition Forest Offset Management Plan Version 5.0 (August 2017/April 2018) (the Plan) Monitoring Reports (Niche, Landcare) Correspondence with DoEE</p>	<p>Securing of offset (1 February 2017) is outside the audit period. Implementation is evidenced through Monitoring Plans:</p> <ul style="list-style-type: none"> ■ Monitoring Report 2017 (covering once a year monitoring in November 2016), submitted 23 March 2017. ■ Monitoring Report 2018 (covering monitoring October 2017 to June 2018 under BioBanking), submitted 31 May 2018. ■ Monitoring Report 2019 (covering April 2018-May 2019 under BioBanking) submitted 9 August 2019. 		C
5	<p>Shale / Sandstone Transition Forest The person taking the action must provide to the Minister for approval within 1 year of the date of this approval, a plan for the management of the Shale / Sandstone Transition Forest Offset. The approved Shale / Sandstone Transition Forest Offset Management Plan (the Forest plan) must include but not be limited to:</p> <ul style="list-style-type: none"> a. specific management measures to control weed species, pest animals, public access and otherwise manage the Shale / Sandstone Transition Forest Offset so that the ecological condition of the Shale / Sandstone Transition Forest is maintained or enhanced to a higher condition than that being lost as a result of this action; <ul style="list-style-type: none"> i. this may be demonstrated through comparisons of floristic diversity and structure, vegetation health and/or percentage cover of introduced or weed plants; b. an outline of key milestones and performance objectives; c. measures for annual monitoring of the ongoing quality (as measured against the ecological survey information referred to at Conditions 4 a) of the Shale / Sandstone Transition Forest Offset and the effectiveness of management actions. Reports containing the monitoring results must be submitted to the department within 30 days of every 12 month anniversary of the date the Shale / Sandstone Transition Forest Offset is protected in perpetuity; and d. corrective actions and contingency measures to be implemented should monitoring indicate a decrease in the quality of the Shale / Sandstone Transition Forest conservation offset. <p>The approved Forest plan must be implemented within 2 years of the date of this approval.</p>			
5A	<p>If the Shale Sandstone Transition Forest is legally secured as a registered NSW BioBanking site, the management plan developed under the NSW BioBanking Agreement for that site is an Offset Management Plan for the purposes of Condition 4. The annual reporting required under that scheme may be provided to the department in place of the reports containing monitoring results required at Condition 5c, on the proviso that all measures specified in Condition 5 are covered.</p>			
	<p>Bulli Seam Operations Shale / Sandstone Transition Forest Offset Management Plan Version 5.0 (13 April 2018) (the Plan) Field Inspection Monitoring Reports (Niche, Landcare) Correspondence with DoEE</p>	<p>Approval of original plan outside audit period. Monitoring Report 2017 (covering once a year monitoring in November 2016), submitted 23 March 2017 Monitoring Report 2018 (covering monitoring October 2017 to June 2018 under BioBanking), submitted 31 May 2018. Monitoring Report 2019 (covering April 2018-May 2019 under BioBanking) submitted 9 August 2019 The submission email for the 2018 Monitoring Report was accompanied by a note explaining why this report was submitted later than "30 days of every 12 month anniversary of the date the Offset is protected in perpetuity" as a requirement of Condition 5c (which therefore required submission by 2-3 March 2018). South32 had been holding off sending the report until they received the Departments decision to revise Condition 5 in May 2018. Submission of the 2017 and 2019 reports were also outside of the requirements of 5c and no explanations for the late submission were provided in the submission emails. It is noted that condition 5A states that "annual reporting required under that (BioBanking) scheme may be provided to the department in place of the reports containing monitoring results required under Condition 5C", thereby implying that the time of submission would also be according to the BioBanking scheme requirements,</p>	<p>It is recommended that confirmation be sought from the Department that the required timing for submission of monitoring report in Condition 5c be changed to that required under the BioBanking scheme</p>	ANC

No	Reference/ Evidence	Assessment	Recommendations	Compliance Status
		<p>notwithstanding the final clause of this Condition 5c (“on the proviso that all measures specified in Condition 5 are covered”).</p> <p>Monitoring reports provide evidence of corrective actions. Photographs of photo points are compared to 2017 photo points, indicating changes in quality</p>		
6	<p>Coal Wash Emplacement Staging and Rehabilitation Plan</p> <p>The person taking the action must provide a Coal Wash Emplacement Staging and Rehabilitation Plan (the Staging Plan) for the stage 4 coal wash emplacement area to the Minister for approval. Clearing of native vegetation for stage 4 coal wash emplacement area must not occur until the Staging Plan has been approved by the Minister. The Staging Plan must include, but not be limited to:</p> <p>a. measures to limit the clearing of native vegetation to no more than 60 hectares;</p> <p>b. provision for the progressive staging of coal wash emplacement to ensure at all times a minimum 100 m wide habitat corridor is maintained linking the <i>Persoonia hirsuta</i> core population with habitat adjacent to the stage 4 coal wash emplacement area;</p> <p>c. measures to ensure that, if the corridor is to include land previously used as emplacement areas (either in whole or in part), native re-vegetation is established to the extent that it facilitates the movement of pollination vectors for <i>Persoonia hirsuta</i>;</p> <p>d. staging of emplacement from east to west;</p> <p>e. provision for progressive rehabilitation of the emplacement area, including through:</p> <p>i. staged clearing of native vegetation within the stage 4 coal wash emplacement area;</p> <p>ii. maximising opportunities for natural regeneration, including through salvage, storage and re-use of site top soil and maximising the retention time of suitable habitat species within the stage 4 coal wash emplacement area adjacent to active emplacement areas to assist re- colonisation of native species to rehabilitated areas;</p> <p>iii. key performance objectives for site rehabilitation, including indicative timelines, performance measures, management actions and responsibilities and accountabilities;</p> <p>iv. planting only endemic species in habitat mixes appropriate for the local surrounding environment, soil, slope and aspect, in accordance with relevant published guidelines; and</p> <p>v. appropriate weed and pest control strategies;</p> <p>f. monitoring of rehabilitation actions including, but not limited to, measures to assess the success of management actions, natural regeneration and revegetation. The reporting of monitoring results must be submitted to the department within 30 days of every 12 month anniversary of the implementation date of the Staging Plan; and</p> <p>g. unless otherwise agreed to in writing by the Minister, the Staging Plan must be implemented and remain implemented for a minimum period of 10 years at which point a revised plan taking into account the monitoring referred to above must be submitted to and approved by the Minister.</p>			
	<p>West Cliff Coal Wash Emplacement Area Management Plan Version 4.0 (21 July 2017) (the Plan) Correspondence with DoEE</p>	<p>The Plan was approved by the Department 18 August 2017. Stage 4 works have not yet commenced.</p>		NT
7	<p>Southern Brown Bandicoot and Broad Headed Snake Management Plan or Plans</p> <p>Within 1 year of the date of this approval the person taking the action must provide for the Minister's approval a Southern Brown Bandicoot and Broad Headed Snake conservation management plan or plans. The plan or plans must include:</p> <p>a. measures to avoid, mitigate and manage impacts on the Southern Brown Bandicoot, Broad Headed Snake and their habitats occurring as result of the action;</p> <p>b. provisions for the contribution of no less than \$250 000 (GST exclusive) in funding towards regional Southern Brown Bandicoot and Broad Headed Snake programs. This funding must not be expended on the measures referred to in condition 6 a;</p> <p>c. a description of actions to be funded and undertaken to inform and/or enhance the conservation of these species, including through survey or research, threat abatement with specific reference to predator controls and habitat restoration or rehabilitation, including public reporting or publication of information gained by these actions;</p> <p>d. a demonstration that management actions to be undertaken will not adversely impact EPBC Act listed species;</p> <p>e. a description of funding arrangements or agreements including work programs and responsible entities; and</p> <p>f. measures for the provision of documentary evidence within 30 days of the funding having been expended and/or that funding commitments have been met.</p> <p>The approved plan or plans must be implemented within 2 years of the date of this approval. The clearing of native vegetation for the stage 4 coal wash emplacement cannot occur until the approved plan or plans have been implemented</p>			
	<p>Bulli Seam Operations Southern Brown Bandicoot Management Plan Version 3.0 (27 October 2017) (the Bandicoot Plan) Bulli Seam Operations Broad-headed Snake Management Plan Version 4.0 (11/12/2018) (the Snake Plan) Correspondence with DoEE Pre-clearance Reports 2018, 2019</p>	<p>Bandicoot Plan approved by the Department 29 November 2017. Snake Plan approved by the Department 17 January 2019.</p> <p>Evidence of implementation: Preclearance reports (2018, 2019), providing results of pre-clearance surveys for the Stage 3 Emplacement Area. There has been one instance of translocation, that of the Broad-headed Snake in 2016, outside the audit period.</p> <p>Stage 4 works have not yet commenced.</p>		C

No	Reference/ Evidence	Assessment	Recommendations	Compliance Status
	Interviews with South 32 personnel – Environmental Officer.			
8	<p>Surface and Ground Water Quality Monitoring and Adaptive Management Plan</p> <p>The person taking the action must provide a Surface and Ground Water Quality Monitoring and Adaptive Management Plan (the Water Plan) to the Minister for approval by 30 September 2012. Clearing of native vegetation for the stage 4 coal wash emplacement area and new mining activities beneath water courses containing habitat for EPBC Act listed species cannot occur until or unless the Water Plan has been approved and implemented. The Water Plan must:</p> <ol style="list-style-type: none"> provide a monitoring and adaptive management framework that will identify potential water related impacts of the action on EPBC Act listed species and their habitat; contain a review of the ecological system that defines the ecological assets, functions and habitats to be protected and establish pre-mining baseline conditions; detail strategies and actions for maintaining, enhancing, and if required, restoring ecological assets, functions and habitats, for dependent EPBC Act listed species and their habitat including but not limited to the Macquarie Perch in Brennans Creek and the Georges and Nepean Rivers; define ecological outcomes and performance objectives; identify water requirements (volume, timing, duration, frequency, quality) for meeting ecological outcomes and performance objectives; identify monitoring, evaluating and reporting mechanisms including comprehensive water quality monitoring, incorporating the emplacement area, that includes: <ol style="list-style-type: none"> detailed baseline data; monitoring methods, location and effort; specific performance indicators that will be used to judge performance, or guide the implementation of any required management measures; and a program to monitor and report on the impacts and environmental performance of the action and effectiveness of management measures; identify requirements for adaptive management actions to achieve performance objectives and ecological outcomes, including a description of the measures that would be implemented to achieve these; include contingency plan(s) to manage any unpredicted impacts and their consequences; include a program to investigate and implement ways to improve the environmental performance of the project over time; and include protocols for periodic review of the plan and annual reporting to the Minister. 			
	Bulli Seam Operations Adaptive Management Plan for Water Sensitive EPBC Act Listed Species Version 5.0 (August 2018) (the Plan)	Original approval of this Plan is outside audit period. Current Plan approved by the Department on 29 August 2018. Stage 4 works have not yet commenced.		NT
9	<p>Mine Closure Environmental Management Plan</p> <p>No less than 3 years prior to the date of expected closure of the mine, the person taking the action must submit to the Minister for approval an environmental management plan that sets out any required actions and responsibilities to ensure the closure of the mine does not result in on-going adverse impacts (post closure) to EPBC Act listed species. The approved plan must be implemented until the person taking the action can provide evidence that no further actions are required and cessation is agreed to in writing by the Minister.</p>			
	Not triggered	Closure of the mine will be over 3 years in the future, outside the audit period.		NT
10	<p>Mine Closure Environmental Management Plan</p> <p>At the cessation of mining activities, all portals and vent shafts are to be closed, decommissioned or capped in manner that prevents the death or injury of EPBC listed bats.</p>			
	Not triggered	Closure of the mine will be over 3 years in the future, outside the audit period		NT
11	<p>Shapefiles</p> <p>The person taking the action must provide the department with offset attributes, shapefiles and textual descriptions and maps to clearly define the location and boundaries of the <i>Persoonia hirsuta</i> and Shale / Sandstone Transition offsets required as a result of this approval. These must be provided within 30 days of the protection in perpetuity of these areas.</p>			
	Correspondence with the DoE	Shapefiles were provided to the Department 26 November 2013, outside the audit period.		NT
12	<p>Notification of Actual Date of Commencement</p> <p>Within 30 days after the commencement of the action, the person taking the action must advise the department in writing of the actual date of commencement.</p>			

No	Reference/ Evidence	Assessment	Recommendations	Compliance Status
	Previous EIA	As per previous IEA. Letter of notification to the Department dated 31 May 2012, outside the audit period.		NT
13	<p>Publication Requirements Unless otherwise agreed to or instructed in writing by the Minister, the person taking the action must publish all management plans, reports, strategies or agreements (however described) required by these conditions of approval on their website. Each management plan, report, strategy or agreement must be published on the website within 30 days of being approved.</p>			
	https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents	Auditor accessed website and determined presence of relevant documents on the website		C
14	<p>Compliance Report Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the department at the same time as the compliance report is published.</p>			
	https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents	Annual Reports for 2017, 2018 (submitted 14 August 2018), and 2019 (submitted 9 August 2019) published on the website.		C
15	<p>Accurate Records Must be Maintained The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement any management plan, report, strategy or agreement required by this approval, and make them available upon request to the department. Such records may be subject to audit by the department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the department's website. The results of audits may also be publicised through the general media.</p>			
	https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents	This audit (see above assessment against conditions). Previous audit (2017) viewed on website		C
16	<p>Minister's Approval of the Modification to a Management Plan, Report, Strategy or Agreement If the person taking the action wishes to carry out any activity otherwise than in accordance with a management plan, report, strategy or agreement (however described) specified in these conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that management plan, report, strategy or agreement. The varied activity shall not commence until the Minister has approved the varied management plan, report, strategy or agreement in writing. The Minister will not approve a varied management plan, report, strategy or agreement unless the revised management plan, report, strategy or agreement would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised management plan, report, strategy or agreement, that management plan, report, strategy or agreement must be implemented in place of management plan, report, strategy or agreement originally approved.</p>			
	Updated Plans and approval letters	Several approvals obtained for Plan updates during the audit period as outlined above.		C
17	<p>Minister's Modification to a Management Plan, Report, Strategy or Agreement If the Minister believes that it is necessary or convenient for the better protection of controlling provisions listed in this decision instrument to do so, the Minister may request that the person taking the action make specified revisions to the management plan, report, strategy or agreement specified in the conditions and submit the revised management plan, report, strategy or agreement for the Minister's written approval. The person taking the action must comply with any such request. The revised approved management plan, report, strategy or agreement must be implemented. Unless the Minister has approved the revised management plan, report, strategy or agreement, then the person taking the action must continue to implement the management plan, report, strategy or agreement originally approved, as specified in the conditions.</p>			
	Interviews with South 32 personnel – Environmental Officer	No requests for plan modifications received during the audit period.		NT
18	<p>Independent Auditor By the end of 31 December 2013 and every three years thereafter, unless the Minister directs otherwise, the person taking the action must commission and pay the full cost of an independent environmental audit of the project. This audit must:</p> <ol style="list-style-type: none"> be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Minister; include consultation with relevant State agencies; assess the environmental performance of the project and assess whether it is complying with the requirements in this approval (including any assessment, plan or program (however described) required under this approval); review the adequacy of strategies, plans or programs required under the abovementioned approvals; recommend appropriate measures or actions to improve the environmental performance of the action, and/or any assessment, plan or program required under the abovementioned approvals; and audit criteria must be agreed to by the Minister. Within 6 weeks of the completion of this audit, or as otherwise agreed by the Minister, the person taking the action must submit a copy of the audit report to the Minister. The audit report must address the criteria to the satisfaction of the Minister. 			

No	Reference/ Evidence	Assessment	Recommendations	Compliance Status
Note: The audit team must be led by a suitably qualified auditor and include experts in any field specified by the Minister .				
	Previous IEA	Previous IEA completed by ERM (2017) This audit period covers 4 February 2017 to 24 October 2019. The endorsement of the audit team was not received from the Minister prior to conducting the audit on 24 October 2019, but until 9 December 2019.	No further action is required.	ANC
19	Unsatisfactory Commencement of Action If, at any time after 5 years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister .			
		Work commenced 15 May 2012, as per Compliance Reports, outside the audit period.		NT

Table D.2: Compliance with Environment Protection and Biodiversity Conservation – EPBC 2010/5722

No	Reference/ Evidence	Assessment	Recommendations	Compliance Status
1	The person taking the action must not clear more than 3.5 hectares of Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest (CPW) vegetation (Annexure A). A report and maps verifying compliance with this condition to be placed by the proponent on their website for three months and a letter indicating when this occurs must be submitted to the department within three months of the completion of construction.			
	Final Clearing Report 20 October 2015	Clearing occurred outside audit period. Report produced outside audit period.		NT
2	The person taking the action must submit a Biodiversity Offset Strategy to the Minister for approval. The strategy must address the following requirements: (a) the conservation of at least 8.7 hectares of land containing medium to high quality CPW (Annexure A); (b) in addition to land pertaining to 2(a), that land will be managed and revegetated to greater quality to that removed; and (c) The land referred to in 2(a) must be protected by a legal instrument under relevant nature conservation legislation, that ensures the land is conserved in perpetuity. The approved strategy must be implemented. The person taking the action must not clear any CPW until the Minister approves the strategy.			
	Appin VS#6 Biodiversity Offset Strategy Version P2 (December 2016) (the Strategy) Correspondence with DoEE Offset Site Monitoring Report 2017 (29 Nov 2017) (Niche) Offset Site Monitoring Report 2017 (4 December 2018) (Niche)	Strategy P2 approved 8 June 2017 (original Strategy 2011). Offset Site Monitoring Report 2017 submitted 25 January 2018 Offset Site Monitoring Report 2018 submitted 24 December 2018 Clearing occurred before 2015, outside the audit period.		C
3	The person taking the action must submit a Vegetation Management Plan to the Minister for approval. The plan must address the following requirements: (a) make reference to the Biodiversity Offset Strategy as outlined in condition 2; (b) measures to protect the population of <i>Pimelea spicata</i> found in the area proposed for protection through condition 2. These must; (i) monitor the <i>Pimelea spicata</i> population to determine the success of management or the need for intervention; (ii) include the establishment of thresholds that if reached would require intervention measures; and (iii) identify what further management measures must be implemented if a threshold is reached. (c) rehabilitate MZ2, MZ3 and MZ4 (Annexure B) using appropriate native species with input from a suitably qualified CPW expert; and (d) The plan must include key milestones, performance indicators, corrective actions and timeframes for the completion of all actions outlined in the plan for the life of the project. The approved plan must be implemented.			

No	Reference/ Evidence	Assessment	Recommendations	Compliance Status
		The person taking the action must not clear any CPW until the Minister approves the plan.		
	Correspondence with DoEE VS#6 Biodiversity Management Plan Version P6 (the Plan) Offset Site Monitoring Report 2017 (29 Nov 2017) (Niche) Offset Site Monitoring Report 2017 (4 December 2018) (Niche) Field inspection	Plan Version P5 (30 January 2017) approved by the department on 8 June 2017. Plan Version P6 is identical to P5, but incorporated into an overall Biodiversity Management Plan for Bulli Seam Operations. Monitoring reports cover the offset area, but there is no evidence of monitoring or maintenance within rehabilitated vegetation within MZ2-4. During field inspection, it appeared that only the noise mitigation bund/wall had been planted with trees. Several areas were observed to be un-rehabilitated (e.g. MZ 2 and parts of MZ4) or exhibited rehabilitation failure, as evidenced by the numerous old plastic protective sleeves without plants growing within. Areas of weeds were also observed. Clearing occurred before 2015, outside the audit period.	Survey to be undertaken by a suitably qualified expert of plant density/composition/survival in rehabilitated zones, and corrective measures to be taken where required.	NC
4	If the person taking the action wishes to carry out an action otherwise than in accordance with any plan, report, program or strategy (however described) approved in relation to this approval, they may submit a revised plan, report, program or strategy (however described) for the Minister's approval. If the Minister approves a revised plan, report, program or strategy (however described) the person taking the action must implement that plan, report, program or strategy (however described) instead of the plan, report, program or strategy (however described) as originally approved.			
	Interviews with South 32 personnel – Environmental Officer	No changes in proposed actions over the audit period.		NT
5	If the Minister believes that it is necessary or desirable for the better protection of any relevant controlling provision to do so, the Minister may request that the person taking the action make specified revisions to any plans, reports, programs or strategy (however described) approved pursuant to these conditions. The person taking the action must comply with any such request. The revised plans, reports, programs or strategy (however described) must be implemented.			
	Interviews with South 32 personnel – Environmental Officer	No requests for plan modifications received during the audit period.		NT
6	If the action has not been substantially commenced within 5 years of the date of this approval the action must not commence without the written agreement of the Minister.			
		Vent construction completed 2016, outside the audit period.		NT

APPENDIX B DEPARTMENTAL CORRESPONDENCE



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

Mr Chris Schultz
Lead Environment
South32
Illawarra Metallurgical Coal
Level 3, Enterprise 1 Building
Innovation Campus, Squires Way
NORTH WOLLONGONG, 2500

Dear Mr Schultz

**Bulli Seam Operations Project (MP 08_0150)
Independent Environmental Audit 2019**

I refer to your letter email of 11 July 2019 seeking approval of the audit team for the upcoming Bulli Seam Operations Independent Environmental Audit, in accordance with Schedule 6, Condition 9 of the project approval MP 08_0150, as modified ('the approval').

Having considered the qualifications and experience of Mr Ross Seedsman, the Secretary does not endorse the appointment of Mr Seedsman to undertake the audit of the subsidence, in accordance with Schedule 6, Condition 9 of the approval. The Department is of the view that Mr Seedsman is not independent from the Bulli Seam Operations Project and there is a perceived conflict of interest. Consequently, the Department requests that you submit an alternative subsidence expert for Secretary's approval, in accordance with Schedule 6, Condition 9 of the approval.

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

- Nicole Whittaker – lead auditor;
- Heather McKay – audit support;
- Toivo Zoete – biodiversity;
- Nathan Lynch – noise;
- Iain Cowan – air quality;
- Wijnand Gemson – hydrology;
- Joanne Woodhouse – indigenous heritage and archaeology, ecology and bushfire;
- Will Weir – audit support; and
- Michael Gaggin – audit overseer.

the Secretary endorses the appointment of this team to undertake the audit in accordance with Schedule 6, Condition 9 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 in accordance with 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:

- 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, South32 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 South32 review the report to ensure it complies with the relevant approval condition.

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

Yours sincerely



Jenifer Rowe 11/7/2019
A/Team Leader Compliance
as nominee of the Secretary



Contact: Georgia Dragicevic
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Email: Georgia.Dragicevic@planning.nsw.gov.au

Mr Chris Schultz
Lead Environment
South32
Illawarra Metallurgical Coal
Level 3, Enterprise 1 Building
Innovation Campus, Squires Way
NORTH WOLLONGONG, 2500

18 October 2019

Dear Chris,

**Bulli Seam Operations Project (MP 08_0150)
Independent Environmental Audit 2019**

I refer to your letter email of 16 October 2019 seeking approval of Messrs Gareth Swarbrick and Kai Koosmen of Pells Sullivan Meynink as the auditors for the subsidence component of the upcoming Bulli Seam Operations Independent Environmental Audit, in accordance with Schedule 6, Condition 9 of the project approval MP 08_0150, as modified ('the approval').

Having considered the qualifications and experience of Mr Gareth Swarbrick, the Secretary does not endorse the appointment of Mr Swarbrick to undertake the audit of the subsidence, in accordance with Schedule 6, Condition 9 of the approval. The Department is of the view that Mr Swarbrick is not independent from the Bulli Seam Operations Project and there is a perceived conflict of interest.

Having considered the qualifications and experience of Mr Koosmen, the Secretary endorses the appointment of Mr Koosmen to undertake the subsidence component of the audit in accordance with Schedule 6, Condition 9 of the approval. This approval is conditional on Mr Koosmen 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 in accordance with 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:

- 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, South32 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 South32 review the report to ensure it complies with the relevant approval condition.

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

Yours sincerely

A handwritten signature in black ink, appearing to read 'K O'Reilly', written in a cursive style.

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



Our reference: EPBC 2010/5350

Mr Chris Schultz
Lead Environment
Illawarra Metallurgical Coal
PO Box 514
UNANDERRA NSW 2526

Dear Mr Schultz

Re: EPBC 2010/5350 *Bulli Seam Operations Expansion, Bulli, NSW* - APPROVAL OF INDEPENDENT AUDITOR AND AUDIT CRITERIA

I refer to your correspondence of 14 November 2019 in which you nominated an audit team from *Environmental Resources Management Australia* (ERM Australia) and submitted the proposed audit criteria for the independent audit of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Bulli Seam Operations Expansion, Bulli, New South Wales (EPBC 2010/5350).

Officers from the Department of the Environment and Energy have reviewed the independent auditor nomination and the proposed audit criteria. It has been determined that the proposed independent auditor is appropriately qualified and the proposed audit criteria will provide sufficient scope for an assessment of compliance as required under Condition 18 of the EPBC Act 2010/5350 approval.

As delegate of the Minister for the Environment, I am pleased to inform you that I approve the nominated independent auditor and the proposed audit criteria.

I note that the independent compliance audit is already in the final stages of completion. A team member from the Environmental Audit Section will contact you shortly regarding this non-compliance with the approval conditions.

For the next independent compliance audit, please ensure that the independent auditor and the audit criteria are approved by the Minister prior to commencement.

I look forward to receiving the final compliance audit report within 6 weeks of its completion as required by Condition 18 of the EPBC Act approval.

Should you require any further information please contact Nicholas Scholar on 02 6274 1284 or at audit@environment.gov.au.

Yours sincerely

Ms Monica Collins
Chief Compliance Officer
Office of Compliance
9 December 2019

From: [Resources Regulator](#)
To: [Nicole Whittaker](#)
Cc: greg.kininmonth@planning.nsw.gov.au
Subject: AREQ0004459 | Bulli Seam Operations | Enquiry | Other Enquiry | 30 Sep 2019 12:25:00
Date: Friday, 18 October 2019 1:18:30 PM
Attachments: [NSW Gov Logo 7k.jpg](#)

Dear Nicole Whittaker,

I refer to your email requesting comments in relation to the upcoming Independent Environmental Audit of Bulli Seam Operations.

The Resources Regulator is responsible for administering the Mining Act 1992 and specifically the environmental provisions of the act and conditions of title.

The Resources Regulator recommends that the audit take into consideration the conditions of the relevant mining titles associated with the Bulli Seam Operations mine and provide an assessment of compliance with the current Bulli Seam Mining Operations Plan.

If you have any further questions, please let me know.

Regards,

Craig Campbell
Snr Inspector Environment
Regulatory Compliance - Team 1 | Resources Regulator
M 0428 254 994



Ref:MSG0111906_yuV06J4lYoZ58U8rRk0S

From: [Andrew Couldridge](#)
To: [Nicole Whittaker](#)
Subject: RE: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019
Date: Tuesday, 29 October 2019 11:11:09 AM
Attachments: [image002.jpg](#)
[image003.png](#)

Hi Nicole,

I apologise for not responding to your email earlier.

Thank you for requesting comments on the Independent Audit of South32's Bulli Seam Operations.

I have no specific comments however trust that as usual the audit will cover general compliance with the Environment Protection Licence [2504](#).

Regards Andrew.

Mr Andrew Couldridge

Senior Operations Officer – Metropolitan Illawarra

Regulatory Services Division, NSW Environment Protection Authority

+61 2 4224 4106 +61 439 706 236

andrew.couldridge@epa.nsw.gov.au www.epa.nsw.gov.au [@EPA_NSW](#)

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

From: Nicole Whittaker <Nicole.Whittaker@erm.com>
Sent: Monday, 30 September 2019 12:25 PM
To: Andrew Couldridge <Andrew.Couldridge@epa.nsw.gov.au>
Cc: Oliver Moore <Oliver.Moore@erm.com>; Heather McKay <Heather.McKay@erm.com>; Bishop, Casey <Casey.M.Bishop@south32.net>
Subject: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019

Hi,

I am currently completing the Independent Environmental Audit (IEA) on the Conditions of Approval issued to South32 Illawarra Metallurgical Coal for the Bulli Seam Operations (BSO), PA 08_0150 and EPBC approval 2010/5350.

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

The attached Terms of Reference outlines the audit process, and also introduces the approved team of suitably qualified, experienced and independent experts who will be undertaking the audit. The site inspection will be completed over the period 21 -24 October 2019, therefore it would be appreciated if there are any concerns, areas of focus etc., they are raised by 16 October 2019.

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

Regards,
Nicole

Nicole Whittaker
Senior EHS Consultant

ERM

Level 4 | 201 Leichhardt Street | Spring Hill QLD 4000
PO Box 1400 | Spring Hill QLD 4004
T +61 7 3007 8487 M +61 423 557 169
E Nicole.Whittaker@erm.com | W www.erm.com



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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

From: [EPBC Monitoring](#)
To: [Nicole Whittaker](#)
Subject: RE: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019 [SEC=OFFICIAL]
Date: Thursday, 31 October 2019 4:14:21 PM
Attachments: [image001.png](#)

Hi Nicole

Thank you for your email and apologies for the delayed response. Unfortunately we were unable to get to this email in time, however we appreciate that you gave the Department the opportunity to provide feedback. No concerns at this stage, and we look forward to receiving the audit report once completed.

Kind regards

Compliance Monitoring Team

Environmental Audit Section
Office of Compliance
Department of the Environment and Energy
GPO Box 787, CANBERRA ACT 2601

From: Nicole Whittaker [mailto:Nicole.Whittaker@erm.com]
Sent: Tuesday, 15 October 2019 9:46 AM
To: EPBC Monitoring <EPBCMonitoring@environment.gov.au>
Subject: RE: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019 [SEC=OFFICIAL]

Hi,

I just wanted to provide a reminder to my below email. If you could please provide any feedback by no later than 16 October 2019, that would be much appreciated.

If you have any queries, please don't hesitate to contact me.

Regards,
Nicole

Nicole Whittaker
Senior EHS Consultant

ERM
Level 4 | 201 Leichhardt Street | Spring Hill QLD 4000
PO Box 1400 | Spring Hill QLD 4004
T +61 7 3007 8487 M +61 423 557 169
E Nicole.Whittaker@erm.com | W www.erm.com



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From: Nicole Whittaker
Sent: Tuesday, October 1, 2019 11:59 AM
To: 'EPBC Monitoring' <EPBCMonitoring@environment.gov.au>
Subject: RE: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019 [SEC=OFFICIAL]

Hi,

Please find attached the ToR.

Regards,
Nicole

Nicole Whittaker
Senior EHS Consultant

ERM
Level 4 | 201 Leichhardt Street | Spring Hill QLD 4000
PO Box 1400 | Spring Hill QLD 4004
T +61 7 3007 8487 M +61 423 557 169
E Nicole.Whittaker@erm.com | W www.erm.com



Please take a look at our 2019 Sustainability Report: <https://www.erm.com/en/sustainability-report-2019/>

From: EPBC Monitoring <EPBCMonitoring@environment.gov.au>
Sent: Tuesday, October 1, 2019 11:51 AM
To: Nicole Whittaker <Nicole.Whittaker@erm.com>
Subject: RE: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019 [SEC=OFFICIAL]

Hi Nicole

Thank you for your email. When Vaughn forwarded the email, the attachment dropped off.
Could you please send it through to this email address?

Kind regards

Compliance Monitoring Team

Environmental Audit Section

Office of Compliance

Department of the Environment and Energy

GPO Box 787, CANBERRA ACT 2601

From: Vaughn Cox

Sent: Monday, 30 September 2019 2:27 PM

To: Nicole Whittaker <nicole.whittaker@erm.com>

Cc: EPBC Monitoring <EPBCMonitoring@environment.gov.au>

Subject: Re: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019

Hi Nicole I am forwarding your note to my colleagues in the environmental audit section for info and possible attention. Thank you. Vaughn Cox

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On Mon, Sep 30, 2019 at 12:25 PM +1000, "Nicole Whittaker" <Nicole.Whittaker@erm.com> wrote:

Hi,

I am currently completing the Independent Environmental Audit (IEA) on the Conditions of Approval issued to South32 Illawarra Metallurgical Coal for the Bulli Seam Operations (BSO), PA 08_0150 and EPBC approval 2010/5350.

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

Regards,
Nicole

Nicole Whittaker
Senior EHS Consultant

ERM

Level 4 | 201 Leichhardt Street | Spring Hill QLD 4000

PO Box 1400 | Spring Hill QLD 4004

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E Nicole.Whittaker@erm.com | W www.erm.com



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From: [Mike Archer](#)
To: [Nicole Whittaker](#)
Subject: Re: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019
Date: Friday, 4 October 2019 11:21:37 AM
Attachments: [image001.png](#)

Hi Nicole,

Thank you for the opportunity for the Illawarra Coal Community Consultative Committee (IC CCC), (Bulli Seam Operations) to contribute to the Independent Environmental Audit (IEA). The Committee will not meet again until the evening before your deadline. However the following are points of interest/ discussion/concern for committee members:

The ongoing effects of subsidence, especially in and around the township of Douglas Park and where mining occurs under roadways including the Hume Motorway.

The ongoing effects on air quality within the community from mine operations with particular emphasis on PM 2.5, PM 10.

Impacts from mine operations on water quality including the prospect of little or no ecological flow from Brennan's Creek Dam into the Georges River system; water discharges quality and both acute and chronic impacts on regional waterways generally.

Waste management, including management and rehabilitation of coal wash stockpiles.

Revegetation of Mountbatten property and restoration of Mountbatten Homestead and adjacent structures.

Noise from mine operations.

I will share your request and this list with IC CCC members on the evening of 15 October and update you on 16 October if there are adjustments or further items to be added.

Yours sincerely

Mike Archer
Independent Chairperson Illawarra Coal Community Consultative Committee.
0408 859 331

From: Nicole Whittaker <Nicole.Whittaker@erm.com>
Sent: Monday, 30 September 2019 12:25 PM
To: mikearcherpr@hotmail.com <mikearcherpr@hotmail.com>
Cc: Oliver Moore <Oliver.Moore@erm.com>; Heather McKay <Heather.McKay@erm.com>; Bishop, Casey <Casey.M.Bishop@south32.net>

Subject: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019

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

Regards,
Nicole

Nicole Whittaker
Senior EHS Consultant

ERM

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From: [Ravi Sundaram](#)
To: [Nicole Whittaker](#)
Cc: [Clay Preshaw](#); [Marlo Vergara](#)
Subject: RE: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019
Date: Tuesday, 8 October 2019 8:40:02 AM
Attachments: [image001.png](#)
[image002.png](#)

Hi Nicole

Thank you for consulting WaterNSW with regards to the above environmental audit.

WaterNSW has no specific concerns or issues with regards to the Bulli Seam Operations Project during the audit period as:

- All current approved mining is outside the 'Sydney Declared Catchment' and Special Areas; and
- Mining by Appin and Westcliff collieries under the Bulli Seam Operations Project to date have not resulted in any impact on WaterNSW's water supply infrastructure.

More information regarding this is provided below.

Background Information:

- Appin Area 7 is the only current Bulli Seam mining operation west of a section of the Upper Canal North from Macquariedale Road and Nepean Creek. Westcliff Area 5 LW37, the last of the Westcliff longwalls within a little over a kilometre of the Upper Canal, was completed in January 2015.
- Pre-mining mitigation works on Ousedale Creek and Mullaly (Mallaty) Creek aqueducts as well as concrete aqueducts C and D were completed to mitigate the impacts due to Westcliff Area 5 and Appin Area 7 longwall mining as part of the approval conditions. Rigorous 3-D monitoring were also undertaken to monitor the performance of these canal infrastructure assets.
- The minimum distance between the closest Appin Area 7 longwall and the Upper Canal varies from about 930m to about 1500m, with Nepean River situated between the closest ends of the longwalls and the canal and acting as a buffer between the mining activity and the infrastructure assets along the canal.

Current Situation:

- As part of the approval condition, asset monitoring surveys are being undertaken in accordance with Upper Canal Management Plan for LW707 to 710 and in compliance with Survey and Monitoring Programme for LW 707 and 708. Far-field horizontal movements are below predictions.
- Movements due to extraction of LW707 A & B, LW708 A & B and future Appin Area 7 longwalls are predicted to have negligible and insignificant impact on the Upper Canal infrastructure assets.
- Repair/remediation of Ousedale Creek and Mullaly (Mallaty) Creek aqueducts as well as concrete aqueducts C and D were recently completed as part of the Post-mining Rehab work.
- No unusual movement exceeding prediction noted to date.
- Appin Area 7 Subsidence Management Status Reports are regularly submitted to WaterNSW.

Please contact me if you need any further information regarding the above.

Kind regards,
Ravi

Ravi Sundaram

Mining Catchment Specialist



PO Box 398, Parramatta NSW 2124
Level 14, 169 Macquarie Street
Parramatta NSW 2150

T: 02 9865 2507

ravi.sundaram@waternsw.com.au

www.waternsw.com.au

From: Nicole Whittaker <Nicole.Whittaker@erm.com>

Sent: Monday, 30 September 2019 12:26 PM

To: Ravi Sundaram <ravi.sundaram@waternsw.com.au>

Cc: Oliver Moore <Oliver.Moore@erm.com>; Heather McKay <Heather.McKay@erm.com>;
Bishop, Casey <Casey.M.Bishop@south32.net>

Subject: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019

Hi,

I am currently completing the Independent Environmental Audit (IEA) on the Conditions of Approval issued to South32 Illawarra Metallurgical Coal for the Bulli Seam Operations (BSO), PA 08_0150 and EPBC approval 2010/5350.

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

Regards,
Nicole

Nicole Whittaker
Senior EHS Consultant

ERM

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PO Box 1400 | Spring Hill QLD 4004

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From: [Mitchell Clark](#)
To: [Nicole Whittaker](#)
Subject: RE: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019
Date: Monday, 14 October 2019 11:03:14 AM
Attachments: [image001.png](#)

Hi Nicole,

From a quick scan over the attached audit process I can't see anything that requires amendment.

Cheers,

Mitch

Mitchell Clark
Coordinator Natural Areas
Campbelltown City Council

P: +612 4645 4501

M: +614 1974 9326

E: mitchell.clark@campbelltown.nsw.gov.au

www.campbelltown.nsw.gov.au

Brand



Brand



Campbelltown City Council acknowledges and respects the Dharawal people as traditional custodians of this land, and extends these respects to all Aboriginal Elders, past and present, and people from all Aboriginal nations.

Please consider the environment before printing this page

From: Nicole Whittaker <Nicole.Whittaker@erm.com>

Sent: Monday, 30 September 2019 12:25 PM

To: Mitchell Clark <Mitchell.Clark@campbelltown.nsw.gov.au>; Mathew Misdale <Mathew.Misdale@campbelltown.nsw.gov.au>

Cc: Oliver Moore <Oliver.Moore@erm.com>; Heather McKay <Heather.McKay@erm.com>; Bishop, Casey <Casey.M.Bishop@south32.net>

Subject: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019

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

Regards,
Nicole

Nicole Whittaker
Senior EHS Consultant

ERM

Level 4 | 201 Leichhardt Street | Spring Hill QLD 4000

PO Box 1400 | Spring Hill QLD 4004

T +61 7 3007 8487 M +61 423 557 169

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From: [Georgia Dragicevic](#)
To: [Nicole Whittaker](#)
Cc: [Oliver Moore](#); [Heather McKay](#); [Bishop, Casey](#)
Subject: RE: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019
Date: Monday, 21 October 2019 11:02:49 AM
Attachments: [image001.png](#)

Hi Nicole,

Can you please have a look into noise. We have had recently reported exceedances.

Kind Regards,
Georgia

From: Nicole Whittaker <Nicole.Whittaker@erm.com>
Sent: Monday, 30 September 2019 12:25 PM
To: Georgia Dragicevic <Georgia.Dragicevic@planning.nsw.gov.au>
Cc: Oliver Moore <Oliver.Moore@erm.com>; Heather McKay <Heather.McKay@erm.com>; Bishop, Casey <Casey.M.Bishop@south32.net>
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From: [Mike Archer](#)
To: [Nicole Whittaker](#)
Subject: Fw: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019
Date: Wednesday, 23 October 2019 12:05:40 PM
Attachments: [image001.png](#)

Hi Nicole,

Contrary to my earlier advice, the Bulli Seam based CCC did not meet on 15 October. The meeting was postponed to last night. While I expect it is now too late to provide input to your audit, committee members endorsed my earlier advice to you and last night added the following concerns/comments:

The committee would have liked earlier contact and more time to provide comments and concerns. You did provide two weeks and I could have tried harder to canvass their views within that two week period, so I take some responsibility for this.

Remediation and rehabilitation of the North Cliff mine

And as a general comment delays in achieving some tasks and objectives.

Yours sincerely

Mike Archer

Independent Chair Illawarra Coal CCC

From: Mike Archer <mikearcherpr@hotmail.com>
Sent: Friday, 4 October 2019 11:21 AM
To: Nicole Whittaker <Nicole.Whittaker@erm.com>
Subject: Re: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019

Hi Nicole,

Thank you for the opportunity for the Illawarra Coal Community Consultative Committee (IC CCC), (Bulli Seam Operations) to contribute to the Independent Environmental Audit (IEA). The Committee will not meet again until the evening before your deadline. However the following are points of interest/ discussion/concern for committee members:

The ongoing effects of subsidence, especially in and around the township of Douglas Park and where mining occurs under roadways including the Hume Motorway.

The ongoing effects on air quality within the community from mine operations with particular emphasis on PM 2.5, PM 10.

Impacts from mine operations on water quality including the prospect of little or no ecological flow from Brennan's Creek Dam into the Georges River system; water discharges quality and both acute and chronic impacts on regional waterways generally.

Waste management, including management and rehabilitation of coal wash stockpiles.

Revegetation of Mountbatten property and restoration of Mountbatten Homestead and adjacent structures.

Noise from mine operations.

I will share your request and this list with IC CCC members on the evening of 15 October and update you on 16 October if there are adjustments or further items to be added.

Yours sincerely

Mike Archer
Independent Chairperson Illawarra Coal Community Consultative Committee.
0408 859 331

From: Nicole Whittaker <Nicole.Whittaker@erm.com>
Sent: Monday, 30 September 2019 12:25 PM
To: mikearcherpr@hotmail.com <mikearcherpr@hotmail.com>
Cc: Oliver Moore <Oliver.Moore@erm.com>; Heather McKay <Heather.McKay@erm.com>; Bishop, Casey <Casey.M.Bishop@south32.net>
Subject: South32 Illawarra Coal Bulli Seam Operations (BSO) Independent Environmental Audit 2019

Hi,

I am currently completing the Independent Environmental Audit (IEA) on the Conditions of Approval issued to South32 Illawarra Metallurgical Coal for the Bulli Seam Operations (BSO), PA 08_0150 and EPBC approval 2010/5350.

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

The attached Terms of Reference outlines the audit process, and also introduces the approved team of suitably qualified, experienced and independent experts who will be undertaking the audit. The site inspection will be completed over the period 21 -24 October 2019, therefore it would be appreciated if there are any concerns, areas of focus etc., they are raised by 16 October 2019.

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

Regards,
Nicole

Nicole Whittaker
Senior EHS Consultant

ERM

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