



# **Independent Environmental Audit**

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Invincible Colliery

**Castlereagh Coal**

**June 2016**

**3015.251**

# Independent Environmental Audit

## Invincible Colliery

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## Glossary and Abbreviations

AEMR	Annual Environmental Management Report
AHMP	Aboriginal Heritage Management Plan
AQMP	Air Quality Monitoring Program
BLALC	Bathurst Local Aboriginal Land Council
BMMP	Blast Monitoring and Management Plan
BOA	Biodiversity Offset Area
CC	Castlereagh Coal Pty Ltd (Shoalhaven Coal Pty Ltd)
CCC	Community Consultative Committee
CPESC	Certified Professional in Erosion and Sediment Control
CPP	Coal Processing Plant
Coalpac	Coalpac Pty Ltd
CRF	Complaint Report Form
DoP	NSW Department of Planning (now DPE)
DPE	NSW Department of Planning and Environment
DPI-Water	NSW Department of Primary Industries - Water
DP&I	NSW Department of Planning and Infrastructure (formerly DoP and now DPE)
DRE	NSW Department of Trade and Investment, Regional Infrastructure and Services - Division of Resources and Energy
EA	Environmental Assessment
EMP	Environmental Management Plan/Environmental Monitoring Program
EPA	NSW Environment Protection Authority
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPL	Environmental Protection Licence
ERSED	Erosion and Sediment Control
ESAP	Energy Savings Action Plan

ESCP	Erosion and Sediment Control Plan
GSSE	GSS Environmental Pty Ltd
IEA	Independent Environmental Audit
KMH	KMH Environmental Pty Ltd
LMP	Landscape Management Plan
MEM	Mining Engineering Manager
ML	Mining Lease
MOP	Mining Operations Plan
NGER	National Greenhouse and Energy Reporting
NMP	Noise Monitoring Program
NPW Act	National Parks and Wildlife Act 1974
NSW	New South Wales
OCE	Open Cut Examiner
PA	Project Approval
PIRMP	Pollution Incident Response Management Plan
POEO Act	Protection of the Environment Operations Act 1997
PM10	Particulate Matter 10 micrometres or less in diameter
RCMP	Road Closure Management Plan
ROM	Run-Of-Mine
UST	Underground Storage Tank
TSP	Total Suspended Particulate Matter
WMP	Water Management Plan

## Executive Summary

KMH Environmental Pty Ltd (KMH) was engaged by Castlereagh Coal Pty Ltd (CC) to conduct an Independent Environmental Audit (IEA) of the Invincible Colliery located at Cullen Bullen in New South Wales (NSW).

The IEA is required by Schedule 5, Condition 5 of Project Approval (PA) 07\_0127 and has been undertaken in accordance with the KMH Proposal dated 27 October 2015. Accordingly, it provides an assessment of the environmental performance of the project; assesses compliance with the project approval and licences; reviews the adequacy of environmental management plans and recommends measures to improve performance and plans as required.

The scope of the IEA is detailed in **Section 1** and includes all operations and infrastructure associated with Mining Lease 1635 and Mining Lease 1638 relevant to the current care and maintenance period from 1 May 2013 and 28 January 2016 (date of the site inspection conducted for this audit).

This is the second IEA to be conducted at the site and is the first audit since the site was purchased by Castlereagh Coal in early 2015. Prior to this (May 2013 to May 2015), the site was operated by Coalpac (partially under administration). The Auditor understands that Coalpac did not formerly submit the first audit report to DP&E.

This audit assesses compliance at the site across both Coalpac and CC operations during the audit period and as such, the compliance status and recommendations should be reviewed with this consideration.

The audit methodology is detailed in **Section 2** and is summarised below:

- Preliminary planning activities;
- Review of information and preparation of Compliance Registers;
- Site inspection and interviews;
- Consultation with key government agencies;
- Review of additional information provided after the site inspection; and
- Preparation of this audit report.

Site history and a description of the current care and maintenance operations are presented in **Section 3**.

**Section 4** outlines the environmental risk management framework employed at the site to address key issues with the potential to impact on the environment and local community. Environmental Management Plans/Monitoring Programs (EMPs) are in place to assist in the management and measurement of the environmental performance. An assessment of the adequacy of the plans is presented in **Table 4**. As the plans have not been revised since their development and relate to current monitoring program requirements, a number of improvements have been recommended.


Environmental performance is assessed in **Section 5**. A review of available information indicated that the site is generally compliant with environmental monitoring criteria and there have been no reportable incidents within the audit period. The site inspection identified a number of issues that need to be addressed and these are outlined in the compliance section of this IEA. Sedgman, the environmental representative engaged by CC, has implemented improved environmental reporting and is working on improvements to internal record keeping (via an intranet). CC has demonstrated a proactive and effective approach to community and government agency consultation.

Compliance with the Project Approval, Statement of Commitments, Environment Protection Licence 1095 and Mining Leases 1635 and 1368 is presented in **Section 6**. Detailed Compliance Registers including audit findings and recommendations are presented in **Appendix A to D**. A summary of non-

compliances is tabulated in **Table 6** and a summary of the issues and recommendations is provided in **Table 7**. Improvement opportunities were identified and recommendations are presented in **Table 8**.

This IEA has identified non-compliances with the project approval and licences. Recommendations are provided to assist Invincible Colliery improve environmental performance and achieve full compliance relevant to the care and maintenance operations. As stated previously, some recommendations relate to historical non-compliances and these recommendations have been provided to guide the auditee on how to achieve full compliance with a particular condition/requirement.

# Auditor Certification

Independent Audit Certification Form	
Development Name	
Development Consent No.	
Description of Development	
Development Address	
Operator	
Operator Address	
Independent Audit	
Title of Audit	
<p>I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report and to the best of my knowledge:</p> <ul style="list-style-type: none"> <li>• The audit has been undertaken in accordance with relevant approval condition(s) and in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits</li> <li>• The findings of the audit are reported truthfully, accurately and completely;</li> <li>• I have exercised due diligence and professional judgement in conducting the audit;</li> <li>• I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;</li> <li>• I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;</li> <li>• I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);</li> <li>• Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and</li> <li>• I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</li> </ul> <p>Note.</p> <p>a) The Independent Audit is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</p> <p>b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</p>	
Signature	
Name of Lead/Principal Auditor	Ken Holmes
Address	4 Baeckea Place, Frenchs Forest, NSW
Email Address	ken@kmh.com.au
Auditor Certification (if relevant)	Exemplar Global 14065
Date	7 June 2016

# 1.Introduction

KMH Environmental Pty Ltd (KMH) was engaged by Shoalhaven Coal Pty Ltd, trading as Castlereagh Coal Pty Ltd (CC), to conduct an Independent Environmental Audit (IEA) of the Invincible Colliery located at Cullen Bullen in New South Wales (NSW). The IEA was required by Schedule 5 Condition 5 of Project Approval (PA) 07\_0127. This IEA report details the audit process, presents the audit findings and provides recommendations that if implemented will facilitate improved compliance with environmental approvals.

## 1.1.Invincible Colliery

The Invincible Colliery is located in the town of Cullen Bullen approximately 120km west-northwest of Sydney and 25km north west of Lithgow, NSW. The site is located within the Lithgow Local Government Area (LGA). Land contained within Mining Leases 1635 and 1638 is either freehold land owned by Shoalhaven Coal Pty Ltd or Crown Land contained in the Ben Bullen State Forest.

Coal mining at Invincible Colliery commenced in 1905. Mining operations were solely underground until 1998 when open cut mining commenced. The recovery of coal using underground methods ceased in 1999 due to low coal prices (Sedgman, 2015a).

Invincible Colliery was previously owned and operated by Coalpac Pty Ltd (Coalpac), who purchased the site in 1988. The site was placed in care and maintenance from 2001 to 2006.

On 7 September 2006, the Department of Planning (DoP) approved an extension to the open cut mining operations. Under this approval, the mine was permitted to produce up to 350,000 tonnes per annum (tpa) of run-of-mine (ROM) coal for domestic markets (Sedgman, 2015a). Modifications to the 2006 approval were granted by the Department of Planning and Infrastructure (DP&I, formerly DoP) on 4 June 2007 and 6 December 2007 to permit use of the existing onsite washery facilities to process coal; as well as high wall mining of the Irondale Seam, and increase production levels up to 0.5 million tpa.

On 4 December 2008, PA 07\_0127 was granted by the DPI approving an extension to the open cut mine and an increase of production up to 1.2 million tpa ROM coal and 0.9 million tpa of saleable coal. The associated Mining Lease 1638 was granted by Department of Trade and Investment, Regional Infrastructure and Services – Division of Resources and Energy (DRE), on 6 November 2009 (Sedgman, 2015a). The approval was modified on 8 October 2010 to increase the saleable coal to 1.2 million tpa with a corresponding road transport increase. During operation, the mine supplied coal for local power stations at Mt Piper and Wallerawang and also for other domestic thermal coal customers.

Mining operations were formerly suspended on 14<sup>th</sup> February 2013 following approval by the DRE in accordance with Section 70(1)(a) of the Mining Act 1992 NSW (Sedgman, 2015a). Mining of the available approved area at Invincible Colliery was completed in April 2013. In May 2013, the Invincible Colliery was placed under care and maintenance and the remaining stockpiled ROM coal was progressively processed by Coalpac with the last of the coal being transported to customers in September 2013.

Coalpac was placed in voluntary administration on 18 October 2013. In March 2014 Coalpac submitted an application to the DP&I for approval of an extension to the open cut mining operations. In October 2014, Coalpac entered into liquidation as a result of the inability to gain the required planning approval.

Shoalhaven Coal Pty Ltd (trading as Castlereagh Coal) purchased the mine in early 2015. CC has been managing the site during the care and maintenance phase since May 2015 in accordance with the approved Care and Maintenance Mining Operations Plan (MOP) (Coalpac, 2013a).

Sedgman was engaged by CC as the appointed environmental representatives for the site during the care and maintenance period. Sedgman prepared an updated Care and Maintenance MOP (Sedgman, 2015a) on 17 December 2015. This updated MOP was approved by the DRE on 12 February 2016 for rehabilitation objectives, completion criteria and schedule of rehabilitation activities for the period until 29 September 2017.

PA 07\_0127 expires on 3 December 2016 and recommencement of mining operations is not currently planned prior to the expiration of the current approval. Sedgman advise that a proposal is currently being prepared for an extension to the open cut mining operations at Invincible Colliery and that this is proposed to be submitted to the Department of Planning and Environment (DPE, formerly DP&I) in 2016. The site will continue to be managed by CC until the recommencement of mining activities (pending approval) or a decision has been made to close the mine.

Invincible Colliery currently operates under the following consents, leases and licences:

- Planning Approval PA 07\_0127 (4 Dec 2008 - 3 Dec 2016);
- EPL No 1095 (28 February Anniversary date);
- Mining Lease 1635 (10 Sep 2009-10 Sep 2030);
- Mining Lease 1638 (6 Nov 2009-5 Nov 2030);
- Consolidation Coal Lease 702 (26 Nov 1991-24 Nov 2024);
- Exploration Licence 7517 (16 April 2010-16 April 2016);
- Groundwater Licence 10BL602586 (19 Feb 2013-18 Dec 2018); and
- Groundwater Licence 10BL602584 (24 Dec 2012-23 Dec 2017).

## 1.2. Objective of the Audit

The objective of the IEA is to review the environmental performance of the project by assessing compliance with the requirements of the following regulatory approvals:

- Conditions of approval issued with PA 07\_0127 (including the statement of commitments);
- Environmental Protection Licence (EPL) No. 1095; and
- Mining Leases (ML) 1635 and 1638.

To assess compliance, PA 07\_0127 requires that the IEA be carried out as per Schedule 5 Condition 5, as follows:

*By the end of November 2010, and every 3 years thereafter, unless the Director-General directs otherwise, the proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. This Audit must:*

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

*Note: This audit team must be led by a suitably qualified auditor and include experts in the fields of ecology and mine site rehabilitation.*

### 1.3. Scope of the Audit

The IEA was undertaken to meet the requirements of Schedule 5 Condition 5 of PA 07\_0127 and the brief outlined in the KMH Proposal (dated 27 October 2015). As such it provides an assessment of the environmental performance of the project by way of compliance with relevant environmental approval, licences and leases; provides a review of the adequacy of environmental management plans and provides recommendations to improve the environmental performance of the project.

This section details the scope of the audit including boundaries, activities and time period. **Section 2** provides detail on the audit process and methodology.

#### 1.3.1. Audit Boundaries and Audited Activities

The scope of the IEA includes all operations and infrastructure associated with ML 1635 and ML 1638 relevant to the current care and maintenance period from 1 May 2013 and 28 January 2016.

Care and maintenance activities assessed in this audit include: water management system and sediment control maintenance, environmental monitoring, rehabilitation maintenance and monitoring and general housekeeping.

Coal processing and transport activities were undertaken by Coalpac between May 2013 and September 2013 and these activities are therefore included in the audit period.

This audit assesses compliance at the site across both Coalpac and CC operations during the audit period as follows (note these dates are assumed change over dates):

- Coalpac – 1 May 2013 to 30 April 2015
- CC – 1 May 2015 to 28 January 2016

The compliance status and recommendations within this report should be reviewed in consideration of the change in ownership during the audit period. This has been noted in the Compliance Tables (Appendix A to D). Due to some activities occurring prior to the site inspection on 28<sup>th</sup> January 2016 and the unique circumstance that CC has limited access to Coalpac's records, compliance was not able to be verified in some instances. This is noted in the audit Compliance Register where appropriate.

Some recommendations provided in this audit relate to historical non-compliances and these recommendations have been provided to guide the auditee on how to achieve full compliance with a particular condition/requirement in recognition that it may be difficult for the auditee to obtain the required historical information.

#### 1.3.2. Audit Period

This IEA assesses compliance within the care and maintenance period from 1 May 2013 and 28 January 2016.

Where reports have been submitted to (Compliance Report) or approved by (Mining Operations Plan) the DRE during the reporting phase of the audit these have been noted in this report but compliance against these documents has not been assessed.

This is the second IEA to be carried out at the site in accordance with Schedule 5 Condition 5 of PA 07\_0127, which specifies audits be carried out every three years following the first audit that was due by end of November 2010. The first audit was conducted by GSS Environmental Pty Ltd (GSSE) in December 2010 (reported in February 2011). The Auditor understands that Coalpac did not formerly submit the first audit report to DP&E. The second IEA was due to be completed by December 2013. However on 31 October 2013, Coalpac submitted a request to the DP&I for extension for this audit on the grounds that it was placed into voluntary administration. Approval of this extension was not verified during this audit.

Following CC's purchase of the site, on 13 November 2015, Sedgman lodged an application to the DPE to postpone the IEA (the first IEA to be conducted by, CC) due to the fact that the mine has been on care and maintenance since 2013. The DPE advised on 9 December 2015, that as it has been 5 years since the last IEA was conducted, the DPE considers that the IEA should be undertaken in accordance with the requirements of the project approval. The DPE specified that the audit was to be commissioned and completed by the end of March 2016 and on this occasion is prepared to relax the requirement for the audit team to include experts in the fields of ecology and mine site rehabilitation.

In February 2016, Sedgman consulted with the DPE and subsequently directed the Auditor that the 2015 audit was to cover only the current care and maintenance period only. This is considered appropriate given the changeover in ownership, the non-operational status of the site and that access to the previous mine operators' records is limited.

#### **1.4. Audit Team**

In accordance with PA 07\_0127 Schedule 5, Condition 5 (a), the audit was conducted by a qualified, experienced and independent audit team. Ken Holmes was endorsed by the Director-General of the DPE on 16<sup>th</sup> December 2015. Ken Holmes is a Certified Lead Auditor (Exemplar Global) for Environmental Management Auditing, Environmental Management Systems Auditing and Compliance Auditing. Cumberland Ecology was engaged to undertake the ecological and restoration components of the IEA.

The audit team comprised of the following personnel:

- Ken Homes, Lead Auditor, KMH;
- Kelly Thomas, Auditor, KMH;
- Vanessa Orsborn, Ecologist, Cumberland Ecology.

#### **1.5. Structure of this Audit Report**

This report contains the following sections:

- Section 1 – Introduction
- Section 2 – Audit Process
- Section 3 – Site Facilities and Operations
- Section 4 – Environmental Risk Management
- Section 5 – Environmental Performance
- Section 6 – Statutory Compliance and Recommendations
- Section 7 – Conclusion
- Section 8 – Limitations

## 2. Audit Process

The IEA process and methodology are described in this section, and comprised the following key undertakings:

- Preliminary planning activities;
- Review of information and preparation of a compliance register (audit checklist);
- Site inspection and interviews:
  - Opening meeting
  - Site inspection
  - Interviews with key personnel
  - Review of relevant records
  - Close out meeting
- Consultation with key government agencies;
- Review of additional information provided after the site inspection; and
- Preparation of this audit report.

### 2.1. Preliminary Activities

Off-site planning for the site audit comprised:

- Initial discussions with Sedgman to organise the site inspection and interviews;
- Submission of a preliminary document/record request;
- Completion of an audit work plan and schedule; and
- Completion of a Safety, Health and Environment Work Method Statement.

### 2.2. Information Review and Compliance Register

Prior to the site inspection, KMH undertook a review of available documentation on the Coalpac and CC websites and documentation provided by Sedgman (in electronic format).

A compliance register was developed and this formed both the audit checklist used during the site inspection and is the compliance register presented in the Appendices of this report. The compliance register specifies the conditions of the PA 07\_0127, the EPL and Mining Leases 1635 and 1638.

### 2.3. Site Inspection and Interviews

The audit team conducted the site component of the Invincible Colliery IEA on 28 January 2016.

#### 2.3.1. Opening meeting

The opening meeting was held at the Invincible Colliery office. It was attended by Liz Clough (Environmental Representative, Sedgman), John Duffy (Mining Engineering Manager (MEM)) and Graham Goodwin (CC representative and former Coalpac employee) as well as the audit team comprising Ken Holmes (Lead Auditor), Kelly Thomas (Auditor) and Vanessa Orsborn (Ecologist).

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

#### 2.3.2. Site Inspection

Following the opening meeting, a general tour of the site was attended by John Duffy and the audit team, Ken Holmes, Kelly Thomas and Vanessa Orsborn. This included observation of the internal

haulage roads; the site facilities (office), open cut areas, rehabilitation areas, Aboriginal Heritage Site, mechanical workshop, wastewater collection system infrastructure, truck wheel wash, substation, septic tanks, and water management structures (including the Main Dam licenced discharge point).

Vanessa Orsborn and Graham Goodwin further inspected the Biodiversity Conservation Offset and rehabilitation areas, whilst John Duffy, Ken Holmes and Kelly Thomas inspected the workshop and chemical storage areas, the wastewater system, septic tanks, the vehicle washbay and the Coal Processing Plant area.

### 2.3.3. Site Interviews

Audit interviews were conducted with Liz Clough, John Duffy and Graham Goodwin during the site component of the IEA on 28 January 2016.

### 2.3.4. Document review

Records and documents were reviewed during the site interviews. Documents that were not available during the site component of the IEA were requested following the audit.

### 2.3.5. Close out meeting

The closing meeting was held at the Invincible Colliery office and was attended by Liz Clough, John Duffy and Graham Goodwin as well as the audit team comprising Ken Holmes, Kelly Thomas and Vanessa Orsborn. The audit team discussed the preliminary audit findings, identified information that would be required to provide verification of compliance and outlined the process for finalising the audit.

## 2.4. Agency Consultation

The Auditor contacted four government agencies that hold a regulatory role relating to the project to seek their views on the environmental performance of Invincible Colliery and to identify any potential issues of concern to focus the audit on. The following representatives were consulted:

- Chris Shultz, Senior Compliance Officer, Resource Assessments and Compliance, DPE
- Greg Kininmonth, Manager and Principal Inspector, Environment (Southern), and Chris Hammersley, DRE
- Darryl Clift, Head, Regional Operations Unit, Bathurst – NSW EPA
- John Galea – Water Regulation Officer, (Hunter/Sydney, South Coast), NSW Department of Primary Industries – Water (DPI-Water).

A summary of consultation with agency representatives is included as **Section 5.1**.

## 2.5. Review of Documentation

A number of documents were provided to the audit team following the site inspection, including the previous IEA (GSSE, 2011). Liz Clough and Graham Goodwin assisted with the collection of documentation following the audit. It was noted that some information was not available for review as CC does not have access to all of Coalpac's and administrators records. Where this occurred, and compliance with a condition was not able to be verified, this was identified in the audit findings. The key documents reviewed during this audit are listed in the Compliance Registers in **Appendix A to D** and the References Section.

## 2.6. Reporting

The compliance register was completed using notes from site interviews; review of appropriate Coalpac and CC documentation and observations recorded during the site inspection. The completed compliance registers are presented in **Appendix A to D**.

A summary of the non-compliances identified during this audit are provided in this IEA report. A review of the adequacy of strategies, plans and programs required under the PA 07\_0127 is also reported.

### 2.6.1.Audit Criteria

The audit criteria that was used to determine compliance with the conditions of approval, EPL and Mining Leases for this IEA is based on the definitions presented in the NSW Government, *Independent Audit Guideline, post-approval requirements for State significant developments*, October 2015, as presented in **Table 1**.

**Table 1: Compliance assessment criteria**

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

Risk levels for any non-compliances were identified consistent with **Table 2**.

**Table 2: Risk levels for non-compliances**

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

## 3. Site Facilities and Operations

A description of key site facilities and operations at the Invincible Colliery (including roles and responsibilities) are outlined in this section of the IEA. Plans showing the location of the mine, site facilities and environmental monitoring locations are provided within the Care and Maintenance MOPs (Coalpac, 2013a and Sedgman, 2015a); the 2013 and 2014 Coalpac Annual Environmental Management Reports (AEMRs) available on the Coalpac website and the 2015 AEMR available on the CC website. Photos of environmental aspects of the site, as taken during the inspection on 28 January 2016 are included in **Appendix E**.

### 3.1. Site Facilities

Site infrastructure including facilities and equipment at the Invincible Colliery includes the following:

- Coal Processing Plant (CCP) including conveyors, feeders, pumps, fans, bin gates, crusher, centrifuge, hydraulic systems, screens, bucket elevators and washery jig;
- Coal crushing facility;
- Two above ground diesel storage tanks (Transtank) and pumps, one in use, another drained down and secured;
- Water management system (storage dams) and associated pumps, pipes, tanks and related infrastructure;
- Septic systems;
- Wastewater collection system and associated bunding, catch drains, waste oil storage tank, oil/water separator, and waste oil collection tank;
- Buildings and structures (administration area, mechanical workshop and servicing pits);
- Electrical substation;
- Heavy and light vehicles;
- Waste storage areas;
- Environmental monitoring infrastructure (dust gauges, high volume air sampler, meteorological monitoring station);
- Truck wheel wash; and
- Underground fuel storage tank (identified post-site inspection and not in use).

### 3.2. Site Operations

Invincible Colliery is operating under care and maintenance. Mining operations have ceased and the site is being managed in a manner to ensure compliance is maintained, it remains in a safe and stable condition and to facilitate the recommencement of future mining activities. Care and maintenance activities approved under the Care and Maintenance MOP in operation during the audit period (Coalpac, 2013a) includes:

- Statutory inspections including mining, electrical and mechanical;
- Maintaining the water management system including sediment and erosion control;
- Ongoing environmental monitoring and reporting including air quality, water and noise;
- Maintenance of Biodiversity Offset areas;
- Weed management and feral animal control;
- The rehabilitation of approximately 6 ha of previously disturbed land and rehabilitation areas;
- Maintenance of regulatory compliance with PA 07\_0127, EPL 1095 and Mining Leases; and
- Ongoing stakeholder consultation.

The 2013, 2014 and 2015 AEMRs (Coalpac 2013b; Coalpac 2014a; Sedgman 2015b) report that the following activities were not undertaken during the care and maintenance period: exploration activity, land clearing, construction, demolition, and open cut or highwall mining operations.

The 2013 AEMR reported the CCP to have been shut down in January 2013. In addition it is reported that some coal processing and transport was undertaken by Coalpac within the audit period (between May 2013 to September 2013), however, no further operational works were undertaken after this time.

### 3.2.1. Roles and Responsibilities

During the care and maintenance period, the number of operational staff is limited to that required to maintain systems as operable, undertake statutory inspections, and oversee any rehabilitation and maintenance works that may be required. Roles currently involved in management of the Invincible Colliery are outlined in **Table 3**:

**Table 3: Care and Maintenance Roles and Responsibilities**

Role	Responsibilities
Mining Engineering Manager (MEM)	Ensure the Invincible Colliery is managed in accordance with the approved Care and Maintenance MOP.
Environmental Representative	Ensure that all activities comply with current Project Approvals, Licences, Leases and management plans, liaison with regulatory agencies, community consultation committee and site personnel.
Open Cut Examiner (OCE)	Fulfil the statutory requirements for the inspection and maintenance of all operations within the designated OCE District.
Electrical Engineer	Fulfil the statutory requirements for the inspection and maintenance of all electrical equipment, processes and supply.
Mechanical Engineer	Fulfil the statutory requirements for the inspection and maintenance of all mechanical equipment on site.

### 3.2.2. Inspections

In accordance with the Care and Maintenance MOP in operation during the audit period (Coalpac, 2013a), daily inspections are carried out as required by the CMHS Regulation. Inspections are undertaken by the OCE or MEM and include everything within the perimeter of the OCE District. At present, these inspections are daily, however, due to the care and maintenance status of the site, it is proposed to complete these inspections weekly in the updated Care and Maintenance MOP (Sedgman, 2015a).

The inspections are recorded on the OCE Designated District Inspection Report and cover: waste dumps, high walls, low walls, stockpiles; the water management system including dams, pipes and the Pit 205 storage area; erosion and sediment controls including drainage lines, silt traps, sumps and diversion bunds; road and access tracks; general security; buildings, maintenance workshop, crib hut, coal crushing facility and other mining related infrastructure.

### 3.2.3. Site Activities at the time of the Audit

At the time of the audit inspection on 28 January 2016, activities observed occurring on site included:

- MEM undertaking the OCE District Inspection and record;
- MEM inspecting and maintaining surface water management structures (pumping);
- Environmental Representative inspecting the site, specifically to review weeds; and
- Mechanical and electrical inspections of the Coal Preparation Plant.

The site Infrastructure observed at the time of the inspection is outlined previously in **Section 2.3.2**.

## 4. Environmental Risk Management

Environmental risk assessment and management at the Invincible Colliery during the audit period is provided for by the Care and Maintenance MOP (Coalpac, 2013a), the Environmental Management Strategy (EMS) (Coalpac, 2009a) and a number of issue specific Environmental Management Plans/Environmental Monitoring Programs (EMPs).

This section of the IEA outlines the environmental risk assessment and management approach, including an assessment of the adequacy of the environmental management plans and programs that are required under PA 07\_0127.

### 4.1. Environmental Risk Assessment

An environmental risk assessment process is in place to establish appropriate environmental control measures for high and medium risks and ensure that potential environmental impacts are minimised. The environmental risk assessment for Invincible Colliery is documented within the Care and Maintenance MOP (Coalpac, 2013a).

Following acquisition of the site by CC, Sedgman updated the risk assessment in May 2015, in accordance with the Sedgman HSEQ Risk Management Procedure. The current risk assessment used at the site is detailed within the updated Care and Maintenance MOP (Sedgman, 2015a), approved by the DRE on 12 February 2016. This plan details the identified risks, risk ratings and management controls that are deemed by Sedgman to be sufficient to manage the identified risks.

A further environmental risk assessment (aspects and impacts register) is documented within the Pollution Incident Response Management Plan (PIRMP) (Sedgman, 2016), to address the risks associated with potential environmental impacts from pollution incidents.

### 4.2. Environmental Management Strategy

An EMS was prepared for Invincible Colliery by Coalpac in November 2009 to satisfy the requirements of PA 07\_0127, Condition 1 of Schedule 5. The purpose of the EMS is to provide the strategic context for environmental management of the site. It aims to achieve this by outlining the:

- Statutory Requirements (Section 3);
- Environmental Management Responsibility, Personnel and Roles (Section 4);
- Environmental Performance – Management and Monitoring (Section 5);
- Information Dissemination and Reporting (Section 6);
- Complaints Receipt and Response Procedures (Section 7);
- Dispute Resolution (Section 8);
- Response to Non-Compliances (Section 9);
- Managing Cumulative Impacts (Section 10);
- Environmental Emergency Response (Section 11);
- Environmental Monitoring Program (Section 12).

A record verifying approval of the EMS by the DPE was not sighted during this IEA. Refer to the compliance register in **Appendix A** for further details and recommendations. A review of the adequacy of the EMS and subsequent recommendations is provided in **Table 4**.

### 4.3. Environmental Management Plans

To ensure the implementation and effectiveness of control strategies for identified environmental risks, a number of management plans have been developed in consultation with regulators and other relevant stakeholders. The EMPs for Invincible Colliery include:

- **Aboriginal Heritage Management Plan (Coalpac, 2009b);**
- **Air Quality Monitoring Program (Coalpac, 2009c);**
- **Blast Monitoring and Management Plan (Coalpac, 2009d);**
- Energy Savings Action Plan (Coalpac, 2009e);
- Environmental Monitoring Program (Coalpac, 200f);
- **Landscape Management Plan (Coalpac, 2009g);**
- **Noise Monitoring Program (Coalpac, 2009h);**
- Road Closure Management Plan (Coalpac, 2010);
- **Water Management Plan (Coalpac, 2009i); and**
- PIRMP (Sedgman, 2016).

The Invincible Colliery is managed in accordance with approved EMPs as required. Any variations required to the above EMPs are undertaken in consultation relevant stakeholders (Sedgman, 2016).

On 6<sup>th</sup> July 2009, the DoP approved the EMPs shown in bold and requested that Coalpac submit a revision to the Energy Savings Actions Plan (ESAP). Approval of the updated ESAP or other plans listed above was not able to be verified during this audit. The DoP also approved Coalpac's request for an alternative timetable for submission of the Mine Closure Plan (MCP), (required by PA 07\_0127 Schedule 3, Condition 34 (c)) until 30 June 2010. The Auditor understands that this plan was not submitted by Coalpac to the relevant agencies.

The Auditor has been advised that limited compliance related documentation was provided to CC at the time of purchase and that some key documents and records remain unavailable.

A review of the adequacy of the plans and subsequent recommendations is provided in **Table 4**.

### 4.4. Environmental Management Plan Adequacy Review

A brief review of the environmental management plans that are required by PA 07\_0127 has been undertaken as part of this IEA. In general, the plans align with the requirements of the project approval and EPL and are considered adequate for purpose, with the exceptions noted in **Table 4**. Where exceptions have been identified, recommendations for improvement have been provided.

It is noted that the majority of plans have not been revised since they were originally approved (for the former mining operations). The plans therefore do not reflect current (care and maintenance) operations. In reviewing the 2015 AEMR, the DPE indicated<sup>1</sup>, that the management plans and programs for Invincible Colliery will be revised and updated during the approvals process prior to commencement of mining operations.

Throughout **Table 4** the Auditor has made recommendations regarding the revision of those plans to meet the requirements of the Approval. The Auditor understands that the application for Approval to recommence mining is in progress, therefore as noted by the DPE, the Auditor recommends that revision of the management plans be undertaken in conjunction with the Approval process so that the plans reflect the future Approved operations.

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<sup>1</sup> DPE correspondence to the MEM (dated 22 February 2016) provided to the Auditor following the audit.

**Table 4: EMS and EMP Adequacy Review Findings**

Plan	Observations and Recommendations
Environmental Management Strategy	<p><b><u>Observation</u></b></p> <p>An EMS was prepared for Invincible Colliery by Coalpac in November 2009 to satisfy the requirements of PA 07_0127, Condition 1 of Schedule 5. Approval of the EMS by the DPE could not be verified.</p> <p>The EMS generally includes the requirements of Project Approval 07_0127 Schedule 5, Condition 1. However, Condition 1(e) requires the EMS to include an environmental monitoring program incorporating all monitoring requirements of the Project Approval. Section 12 of the EMS states that Environmental Monitoring Programs have been prepared pursuant to Schedule 3, Condition 6, 10, 13 and 30 of PA 07_0127. This relates to noise, air, water and blast monitoring only and does not include the requirement to monitor waste generation (Schedule 3, Condition 43), rehabilitation (Schedule 3, Condition 35), and greenhouse and energy efficiency (Schedule 3, Condition 42).</p> <p>Section 12 of the EMS states that the included monitoring plans have been consolidated into a single document as described within Appendix 2 of the EMS. However, the plans included in Appendix 2 of the EMS could not be verified as Appendix 2 is not attached to the EMS (on the CC website). A separate Environmental Monitoring Program (Coalpac, 2009f) is provided on the CC website. The Environmental Monitoring Program states that it has been developed as required by Schedule 5, Condition 1 (e), however, the date of this report (December 2009) does not indicate that it is the Appendix 2 of the EMS (November 2009). It does not include a waste monitoring program. Inclusion of the current Environmental Monitoring Program within the EMS is required to meet the conditions of the Project Approval (see Compliance Register in <b>Appendix A</b>). A full copy of the EMS should be uploaded to the website and the EMS should be updated to reference the EMP.</p> <p>PA07_0127 Schedule 5, Condition 1(e)d requires the EMS to describe the procedures that would be implemented to respond to emergencies. An Emergency Response Procedure is provided in Section 11, however it does not reference the PIRMP and it is recommended that this be updated.</p> <p>PA 07_0127 Schedule 5, Conditions 9 and 10 require publishing of the EMS, EMPs, AEMRs and monitoring results on the CC website. In addition, a comprehensive running summary of monitoring results is required to be maintained on the website. There is also a requirement under the Protection of the Environment Operations (POEO) Act 1997 to publish on the website all monitoring data undertaken by requirement of a licence condition, within 14 days of obtaining the data. Section 6 of the EMS should be updated to state these requirements.</p>

Plan	Observations and Recommendations
Environmental Management Strategy	<p><b><u>Recommendations</u></b></p> <ul style="list-style-type: none"> <li>• Consult with the DPE to verify whether the Environmental Management Strategy was approved in accordance with PA 07_0127 Schedule 5, Condition 1(a).</li> <li>• Review and update the EMS to ensure it includes all current monitoring programs that are required by PA 07_0127 Schedule 5, Condition 1(e). As a minimum, it should reference the current Environmental Monitoring Program (ensuring also that this document is reviewed for relevancy).</li> <li>• Upload a full copy of the Environmental Management Strategy to the website (including Appendix 1 and 2).</li> <li>• It is recommended that CC review and update the EMS to include the following: <ul style="list-style-type: none"> <li>- reference to the Pollution Incident Response Management Plan (PIRMP) and incident reporting requirements of the EPL; and</li> <li>- requirement to publish the EMS, EMPs, AEMRs, and a comprehensive running summary of monitoring results on the website.</li> </ul> </li> </ul>
Environmental Monitoring Program	<p><b><u>Observation</u></b></p> <p>An Environmental Monitoring Program was prepared in December 2009 in accordance with PA 07_0127 Schedule 5, Condition 1 (e). Approval of the EMS by the DPE could not be verified.</p> <p>Table 1 of the EMP provides a detailed list of the monitoring program requirements outlined in the Project Approval, including meteorology, air quality, noise, blasting, surface water, groundwater, rehabilitation offset management, waste, greenhouse gas and energy efficiency, coal transport and auditing, reporting and review. With the exception of meteorology and waste, for each environmental issue, the plan identifies the impact assessment criteria, the monitoring requirements and management measures from the statement of commitments. The EMP specifies a review process to ensure that it remains relevant and representative of the current status of the Invincible Colliery operations; however, the plan has not been revised since it was first produced and the site has gone into care and maintenance.</p> <p>Individual Environmental Management Plans relevant to environmental monitoring requirements are referenced in the EMP; however there was some inconsistency noted between Sections 1.4 and 12.1.1 in this respect and this requires updating. A review of the adequacy of each of these plans is provided in this Table 4. Where recommendations are made to update these individual plans, the EMP should also be reviewed to ensure consistency.</p> <p>Other specific issues that should be considered when reviewing the plan are outlined in the recommendations.</p>

Plan	Observations and Recommendations
Environmental Monitoring Program	<p><b><u>Recommendation</u></b></p> <ul style="list-style-type: none"> <li>Consult with the DPE to determine whether the Environmental Management Plan was approved in accordance with PA 07_0127 Schedule 5, Condition 1(e).</li> <li>Review and update the EMP to reflect to ensure it reflects all current monitoring programs that are required by PA 07_0127 Schedule 5, Condition 1(e).</li> <li>It is recommended that CC review and update the EMP, in consideration of the following: <ul style="list-style-type: none"> <li>Check consistency with each issue specific environmental monitoring/management plan and update as required.</li> <li>Include the environmental monitoring report requirements specified in EPL conditions M1.1 to M1.3.</li> <li>Include detailed waste monitoring requirements to ensure consistency in AEMR waste reporting across reporting years.</li> <li>Specify the incident reporting requirements of the EPL within Section 12.2.1 and reference the PIRMP.</li> <li>Specify the environmental monitoring reporting requirements of PA 07_0127 Schedule 5, Conditions 9 and 10 within Section 12.2.2.</li> <li>Update mapping to accurately identify the water quality monitoring locations.</li> <li>Remove reference to EPL licenced discharge point 1, as this has since been removed from the EPL.</li> <li>Update references to the Billabong and Hillview properties and reduction in noise monitoring location from five to three.</li> <li>Identify the approval from the DPE and EPA regarding monitoring of Total Suspended Particulate (TSP) Matter via calculation from measured PM10 data, as opposed to direct monitoring using a high volume air sampler, as required by the Project Approval and EPL.</li> </ul> </li> <li>Ensure regular reviews of the Environmental Monitoring Program are undertaken as specified in Section 12.4 of the plan including during the care and maintenance period.</li> </ul>
Aboriginal Heritage Management Plan	<p><b><u>Observation</u></b></p> <p>An Aboriginal Heritage Management Program (AHMP) was prepared by Coalpac in June 2009 in accordance with PA 07_0127 Schedule3, Condition 40. The plan was approved by the DoP in July 2009. The plan was reported to have been developed in consultation (by telephone) with the Bathurst Local Aboriginal Land Council (BLALC) (not verified during this audit). The plan incorporates the required elements of Condition 40 of the Project Approval, noting that a detailed salvage and collection protocol will be developed following identification and OEH approval for the removal of any Aboriginal objects found within the project boundaries.</p> <p>The AHMP identifies one Aboriginal heritage site within proximity to the area approved by PA 07_0127, but no sites within the area itself. Section 6 of the AHMP requires the OS1 to be fenced and sign posted. During the site inspection, the Auditor observed that the heritage site was not easily accessible and fencing had been installed. It was reported that eight warning/notice signs had been erected around the site, however these were not visible during the audit. It is recommended that the AHMP be updated to include role and responsibilities for these inspecting the site regularly to check these controls.</p> <p>Section 3.2 of the AHMP provides a summary of the legislation relevant to the protection of indigenous heritage, including where the National Parks and Wildlife (NPW) Act 1974 provides statutory protection vs areas approved under Part 3A of the Environmental Planning and Assessment (EP&amp;A) Act 1979, to be managed in accordance with obligations in the Statement of Commitments. The AHMP does not specify all obligations of the Statement of Commitments and it does not clearly identify that Invincible OS1, is subject to the protections of the NPW Act and should be updated.</p>

Plan	Observations and Recommendations
Aboriginal Heritage Management Plan	<p>Section 6.1.1 specifies that inductions with an Aboriginal Heritage Component will be delivered to all staff and contractors. Training and induction records were not sighted for the audit period. As ground disturbing maintenance works are proposed during the care and maintenance period, cultural heritage awareness inductions should continue (including the Cultural Heritage Awareness Induction Course required by the Statement of commitments) and records of all training should be kept. It is recommended that the plan be updated to include requirements to maintain records of Aboriginal heritage training.</p> <p><b><u>Recommendation</u></b></p> <ul style="list-style-type: none"> <li>It is recommended that CC review and update the AHMP to include the following: <ul style="list-style-type: none"> <li>Roles and responsibilities for implementation of management actions.</li> <li>Inspection schedules to ensure protective measures are in place; any unauthorised disturbance is identified and reported and to enable implementation of water management measures to minimise flooding impacts.</li> <li>Obligations within the Statement of Commitments (e.g. manage drainage in the vicinity of the site, conduct a Cultural Heritage Awareness Induction etc.) and how these will be achieved.</li> <li>Identification that the known Aboriginal heritage site, Invincible OS1, is outside of the Part 3A approved project area as shown on Figure 2 and is subject to the protections of the NPW Act 1974. The site induction (Section 6.1.1) should identify the obligations under the NPW Act.</li> <li>Updated Figures within the AHMP (and all other management plans) to clearly identify the location of Invincible OS1, with respect to the approved project area, and other areas of the site used for site access, water management etc.</li> <li>Requirement to maintain records of Aboriginal heritage induction and training.</li> <li>Procedure for periodic review and revision of the AHMP.</li> </ul> </li> <li>Ensure the EPA and BLALC is consulted during any future revisions to the AHMP, and written evidence of consultation is retained where possible.</li> </ul>
Air Quality Monitoring Program	<p><b><u>Observation</u></b></p> <p>An Air Quality Monitoring Program (AQMP) was prepared by Coalpac in June 2009 in accordance with PA 07_0127 Schedule 3, Condition 10. The plan was approved by the DoP in July 2009. The plan incorporates a review process however has not been revised since this time.</p> <p>The AQMP outlines the statutory requirements of the Project Approval and EPL and outlines an air quality monitoring program that aims to demonstrate compliance with these requirements. The plan provides a protocol to be followed in the evaluation of results and reporting and contingency measures in the event of non-compliance. Protocols for complaints management and dispute resolution are also included. It is noted that the plan does not include management measures from the Statement of Commitments (as per the relevant section of the EMP).</p> <p>With respect to the monitoring program, PA 07_0127 Schedule 3, Conditions 8 and 9 and the EPL requires monitoring of TSP Matter at IDD1 (EPA point 3) weekly in accordance with AS/NZS 3580:2003 using a High Volume Air Sampler (HVAS). The AQMP indicates that a determination was made to estimate TSP from PM10 data that is collected using the HVAS at this location. Approval from the DPE or EPA regarding this methodology has not been sighted. Given that it remains a condition of the EPL, this is a non-compliance (refer to Compliance Register in <b>Appendix C</b>) that requires investigation. In addition, other specific issues that should be considered when reviewing the plan are outlined in the AQMP recommendations.</p>

Plan	Observations and Recommendations
Air Quality Monitoring Program	<p><b><u>Recommendation</u></b></p> <ul style="list-style-type: none"> <li>As per recommendations in the Compliance Register (<b>Appendix C</b>), consult with the DPE and EPA regarding the sampling method for measurement of TSP at IDD1 (EPA point 3). If the change in sampling method for TSP is accepted by the relevant agencies, document the methodology for estimation of TSP from PM10 data and ensure this is recorded within the monthly air quality monitoring reports.</li> <li>It is recommended that CC review and update the AQMP, in consideration of the following: <ul style="list-style-type: none"> <li>Include the environmental monitoring report requirements specified in EPL conditions M1.1 to M1.3 in Section 9.5.1.</li> <li>Include the following monitoring report requirements in Section 9.5.1: the method for estimation of TSP from PM10 data; reporting on compliance with the 'maximum increase in deposited dust level'; and the laboratory report.</li> <li>Specify the incident reporting requirements of the EPL and reference the PIRMP within Section 9.5.3.</li> <li>Update mapping to accurately identify the meteorological monitoring station.</li> <li>Update the impact assessment Table 3 heading in Section 4.2.2, to 'Long term impact assessment criteria/acquisition criteria for deposited matter' to cover part of Project Approval Condition Schedule 3-9.</li> <li>Section 4.3 incorrectly references Tables 1 to 3 and should instead reference acquisition criteria shown in Tables 1, 3 and 4. Currently no references to Table 4. These relate to Project Approval Condition Schedule 3-9.</li> <li>Section 8 references EPL conditions that are no longer current.</li> <li>Add measurement of humidity to Table 11.</li> </ul> </li> <li>Ensure the EPA is consulted during any future revisions to the AQMP, and evidence of consultation is retained.</li> <li>Consider including site management measures in the AQMP as is outlined in the air quality section of the Environmental Monitoring Program.</li> <li>Ensure regular reviews of the AQMP are undertaken as specified in Section 12 of the plan including during the care and maintenance period.</li> </ul>
Blast Monitoring and Management Plan	<p><b><u>Observation</u></b></p> <p>A Blast Monitoring and Management Plan (BMMP) was prepared by Coalpac in June 2009 in accordance with PA 07_0127 Schedule 3, Condition 30. The plan was approved by the DoP in July 2009. The plan includes the requirements as outlined in Schedule 3, Condition 30.</p> <p>Blasting ceased at the site in December 2012 and therefore no blasting was undertaken during the audit period. No blasting is proposed to be carried out during the care and maintenance period. The adequacy of the technical aspects of the BMMP plan was not undertaken and is not required at this stage. Review of the plan is required prior to the commencement of any future mining activities.</p> <p><b><u>Recommendation</u></b></p> <ul style="list-style-type: none"> <li>Prior to the commencement of future mining activities (pending approval), review and update the BBMP to reflect the nature and scale of the proposed operations. Undertake any required consultation with relevant agencies and the Community Consultative Committee (CCC) as part of the review process.</li> </ul>

Plan	Observations and Recommendations
Energy Savings Action Plan	<p><b><u>Observation</u></b></p> <p>An ESAP was prepared by Coalpac in June 2009 in accordance with PA 07_0127 Schedule 3, Condition 42. The plan was submitted to the DoP on 30 May 2009. The DoP requested a revision to the plan to ensure that it incorporated the assessment and monitoring of greenhouse gas emissions from Invincible Colliery's open cut and auger mining operations in accordance with Schedule 3, Condition 42 (b and c).</p> <p>The ESAP available on the Coalpac website did not include a program to assess or monitor greenhouse gas emissions, and therefore this plan has not been approved. This was noted as a non-conformance in the Compliance Register (<b>Appendix A</b>).</p> <p>As the site is currently in care and maintenance and there is limited energy use associated with the operations, revision of this plan is considered to be most appropriate upon approval for future mining activities at the site. As such, a full review of adequacy of this plan has not been undertaken as part of this audit.</p> <p><b><u>Recommendations</u></b></p> <ul style="list-style-type: none"> <li>• Consult with the DPE to determine whether the ESAP was approved in accordance with PA 07_0127 Schedule 3, Condition 42.</li> <li>• If required, submit to the DPE a revised plan upon approval to continue mining operations. The revised plan is to ensure it meets all requirements of the Project Approval. Ensure the current ESAP is uploaded to the website.</li> </ul>
Landscape Management Plan	<p><b><u>Observation</u></b></p> <p>A Landscape Management Plan (LMP) was prepared by Coalpac in June 2009 as required by PA 07_0127 Schedule 3, Condition 34. The plan was approved by the DoP in July 2009. The plan was required to be developed by a suitably qualified expert whose appointment was approved by the DPE in consultation with relevant agencies (not verified during audit).</p> <p>In accordance with the Project Approval, the LMP is to include: a Rehabilitation and Offset Management Plan and Mine Closure Plan (MCP).</p> <p>The Rehabilitation and Offset Management Plan specifications are detailed in Schedule 5, Condition 35 and are considered by Cumberland Ecology (<b>Appendix F</b>) to be adequately outlined in the LMP.</p> <p>The MCP was required to be submitted to the DoP by 30 June 2010 (via letter dated 6 July 2009). The MCP was not been prepared by Coalpac by this date and this is recorded as a non-compliance (refer to the Compliance Register in <b>Appendix A</b>). It is recommended that an extension to the alternative timetable be sought from the DPE, inconsideration of the proposal to extend mining operations at the site.</p> <p>The information in the LMP is considered to be generally adequate for the purpose. However, site inspection confirmed that the LMP was not implemented according with all performance criteria set out in the plan. Therefore it is recommended that the LMP be reviewed to ensure that the rehabilitation monitoring methods better assess performance against the stated criteria.</p>

Plan	Observations and Recommendations
Landscape Management Plan	<p><b><u>Recommendations</u></b></p> <ul style="list-style-type: none"> <li>As per recommendations in the Compliance Register (<b>Appendix A</b>), consult with the DPE to obtain approval for an alternative timetable for the submission of a Mine Closure Plan, in consideration of the proposal to extend mining operations.</li> <li>It is recommended that CC consider revising the LMP to include: <ul style="list-style-type: none"> <li>Rehabilitation monitoring methods that better assess performance against their stated criteria.</li> <li>Consistent monitoring methods across the BOA and rehabilitation areas to enable comparison between the two areas.</li> </ul> </li> <li>Ensure the LMP, when revised, is revised by a suitably qualified expert whose appointment has been approved by the DPE. Any revision to the plan should be undertaken in consultation with Lithgow City Council and DPI-Water.</li> </ul>
Noise Monitoring Program	<p><b><u>Observation</u></b></p> <p>A Noise Monitoring Program (NMP) was prepared by Coalpac in June 2009 in accordance with PA 07_0127 Schedule 3, Condition 6. The plan was approved by the DoP in July 2009. The plan incorporates a review process however has not been revised since this time.</p> <p>The NMP outlines the statutory requirements of the Project Approval and outlines a noise monitoring program that aims to demonstrate compliance with these requirements. The NMP includes a brief reference to the noise criteria within the EPL, however, does not include the meteorological conditions for the EPL criteria in the Plan. Although the criteria are similar in value, there are different meteorological conditions that have been adopted by the PA and the EPL that trigger when this criteria applies. To date, the Global Acoustic monitoring reports have been reporting the noise monitoring results against the meteorological conditions specified in the PA only and not the EPL. Therefore it is difficult to determine EPL compliance. The NMP should be updated to include the EPL noise criteria and other location and reporting requirements of the EPL as specified in L4.1 to L4.3 and M1.1 to M1.3.</p> <p>The plan provides a protocol to be followed in the evaluation of results and reporting and contingency measures in the event of non-compliance. Protocols for complaints management and dispute resolution are also included. It is noted that the plan does not include management measures from the Statement of Commitments (as per the relevant section of the EMP). Roles and responsibilities do not match with current operational staff e.g. Mining Engineering Manager.</p> <p>With respect to the monitoring program, the NMP specifies 5 monitoring locations. Since the plan was produced, two properties, Hillview and Billabong were acquired and therefore these locations are no longer monitored. The NMP, including Figure 1 should be updated to reflect the current monitoring program.</p> <p>The Statement of Commitments specifies the requirement for both attended and unattended quarterly noise monitoring for the life of the mine. No unattended noise monitoring is carried out and the reasoning is outlined within the NMP. In accordance with the Compliance Register (<b>Appendix B</b>), it was recommended that CC seek confirmation from the DPE to amend the noise monitoring program as such.</p> <p>In addition, other specific issues that should be considered when reviewing the plan are outlined in the recommendations.</p>

Plan	Observations and Recommendations
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Noise Monitoring Program	<p><b><u>Recommendation</u></b></p> <ul style="list-style-type: none"> <li>It is recommended that CC review and update the NMP, in consideration of the following: <ul style="list-style-type: none"> <li>Ensure it reflects current monitoring locations.</li> <li>Include EPL noise criteria and other location and reporting requirements of the EPL as per L4.1 to L4.3.</li> <li>Include the environmental monitoring report requirements specified in EPL conditions M1.1 to M1.3.</li> <li>Specify the incident reporting requirements of the EPL and reference the PIRMP.</li> <li>Update roles and responsibilities to reflect current roles.</li> <li>Check relevancy of control measures outlined in Section 10.2 (i.e. 15 high bund wall).</li> </ul> </li> <li>Ensure the EPA is consulted during any future revisions to the NMP, and evidence of consultation is retained.</li> <li>Consider including site management measures in the NMP as is outlined in the noise section of the Environmental Monitoring Program.</li> <li>Ensure regular reviews of the NMP are undertaken as specified in Section 8.11 of the plan including during the care and maintenance period.</li> <li>Quarterly noise monitoring reports to provide a statement of compliance with respect to EPL conditions L4.1 to L4.3. The monitoring reports are to ensure an assessment against the meteorological conditions in the EPL is undertaken.</li> </ul>
Road Closure Management Plan	<p><b><u>Observation</u></b></p> <p>A Road Closure Management Plan (RCMP) was prepared by Coalpac in November 2010 in accordance with PA 07_0127 Schedule 3, Condition 25. Condition 25 requires the preparation and implementation of a RCMP to the satisfaction of the RTA and I&amp;I NSW prior to blasting within 500m of any public road. Approval of the RCMP by RMS and I&amp;I NSW could not be confirmed.</p> <p>Blasting ceased at the site in December 2012 and therefore no blasting was undertaken during the audit period. No blasting is proposed to be carried out during the care and maintenance period.</p> <p>The adequacy of the technical aspects of the RCMP plan was not undertaken and is not required at this stage. Review of the plan is required prior to the commencement of any future blasting activities.</p> <p><b><u>Recommendation</u></b></p> <ul style="list-style-type: none"> <li>Prior to the commencement of future blasting activities (pending approval), review and if required update the RCMP. Undertake any required consultation with relevant agencies as part of the review process and maintain a record of consultation.</li> </ul>

Plan	Observations and Recommendations
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<p>Water Management Plan</p>	<p><b><u>Observation</u></b></p> <p>A Water Management Plan (WMP) was prepared by Coalpac in June 2009 in accordance with PA 07_0127 Schedule 3, Condition 13. The plan was approved by the DoP in July 2009. The WMP includes the requirements of Schedule 3, Condition 13, including a site water balance, erosion and sediment control (ERSED) plan, a surface water monitoring program, a groundwater monitoring program and a surface and groundwater response plan.</p> <p>Section 8 of the WMP provides an Erosion and Sediment Control Plan (ESCP). Erosion was observed on site during the site inspection and has been noted by others during recent inspections of the rehabilitation areas (Kleinfelder, 2015), indicating that review and maintenance of controls is required. The implementation of the plan is recorded as not compliant (refer to the Compliance Register in <b>Appendix B</b>).</p> <p>Section 10 of the WMP references a Groundwater Monitoring Program. The plan includes baseline data, groundwater impact assessment criteria and trigger levels; however it lacks a detailed monitoring program that is required to assess groundwater inflows to the open cut mining operations and impacts of the development on the regions water resources. The 2014 and 2015 AEMRs report that groundwater monitoring is being undertaken from up and downgradient wells, however this monitoring is not detailed in the WMP. Inclusion of these details is required to enable compliance with the Project Approval (refer to Compliance Register in <b>Appendix A</b>).</p> <p>The WMP lacks clear definition and location of the monitoring locations. All water monitoring locations should be clearly identified and shown on a site plan. In addition, the WMP does not specify monitoring report requirements (similar to that provided in the AQMP). This is required to ensure that the conditions of the EPL (M1.1 to M1.3) and the Project Approval are met (e.g. visual inspections for ferrous iron oxidation or other contamination).</p> <p><b><u>Recommendations</u></b></p> <ul style="list-style-type: none"> <li>• Review and update the WMP in consideration of the following: <ul style="list-style-type: none"> <li>- Update the ESCP with reference to the latest guidelines for <i>Managing Urban Stormwater: Soils and Construction, Volume 2E Mines and Quarries</i> (Blue Book).</li> <li>- Specify environmental monitoring report requirements, including those specified in EPL conditions M1.1 to M1.3 and the results of visual inspections (ferrous iron/contamination).</li> <li>- Specify the incident reporting requirements of the EPL and reference the PIRMP.</li> <li>- Update mapping to accurately identify the water monitoring locations.</li> <li>- Remove references to EPL conditions that are no longer current, for example Licenced Discharge Point 1 (including monitoring of volume).</li> <li>- Specify the groundwater monitoring program in accordance with Project Approval requirements.</li> <li>- Clarify the analytical testing requirements for Licenced Discharge Point LDP2.</li> </ul> </li> <li>• Ensure regular reviews of the WMP are undertaken as specified in Section 13 of the plan. <ul style="list-style-type: none"> <li>- Ensure the DPI-Water is consulted during any future revisions to the Water Management Plan, and evidence of consultation is retained.</li> </ul> </li> </ul>
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## 5. Environmental Performance

The environmental performance of the Invincible Colliery is discussed in this section of the IEA and has been assessed by way of consultation with agencies; review of agency correspondence, complaints, incidents, Annual Returns and AEMRs; and inspection of the maintenance of controls and site rehabilitation. Compliance with statutory requirements, recommendations and improvement opportunities are outlined in **Section 6**.

### 5.1. Consultation with Government Agencies

Consultation was undertaken with representatives of four government agencies to seek their understanding of the environmental performance of the site relevant to the audit period. Feedback on this consultation is presented in **Table 5**.

**Table 5: Government Agency Consultation Feedback**

Agency Contact	Feedback
DPE	<p><b><u>Environmental and Community Issues</u></b></p> <ul style="list-style-type: none"> <li>No significant environmental or community issues.</li> </ul> <p><b><u>Environmental Performance</u></b></p> <ul style="list-style-type: none"> <li>Rehabilitation of the steep slope at the northern end of the site has not been successful and needs to be addressed. It is unstable and does not meet the requirements of the Landscape Management Plan. Other areas of rehabilitation looked poor and need to be addressed.</li> <li>There is a UST on site.</li> <li>Other than that, no issues to be addressed.</li> </ul> <p><b><u>Complaints and Incidents</u></b></p> <ul style="list-style-type: none"> <li>The AEMRs report three complaints in 2013 and none in 2014 or 2015.</li> <li>No incidents reported.</li> </ul> <p><b><u>Compliance with Statutory Requirements</u></b></p> <ul style="list-style-type: none"> <li>No fines or notices issued relating to non-compliances.</li> <li>No outstanding compliance actions or issues.</li> <li>In 2015, the DPE undertook a risk review of the Invincible Colliery comprising a document review and a site inspection on 15<sup>th</sup> October. The desktop review identified the following relevant to the audit period: <ul style="list-style-type: none"> <li>One non-compliance in 2014 during Coalpac ownership: pH exceedance in discharge water at LDP2 in 2014. <i>The Auditor notes that this issue is regulated by the EPA.</i></li> <li>High dust deposition readings in 2014 at dust depositional gauge 5 (IDDG5) during Coalpac ownership. Coalpac submitted a report to the DPE stating that the result was unlikely to be a result of site operations as it was non-operational at the time. The DPE was satisfied with the way this was resolved.</li> <li>A noise monitoring exceedance in Cullen Bullen West and Centre in June 2015. As the mine was not operational at this time, the DPE considered that this is unlikely to be a result of site operations. <i>The Auditor notes that for June 2015 wind speeds of greater than 3m/s were observed during the monitoring event and therefore the acoustic consultant deemed that the assessment criteria did not apply. Noise monitoring was considered by Global Acoustics as being in compliance with all relevant noise impact assessment criteria.</i></li> </ul> </li> </ul>

	<p><b><u>Communication and Reporting</u></b></p> <ul style="list-style-type: none"> <li>The DPE requested the IEA be completed after it was postponed a number of times during the care and maintenance period. This IEA satisfies this requirement.</li> <li>The DPE requested that a copy of the 2015 AEMR be submitted to both DPE and DRE as this is a condition of the Project Approval. The AEMR has been provided and is currently with the DPE for review.</li> <li>CC is working to the existing management plans and reviewing current processes following establishment at the site in early 2015. The DPE understands that the plans will be updated if the modification to continue mining operations is approved.</li> </ul> <p><b><u>IEA Requirements</u></b></p> <ul style="list-style-type: none"> <li>The NSW Government <i>Independent Audit Guideline</i> (October 2015) was identified and the DPE requested that the Auditor speak with the Assessments Branch regarding the audit scope. The Assessments Branch was contacted by the Auditor who indicated that the audit scope was to be confirmed, however, a response was not received by the Auditor at the time of reporting. Sedgman contacted the DPE and further advised the Auditor that the audit period is to remain as per the KMH proposal dated 27 October 2015 (i.e. care and maintenance period only).</li> </ul>
DRE	<p><b><u>Environmental and Community Issues</u></b></p> <ul style="list-style-type: none"> <li>No significant environmental or community issues.</li> </ul> <p><b><u>Environmental Performance</u></b></p> <ul style="list-style-type: none"> <li>Weed management requires addressing.</li> </ul> <p><b><u>Complaints and Incidents</u></b></p> <ul style="list-style-type: none"> <li>No complaints made to the DRE.</li> <li>No incidents reported.</li> </ul> <p><b><u>Compliance with Statutory Requirements</u></b></p> <ul style="list-style-type: none"> <li>No fines or notices issued relating to non-compliances.</li> <li>No outstanding compliance issues or actions.</li> </ul> <p><b><u>Communication and Reporting</u></b></p> <ul style="list-style-type: none"> <li>DRE is satisfied with the communication and reporting of compliance status.</li> <li>CC and Sedgman demonstrate good and proactive communication and keep the DRE informed. This was also demonstrated by Coalpac and in particular Coalpac's former Environment Officer, Ben Eastwood.</li> <li>The 2013 Care and Maintenance MOP (Coalpac, 2013a) is current for the audit period. The DRE had received a copy of the updated 2015 Care and Maintenance MOP (Sedgman, 2015a). Care and Maintenance MOPs are generally approved for a period of 2 years and the 2013 MOP was extended until the 2015 version is approved.</li> <li>Annual reports (covering Geology) and AEMRs are submitted. New reporting requirements now apply as outlined in the Mining Lease: Rehabilitation Report and Compliance Reports. Future reporting needs to meet the requirements of the Mining Lease conditions and this is still being established by the DRE.</li> <li>Reporting anniversary date is as per the Mining Leases and is for the previous financial year.</li> </ul>
EPA	<p><b><u>Environmental and Community Issues</u></b></p> <ul style="list-style-type: none"> <li>No significant environmental or community issues.</li> </ul> <p><b><u>Environmental Performance</u></b></p> <ul style="list-style-type: none"> <li>No issues relevant to the audit period.</li> </ul>

	<p><b><u>Complaints and Incidents</u></b></p> <ul style="list-style-type: none"> <li>No complaints reported to the EPA in the reporting period. The EPA report that occasional noise &amp; dust complaints from Cullen Bullen were received from open cut mining prior to operations ceasing and going into care and maintenance in April-May 2013.</li> <li>No incidents reported.</li> </ul> <p><b><u>Compliance with Statutory Requirements</u></b></p> <ul style="list-style-type: none"> <li>No fines or notices issued relating to non-compliances.</li> <li>No outstanding compliance issues or actions.</li> <li>EPA has not requested any written reports as per EPL conditions R3.1 and R3.4.</li> <li>pH exceedance at LDP2 recorded in 2014/2015 does not meet the definition of EPL condition R2 for notification of environmental harm.</li> </ul> <p><b><u>Communication and Reporting</u></b></p> <ul style="list-style-type: none"> <li>Satisfied with communication and reporting of compliance status.</li> <li>Pollution Reduction Program for noise is recorded as being completed in 2008.</li> <li>Annual returns submitted.</li> </ul>
DPI-Water	<p><b><u>Environmental and Community Issues</u></b></p> <ul style="list-style-type: none"> <li>No significant environmental or community issues.</li> </ul> <p><b><u>Environmental Performance</u></b></p> <ul style="list-style-type: none"> <li>No issues. The site is not operational.</li> </ul> <p><b><u>Complaints and Incidents</u></b></p> <ul style="list-style-type: none"> <li>No complaints reported to the DPI-Water in the reporting period.</li> <li>No incidents reported in the AEMRs.</li> </ul> <p><b><u>Compliance with Statutory Requirements</u></b></p> <ul style="list-style-type: none"> <li>No fines or notices issued relating to non-compliances.</li> <li>No outstanding compliance issues or actions.</li> <li>Approvals are current.</li> <li>Aquifer Interference Policy needs to be considered as it came into effect since approval of this project. If dewatering and there is any incidental take of surface water or CC divert surface water to ground, need to assess these activities in accordance with this policy.</li> </ul> <p><b><u>Communication and Reporting</u></b></p> <ul style="list-style-type: none"> <li>DPI-Water was consulted during the development of environmental management plans for the site.</li> </ul>

## 5.2. Regulatory Agency Inspections

### 5.2.1. EPA Audit

On 4 January 2016, the NSW EPA completed an audit that focused on the administrative requirements of the EPL 1095 held by Invincible Colliery. The EPA is undertaking similar audits across the Central West of NSW to ensure that all environment protection licence holders are complying with relevant administrative requirements in light of ongoing technical non-compliances across the licenced community identified during the annual return review process. It was not an audit targeted at the Invincible Colliery specifically. An advisory letter was issued on 6 January 2016, requesting action on a number of partial non-compliances.

Of 10 items targeted in the audit, four were partially compliant and one was not applicable. The EPA noted the following with respect to the non-compliances:

- Copy of the EPL and PIRMP at the premises:
  - EPL Condition G1.1 and G1.3 requires a physical copy of the in-force EPL to be kept at the site and be available to an authorised officer of the EPA on request.
  - The EPA observed multiple outdated versions of both the EPL and PIRMP at the site but acknowledged that current copies were able to be accessed via electronic means.
  - The EPA requested all outdated versions of the licence and PIRMP be archived and a current version of the licence and PIRMP be held on site as soon as possible and no later than 29 January 2016.

Current versions of the EPL and PIRMP were observed on site at the time of the Audit on 28 January 2016. The site is now compliant with this requirement and no further action is required.

- Monitoring results kept and available to EPA
  - EPL Condition M1.2 requires monitoring data to be kept for a minimum of four years and be produced in a legible form to any authorised officer of the EPA on request.
  - Monitoring records were not able to be produced to the EPA at the time of their audit. The EPA was advised that the records are kept in the Sedgman office. The EPA acknowledged that monitoring is being undertaken with records kept as they are published online.
  - The EPA requires that all monitoring records including any raw data be available to an EPA officer on request. The EPA requested that this be rectified (i.e. internal server/intranet) as soon as possible and no later than 29 January 2016.

At the time of the Audit inspection on 28 January 2016, Sedgman was in the process of establishing the records on an internal server (refer to recommendations in the Compliance Register in **Appendix C**).

- Number provided as complaints number
  - EPL Condition M5.2 requires a complaints line telephone number to be available to the public. The number must be identified as a complaints line.
  - The EPA stipulated that the general mine telephone number was in use, however it was not specifically identified to the public as a complaints line.
  - The EPA acknowledged that this had been resolved.

A review of the website during this IEA confirmed that the site is compliant with this requirement and no further action is required.

#### 5.2.1. Agency Inspections - July 2015

On 30 July 2015, an on-site meeting was held with State agencies to discuss future site operations and to determine agency expectations for environmental management. The meeting was attended by CC, Sedgman, DRE, EPA and Forestry Corporation. The 2015 AEMR reports that agreement was reached with agencies on the ongoing management of rehabilitation areas, rectification of soil erosion, care and maintenance operational arrangements and amendment of the Care and Maintenance MOP.

#### 5.2.2. DPE Inspection - October 2015

On 15 October 2015, an on-site meeting was held with DPE to discuss compliance with the project approval. The inspection was attended by DPE, CC and Sedgman. Issues raised by email (dated 22 October 2015) following the inspection related to:

- Completion of the IEA (refer to **Table 5**);
- Submission of the 2015 AEMR to the DPE (refer to **Table 5**);

- Identification of Broom weed and acknowledgment of the implementation of a weed spraying program.
- Community Consultative Committee (CCC) member nominations.
- Planned remediation of the slope at the northern end of the site as rehabilitation had not been successful and additional areas of rehabilitation to be revisited.

The 2015 AEMR reports that agreement was reached regarding the IEA, rehabilitation works, weed spraying and the CCC. All items were addressed by Sedgman in a reply email to the DPE dated 18 January 2016. The Auditor notes that the only outstanding item raised by DPE during the consultation required for this IEA was the issue of remediation of the northern slope. Sedgman advised the DPE that the proposed rehabilitation works are included within the draft Care and Maintenance MOP (Sedgman, 2015a) that was submitted to the DRE on 31 September 2015. It is recommended that the draft Care and Maintenance MOP also be provided to the DPE to provide detailed information on the proposed rehabilitation works.

### 5.3. Community Complaints

A review of the 2013, 2014 and 2015 AEMRs identified the following community complaints information:

- Three complaints were recorded in 2013 (May and June);
- No complaints were recorded in 2014; and
- No complaints were recorded in 2015.

Completed Complaint Reporting Forms (CRF) indicated that the complaints recorded in 2013 were made by three separate complainants and related to: a housekeeping matter on Coalpac owned property, access for delivery of the newsletter and alleged damage to cliffs.

The CRF for each incident adequately documented the actions taken to resolve the issue. The housekeeping issue was resolved immediately, the newsletter delivery issue was noted for future reference and the alleged damage to cliffs was found not to be located on Coalpac's leases or relate to Coalpac's mining operations.

Invincible Colliery maintains a complaints hotline telephone number as advertised on the CC website. An answering service is available and the number also refers to the CC onsite representative, Graham Goodwin's, mobile phone number. Community complaints are recorded and maintained by CC representative, Graham Goodwin and are discussed in the CCC meetings.

### 5.4. Incidents

Incident reporting is required by PA07\_0127 Schedule 5, conditions 2 and 3 and the EPL. Incident response procedures are well documented, including within the PIRMP. The PIRMP (Sedgman, 2016) is current having been updated in February 2016. The PIRMP has not yet been tested and it is recommended that this be undertaken when required.

A review of the 2013, 2014 and 2015 AEMRs indicated that there were no reportable incidents within the audit period related to air quality, erosion and sediment control, surface water management, groundwater, contaminated land, flora and fauna, weed management, operational noise, blasting, visual impacts, Aboriginal heritage, bushfire, hydrocarbon contamination or greenhouse gas emissions.

A review of the NSW EPA Public Register website did not identify any penalty notices for the Invincible Colliery. Consultation with relevant agencies indicated that there were no incidents reported to the DPE, DRE, EPA or DPI-Water in the audit period.

## 5.5. Annual Reporting

Environmental performance at the Invincible Colliery is reported via the following:

- Annual Returns are submitted to the NSW EPA in accordance with EPL Condition R1.1 to R1.8.
- AEMRs are submitted to the DPE and DRE in accordance with PA 07\_0127 Schedule 5, Condition 4 and the conditions of the Mining Leases respectively.

### 5.5.1. EPL Annual Returns

In accordance with EPL 1095, Annual Returns for the reporting periods: 2012-2013, 2013-2014, 2014-2015, February 2015-May 2015 were submitted to the NSW EPA within the required timeframes and are available on the NSW EPA Public Register. With the exception of the 2012-2013 Annual Return (completed by Coalpac), Annual Returns relevant to the audit period were completed by McGrath Nicol (Liquidation Company). Sedgman is currently in the process of completing the Annual Return for 2015-2016 and this document was not reviewed for this IEA and is due to be submitted to the EPA by 28 April 2016.

The NSW EPA Public Register noted one EPL non-compliance as identified from the results reported in the 2014-2015 Annual Return submitted by Coalpac. The non-compliance was for a minor exceedance of pH at the licenced discharge point 'LDP2' (6.23) which is a non-compliance with the concentration limits specified in EPL Condition L2.4 (6.5-8.5). Consultation with the EPA during the course of this audit confirmed that the exceedance was not deemed to fall into the definition of material harm and therefore notification of an incident in accordance with EPL Condition R2.2 was not required (refer to Compliance Register in **Appendix C**).

### 5.5.2. AEMR - Reporting

AEMRs for 2013, 2014 and 2015 were submitted to the following government agencies:

- DPE in accordance with the requirements specified in PA 07\_0127 Schedule 5, Condition 4.
- DRE in accordance with the requirements of the Mining Leases 1635 and 1638.

With the exception of the following, the AEMRs meet the reporting requirements outlined in Schedule 5, Condition 4 of PA 07\_0127:

- Include an analysis of these monitoring results against the relevant:
  - monitoring results from previous years; and
  - predictions in the Environmental Assessment (EA);
- Identify any trends in the monitoring results over the life of the project.

It is recommended that the AEMRs be reviewed against the requirements of the Project Approval and future AEMRs are updated to include the required analysis of results against previous data and predictions and identify trends over the life of the project (refer to Compliance Register in **Appendix A**).

Following the transfer of the Mining Leases to Shoalhaven Coal in February 2015, new reporting requirements were established via the *Mining Lease Conditions (Coal) 2013, June 2014*. AEMRs are to be replaced by an Annual Rehabilitation Report and an Annual Compliance Report as detailed in Mining Lease Conditions 3 and 4. Sedgman advise that the 2015 AEMR covers rehabilitation and compliance. The Auditor notes that the compliance section of the AEMR does not meet the specifications outlined in the Mining Lease. The DRE has advised that this is a new requirement and this reporting system is still under development and had asked Sedgman to submit a brief compliance report to cover the current reporting period. The DRE acknowledged receipt of this compliance report by email dated 10 February 2016.

The DRE also advised that the reporting is to be carried out per financial year. The reporting is currently carried out per calendar year. It is recommended that Sedgman seek clarification from the DRE with respect to annual reporting requirements (refer to Compliance Registers in **Appendix D**).

### 5.5.3.AEMR – Monitoring and Performance

A summary of the review of the environmental performance sections of the 2013, 2014 and 2015 AEMRs is provided below:

- No complaints related to noise, air quality, blasting, traffic or water received.
- No noise exceedances recorded at privately owned properties.
- Known Aboriginal and European cultural heritage items were not impacted.
- No air quality exceedances in Cullen Bullen and other privately owned properties adjacent to the Mining Leases. Exceedance of depositional dust was recorded at the onsite dust gauge (IDD5), however, the Coalpac *Assessment of Elevated Total Insoluble Solids from Deposited Dust Gauge IDD5 Report* (October 2014) concluded that the result was anomalous and as the site was in care and maintenance, the readings are restricted to this monitoring location and no community complaints have been received, that it appears to be the result of contamination by a localised external source (e.g. insect activity).
- National Greenhouse and Energy Reporting (NGERs) was completed.
- No significant hydrocarbon spills or other incidents requiring disposal of contaminated material.
- No disturbance of flora and fauna.

The Auditor identified the following monitoring/reporting issues relevant to the audit period:

- Monthly monitoring of water quality in the Main Dam and settlement dams was not undertaken in accordance with the frequencies outlined in the WMP. The 2015 AEMR states that this commenced in December 2015 and will continue on a monthly basis regardless of whether water is discharge from the licensed discharge point.
- Most monthly monitoring results for surface water quality testing in 2013 and 2014 are available on the Coalpac website, however the respective AEMRs (Coalpac, 2013b/2014b) do not summarise these results. This has been rectified with improved reporting of water monitoring results in the 2015 AEMR (Sedgman, 2015b).
- The 2013 and 2014 AEMRs (Coalpac, 2013b/ 2014b) reported compliance with the depositional dust limit of 4g/m2/month limit but not the maximum increase in deposited dust level criteria. This has been rectified by improved reporting of air quality results in the 2015 AEMR (Sedgman, 2015b).
- Groundwater monitoring was undertaken from offsite bores; however the results of analysis were not reported in the 2013 and 2014 AEMRs (Coalpac, 2013b/ 2014b). This has been rectified by improved reporting in the 2015 AEMR (Sedgman, 2015b).
- Not all monthly environmental monitoring reports are available on the website (e.g. Noise monitoring reports for Quarters 3 and 4 in 2014 and Quarter 1 in 2015; and environmental monitoring reports for September 2014 to April 2015, August 2013 and September 2013. It is noted that these reports relate to historical monitoring reports undertaken prior to CC ownership. Refer to Compliance Register in **Appendix A**.
- It is noted that the EPL requires monitoring of particulate matter at IDD1 (EPA point 3) weekly in accordance with AS/NZS 3580.9.3:2003. The Project Approval specifies criteria for TSP monitoring. The AQMP stipulates that a determination was made to estimate TSP from PM10 data. It is recommended that the methodology for estimation is recorded within the monitoring reports and that consultation with the DoP and EPA be undertaken to confirm acceptance of this methodology, as this constitutes a non-conformance with the current EPL (refer to Compliance Register in **Appendix C**).

## 5.6. Site Inspection

The site inspection of the Invincible Colliery was undertaken on 28 January 2016. Operations during the site inspection were generally observed to be carried out in a competent manner. The mine is inspected regularly, and records of this inspection are maintained.

The Auditor noted the following key items:

- Chemical and waste oil storage bunding;
- Chemical register and MSDS requires updating;
- Wastewater Collection System requires maintenance and repair;
- Erosion on access roads and in rehabilitation areas;
- Failed restoration on steep slopes in the north-western part of the site; and
- Signage was not visible on the fencing to the Aboriginal Heritage site, Invincible OS1.

Further detail and recommendations regarding these observations are recorded in the Compliance Registers.

In addition, it was reported by the DPE and confirmed by CC (following the site inspection), that an underground fuel storage tank (UST) is located at the site. Review of the 2011 AEMR indicated that the UST is 40,000L, is located near the mine infrastructure and office area and was used to hold diesel during the operating phase of the mine. CC confirmed that the UST had not been decommissioned, was empty and was last used three years ago. A photo was provided (**Appendix E**).

The UST and its management or maintenance is not recorded in any documents relevant to the audit period. It is recommended that UST integrity inspections be carried out and the results reported in the AEMRs. If the tank is no longer required, it should be decommissioned in accordance with SafeWork NSW and NSW EPA requirements. If the tank is proposed to be used in the future, it is recommended that CC arrange for the tank and associated piping be tested prior to recommissioning.

## 5.7. Rehabilitation

An ecological assessment of the Invincible Colliery was completed with the assistance of Cumberland Ecology as part of this IEA to assess environmental performance and recommend improvement opportunities related to rehabilitation at the site. The assessment involved a desktop review and site inspection, carried out by Vanessa Orsborn on 28 January 2016. The assessment is presented in **Appendix F**.

The LMP provides specific environmental objectives for the Invincible Colliery in relation to rehabilitation of the site and biodiversity offset areas. The LMP also sets out the strategies and operational procedures to be implemented on site to ensure all legislative requirements with respect to landscape management are met.

Rehabilitation areas are monitored on an annual basis by Kleinfelder. The objective of the annual monitoring is to determine whether the LMP strategies and procedures are successful in demonstrating no net loss of biodiversity values in the medium to long term (Kleinfelder, 2015).

It is noted that the 2013, 2014 and 2015 AEMRs report that there were no new rehabilitation areas established. The 2015 AEMR states that rehabilitation works during 2015 focussed on assessment of failed vegetation in existing rehabilitation areas. It is proposed to undertake remediation of existing rehabilitation areas in 2016 in accordance with the LMP, and this will include:

- Benching, topsoil, replanting of failed rehabilitation areas on steep slopes;
- Monitoring and reseeded (if required) of rehabilitation areas that are not yet established; and
- Rectification of existing erosion/washout and slumping within rehabilitation areas and repair of ERSED controls.

### 5.7.1. Compliance Assessment

A review of compliance with the ecology components of PA 07\_0127, the Statement of Commitments and Mining Leases 1635 and 1638 identified a number of non-compliances. These primarily relate to:

- Implementation of the biodiversity offset strategy;
- Progressive rehabilitation consistent with the final landform;
- Implementation of the Landscape Management Plan;
- Biodiversity Offset Strategy Implementation Bond; and
- Failed restoration in the northwest of the site.

A description of each issue and recommendations for improvement have been transcribed into the IEA Compliance Registers presented in **Appendix A, B, D and E**. Further detail regarding these non-compliances is provided in the ecological assessment report in **Appendix F**.

### 5.7.2. Compliance with Ecological Management Plans

A review of the implementation of the LMP and the 2015 Annual Flora, Fauna and Rehabilitation Monitoring Report (Kleinfelder, 2015) was completed by Cumberland Ecology. Recommendations for improvement have been transcribed into **Table 8** of this IEA report. The analysis is reproduced below.

#### *i. Landscape Management Plan*

The Landscape Management Plan includes a list of performance and completion criteria. Compliance with each of these was assessed and reported in Appendix C of the ecological assessment report.

Although the Landscape Management Plan has been implemented there is non-compliance with the performance criteria set out within Section 7 of the LMP, and the monitoring requirements in Section 8 of the LMP. The most significant area of non-compliance, results from the observed poor performance of the rehabilitation from 2011 (in part) and 2012, as noted during the site inspection by KMH and Cumberland Ecology on 28 January and in correspondence from the DPE.

There is also a lack of monitoring plots within these poor condition rehabilitation blocks (2011 and 2012) (Kleinfelder, 2015) to allow of analysis of the vegetation condition data over time, and inform adaptive management and remedial actions. This represents an area of compliance for the Biodiversity Offset Area (BOA), as the annual monitoring of the BOA includes adequate fixed monitoring plots and the site characteristics recorded within each plot has allowed for assessment against the performance criteria in Section 7.2 of the LMP. Another non-compliance results from the lack of tubestock planting within the BOA during the current audit period, as specified in Section 5.3 of the LMP.

#### *ii. Flora and Fauna and Rehabilitation Monitoring 2013-2016*

##### *a. Performance of Monitoring*

Flora, fauna and rehabilitation monitoring has occurred annually during the audit period, however, there is a lack of monitoring plots across all areas of rehabilitation, with a lack of representation in parts of the 2011 and all of the 2012 rehabilitation (Kleinfelder, 2015). This has resulted in a lack of sufficient data to allow analysis of the vegetation condition over time, and inform adaptive management and remedial actions. Furthermore, the data collected within rehabilitation areas is insufficient to assess completion criteria, due to the lack of fixed monitoring plots, stem counts and other numeric data, as required in the LMP.

Annual monitoring of the BOA includes adequate fixed monitoring plots and the site characteristics recorded within each plot has allowed for assessment against the performance criteria in Section 7.2 of the LMP. The monitoring plot locations and frequency appear adequate. Additional statistical data analysis could be performed to gain a greater understanding of the changes in species composition over time in the BOA, and this would strengthen the monitoring reports.

b. Compliance with recommendations resulting from monitoring

The highest risk from non-compliance with the recommendations resulting from the annual monitoring (as described in the Compliance Tables and Ecological Assessment) is the areas of erosion in the rehabilitation areas, the lack of established vegetation in some areas, and an inappropriate seed mix, with over-representation of acacia species which dominate the shrub and small tree layer. During the site inspection by Cumberland Ecology on 28 January 2016, it was also noted that the 2012 rehabilitation was in very poor condition. Exotic species were found to dominate the understorey with native eucalypt and acacia species germination found to be limited. No tubestock planting was observed in this area. It is therefore recommended that slope stabilisation, seeding, and subsequent tubestock planting (after the slope is stabilised) be undertaken in this area of rehabilitation.

During each year of monitoring (2013-2015), there has been a recommendation for tubestock planting of dominant eucalypt and acacia species in the BOA. As the groundcover is naturally regenerating over time, grassland species planting has not been recommended (Kleinfelder, 2015). This is consistent with the findings of the site inspection by Cumberland Ecology on 28/1/16, where eucalypt regeneration was observed in areas of good and moderate condition vegetation. However, the low condition grasslands were not observed to be regenerating, and adaptive management should be reviewed.

Actions such as deep-ripping have not been employed at the edges of the moderate quality woodland and native dominated grasslands, which would be likely to improve natural regeneration. Bush regeneration techniques to promote natural regeneration, and then supplementing with tube stock planting and seeding, as part of an adaptive and ongoing approach (Buchanan, 1989) would be suitable, and should be reviewed in the final MOP and supporting management plans.

A low intensity ecological burn within the BOA has been recommended in each monitoring report. This recommendation has not been followed, and is supported by the findings of the site inspection by Cumberland Ecology. Controlled ecological burns are very useful for promoting natural regeneration, and are suitable for all the vegetation types present in the BOA.

### 5.7.3. Adequacy of LMP

A review of the adequacy of the LMP has been provided in **Table 4** of this IEA including recommended improvement opportunities. It was concluded that the plan is generally fit for purpose, however would benefit from inclusion of rehabilitation monitoring methods that better assess performance against their stated criteria; consistent monitoring methods across the BOA and rehabilitation areas to enable comparison and use standard rehabilitation monitoring against benchmarks for particular vegetation types (e.g. Biometric Assessment Method).

### 5.7.4. Key Ecological Recommendations

The key area for continuing improvement of flora, fauna and rehabilitation management is the remedial action within failed and poor quality rehabilitation areas, particularly the 2012 blocks. Monitoring plots should also be established consistently across the project boundary.

Cumberland Ecology advises that specific ecological adaptive management recommendations have been made by Kleinfelder (2015), as part of the Annual Flora, Fauna and Rehabilitation Monitoring Report, and these are supported by observations and recommendations resulting from the site inspection by Cumberland Ecology and should be implemented.

The rehabilitation program should be updated as per the findings of the Cumberland Ecology assessment and the recommendations of annual monitoring.

## 6. Statutory Compliance & Recommendations

The environmental performance of the invincible Colliery has been reviewed by assessing compliance with PA 07\_0127; Statement of Commitments (SOC); EPL No. 1095; and Mining Leases 1635 and 1638. Compliance Registers presented in **Appendix A to D** provide a detailed review of the compliance status of the site, including recommendations to address non-conformances.

### 6.1. Summary of Compliance Status

A summary of compliance with statutory requirements is provided in **Table 6**.

**Table 6: Summary of Statutory Compliance**

Approval/Licence	No. of Conditions	Not Compliant	Compliant/ Observation	Not Verified/ Observation	Noted/Not Triggered
PA 07_0127	128	25	44	19	40
SOC	128	24	32	35	37
EPL 1095	58	11	20	4	23
Mining Lease 1635	27	3	4	4	16
Mining Lease 1638	27	3	4	5	15

### 6.2. Non-Compliances and Recommendations

Non-compliances identified during the site inspection, interviews and document reviews are documented in detail in the Compliance Registers in Appendix A to D and are summarised in **Table 7**. Recommendations have been made to address all non-compliances identified. Please note that **Table 7** excludes conditions that could not be verified as compliant during this IEA.

### 6.3. Management Plans

Recommendations relating to the adequacy of the EMS and EMPs are presented in **Table 4** and have not been reproduced in this section. As indicated in Section 4.4, the DPE have noted that the management plans and programs for Invincible Colliery will be revised and updated during the approvals process to recommence mining operations. .

### 6.4. Improvement Opportunities

Improvement opportunities, including those identified from conditions where compliance could not be verified, have been provided in **Table 8** to assist improvement of environmental performance at the site.

**Table 7: Non-Compliance and Recommendations**

#	Criteria	Requirement	Responsibility	Recommendation
NC1	PA 07_0127, S2, C1	The Proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.	CC	Implement Recommendations described below.
NC2	PA 07_0127, S2, C2	The Proponent shall carry out the project generally in accordance with the: (a) EA; (b) statement of commitments; (c) the modification application 07_0127 MOD 2 and accompanying documents entitled: • 'Proposed Modification to Project Approval 07_0127 for the Invincible Colliery Open Cut Mine, May 2009'; and • 'Addendum to the Proposed Modification to Project Approval 07_0127 for the Invincible Colliery Open Cut Mine, July 2009'; and (d) modification application 07_0127 – MOD 3 and the accompanying Environmental Assessment prepared by Hansen Bailey and dated June 2010; and (e) the conditions of this approval.	CC	Implementation of the recommendations in this audit will assist in ensuring the project is carried out in accordance with the Project Approval and Statement of Commitments.
NC3	PA 07_0127, S2, C4A	The Proponent shall prepare revisions of any strategies, plans or programs required under this project approval if directed to do so by the Director-General. Such revisions shall be prepared to the satisfaction of, and within a timeframe approved by, the Director-General.	Coalpac	Consult with the DPE to confirm the status of the approval of the Energy Savings Action Plan.  Upon approval of any application to continue mining activities, review the Energy Savings Action Plan to ensure it includes the assessment and monitoring of greenhouse gas emissions, including the duty to report under the National Greenhouse and Energy Reporting Scheme (NGERS).
NC4	PA 07_0127, S2, C11(a)	The Proponent may: (a) with the approval of the Director-General, submit any management plan or monitoring program required by this approval on a progressive basis; and	Coalpac	Consult with the DPE to obtain approval for an alternative timetable for the submission of a Mine Closure Plan, in consideration of the proposal to extend mining operations at the site.

#	Criteria	Requirement	Responsibility	Recommendation
NC5	PA 07_0127, S2, C14(a)	The Proponent shall ensure that all the plant and equipment used on site is: (a) maintained in a proper and efficient condition; and	CC	Undertake maintenance and cleaning of the wastewater catch drain system. Conduct a maintenance inspection and integrity test of the wastewater collection system including bunding, tanks and piping.  Repair the breakage in the piping that leads from the wastewater catch drain to the oil/water separator and waste oil collection tank. Investigate whether any soil contamination has resulted from the breakage.  Install bunding around the waste oil collection tank (if it is to remain operational). Retain maintenance and servicing records for all plant and equipment used at the site.
NC6	PA 07_0127, S3, C12	Except as may be expressly provided for by an EPL, or in accordance with section 120 of the Protection of the Environment Operations Act 1997, the Proponent shall not discharge any mine water from the site.	Coalpac	Review the current operations against the Aquifer Interference Policy. Apply to the EPA for a modification of the Environment Protection Licence to permit discharge via the underground workings.
NC7	PA 07_0127, S3, C13(c)(ii)	Water Management Plan This Plan must include an erosion and sediment control plan for all surface works in the mining area that is consistent with the requirements of Managing Urban Stormwater: Soils and Construction Manual (Landcom 2004, or its latest version);	Coalpac	Update the Erosion and Sediment Control Plan with reference to the latest guidelines for <i>Managing Urban Stormwater: Soils and Construction, Volume 2E Mines and Quarries</i> (Blue Book).
NC8	PA 07_0127, S3, C13(c)(iv)	This Plan must include a groundwater monitoring program with: - baseline data of groundwater levels and quality in the region, including details of any privately-owned groundwater bores which could be affected by the development; - groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts of the development; and - a program to monitor: o groundwater inflows to the open cut mining operations; & o impacts of the development on the region's aquifers, groundwater bores and surrounding watercourses; and	Coalpac	Update the Water Management Plan to include a groundwater monitoring program that satisfies the requirements of the Project Approval.

#	Criteria	Requirement	Responsibility	Recommendation
NC9	PA 07_0127, S3, C14	Monitoring of Coal Transport The Proponent shall keep records of the amount of coal transported from the mine site and number of coal truck movements each year and include these records in the AEMR.	Coalpac	The 2013 AEMR (Coalpac, 2013b) did not report the total number of truck movements during the audit period. As this condition relates to previous mining operations by Coalpac, there are no current recommendations related to this non-compliance.
NC10	PA 07_0127, S3, C18A	Coal Haulage Limits The Proponent shall install a truck wheel wash with sprays by 31 December 2010 and following this date, must ensure that all coal trucks have their tyres and vehicles cleaned of mud and dust prior to exiting the Colliery, to the satisfaction of the Director-General. The truck wheel wash with sprays must remain in place unless replaced by equivalent mitigation measures to the satisfaction of the Director-General.	Coalpac	The truck wheel wash was not installed by Coalpac by the required date. There are no recommendations required to address this administrative non-compliance.
NC11	PA 07_0127, S3, C32	Biodiversity Offsets Within 2 years of the date of this approval, the Proponent shall provide appropriate long term security for the biodiversity offset strategy, to the satisfaction of the Director-General. <i>Note: The long-term security of the offset can be achieved through one, or a combination, of the following: Deed of Agreement with the Minister, rezoning the land under the Lithgow Local Environment Plan, caveats on the title under the Conveyancing Act 1919, etc.</i>	Coalpac	It is recommended that the leaseholder provide appropriate security for the Biodiversity Offset Strategy such as rezoning of Lot 112 DP877190, Lot 113 DP 877190 and Lot 1 DP180294 or the application of a protective covenant (such as a Section 88B Covenant) on title. Consult with the DPE.
NC12	PA 07_0127, S3, C33	The Proponent shall progressively rehabilitate the site in a manner that is generally consistent with the final landform set out in the EA (shown conceptually in Figure 5 of Appendix 1) to the satisfaction of the Director-General and I&I NSW.	CC	Whilst no new rehabilitation has been established during CC operations and rehabilitation performance is assessed annually, it is recommended that CC review Rehabilitation progress and performance, including the establishment of failed rehabilitation areas on steep slopes. Any recommendations from the annual review process should be reflected in future rehabilitation plans.
NC13	PA 07_0127, S3, C34(a)	The Proponent shall prepare and implement a detailed Landscape Management Plan for the site to the satisfaction of the Director-General and I&I NSW. This plan must: (a) be prepared in consultation with Lithgow City Council and NOW by suitably qualified expert/s whose appointment/s have been approved by the Director-General;	CC	Ensure the Lithgow City Council and the DPI-Water is consulted during any future revisions to the Water Management Plan, and evidence of consultation is retained. Implement the LMP in terms of achieving performance criteria for rehabilitation, and following recommendations from Annual Flora, Fauna and Rehabilitation Monitoring.

#	Criteria	Requirement	Responsibility	Recommendation
NC14	PA 07_0127, S3, C34(c)	<p>Landscape Management Plan</p> <p>This plan must:</p> <p>(c) include a:</p> <ul style="list-style-type: none"> <li>• Rehabilitation and Offset Management Plan; and</li> <li>• Mine Closure Plan.</li> </ul> <p><i>Note: The Department accepts that the initial Landscape Management Plan may not include the detailed Mine Closure Plan. However, if this occurs, the Proponent will be required to seek approval from the Director-General for an alternative timetable for the completion and approval of the Mine Closure Plan.</i></p>	Coalpac	<p>The MCP was not submitted by Coalpac by the agreed alternative timetable date of 30 June 2010.</p> <p>Consult with the DPE to obtain approval for an alternative timetable for the submission of a Mine Closure Plan, in consideration of the proposal to extend mining operations at the site.</p>
NC15	PA 07_0127, S3, C36	<p>Mine Closure Plan</p> <p>The Mine Closure Plan must:</p> <p>(a) define the objectives for the site following the cessation of mining operations under this approval;</p> <p>(b) investigate options for the future use of the site;</p> <p>(c) investigate ways to minimise the adverse socio-economic effects associated with the conclusion of the project, including reduction in local and regional employment levels;</p> <p>(d) describe the measures that would be implemented to minimise or manage the on-going environmental effects of the project; and</p> <p>(e) describe how the performance of these measures would be monitored over time.</p>	Coalpac	<p>Consult with the DPE to obtain approval for an alternative timetable for the submission of a Mine Closure Plan, in consideration of the proposal to extend mining operations at the site.</p>
NC16	PA 07_0127, S3, C37	<p>Biodiversity Offset Strategy Implementation Bond</p> <p>Within 3 months of the approval of the Landscape Management Plan, the Proponent shall lodge a Biodiversity Offset Strategy implementation bond with either the I&amp;I NSW or the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with the performance and completion criteria of the Landscape Management Plan. The sum of the bond shall reflect the full cost of implementing the Biodiversity Offset Strategy and be determined by employing a suitably qualified rehabilitation expert or quantity surveyor.</p>	Coalpac	<p>Evidence of the Biodiversity Offset Strategy Implementation Bond was not available. Consult with DPE and DRE and provide evidence of Biodiversity Offset Strategy Implementation Bond, or evidence of DG sign-off on the implementation of the Biodiversity Offset Strategy.</p>

#	Criteria	Requirement	Responsibility	Recommendation
		<p>Notes:</p> <ul style="list-style-type: none"> <li>• If the Biodiversity Offset Strategy is implemented to the satisfaction of the Director-General and I&amp;I NSW, then the bond holder will release the implementation bond.</li> <li>• If the Biodiversity Offset Strategy is not implemented to the satisfaction of the Director-General and I&amp;I NSW, then all or part of the bond may be used to ensure the satisfactory completion of the relevant works.</li> <li>• The bond may be incorporated into rehabilitation bonding arrangements under the Mining Act 1992.</li> </ul>		
NC17	PA07_0127, S3, C40 (a)	<p>Aboriginal Heritage Management Plan</p> <p>The Proponent shall prepare and implement an Aboriginal Heritage Management Plan for the project to the satisfaction of the Director-General. The Plan must:</p> <p>(a) be prepared in consultation with DECCW and the Aboriginal community;</p>	CC	<p>Ensure the EPA and the Aboriginal Community is consulted during any future revisions to the Aboriginal Heritage Management Plan, and evidence of consultation is retained.</p> <p>Re-erect the signs at the 'Invincible OS1' Aboriginal heritage site as outlined in the Aboriginal Heritage Management Plan (i.e. Warning and Notice signs).</p> <p>Update plans in all management documents to include the location of the cultural heritage site "Invincible OS1".</p>
NC18	PA 07_0127, S3, C42 (c)(d)(e)	<p>Greenhouse and Energy Efficiency</p> <p>This plan must:</p> <p>(c) include a program to monitor greenhouse gas emissions and energy use generated by the project;</p> <p>(d) include a framework for investigating and implementing measures to reduce greenhouse gas emissions and energy use at the site;</p> <p>(e) describe how the performance of these measures would be monitored over time.</p>	Coalpac	<p>Consult with the DPE to determine whether the ESAP was approved in accordance with PA 07_0127 Schedule 3, Condition 42. If required, seek approval to provide a revised plan upon approval to continue mining operations. The revised plan is to ensure it meets all requirements of the Project Approval.</p>
NC19	PA 07_0127, S3, C43(a)	<p>Waste Minimisation</p> <p>The Proponent shall:</p> <p>(a) monitor the amount of waste generated by the project;</p>	CC	<p>Ensure records of waste disposal are retained on site for a period of 7 years.</p> <p>Monitor the amount of waste generated by the project. Include detailed waste monitoring requirements in the Environmental Monitoring Program.</p>

#	Criteria	Requirement	Responsibility	Recommendation
NC20	PA 07_0127, S3, C43(e)	Waste Minimisation The Proponent shall: (e) report on waste management and minimisation in the AEMR to the satisfaction of the Director-General.	CC	Report the total volume of waste to landfill and recycling in the AEMR.
NC21	PA 07_0127, S5, C1(e)	Environmental Management Strategy This strategy must (e) include environmental monitoring program for the project that includes all the monitoring requirements of this approval;	CC	Inclusion of the current Environmental Monitoring Program within the EMS is required to meet the conditions of the Project Approval.  A full copy of the EMS should be uploaded to the website and the EMS should be updated to reference the EMP (ensuring also that the EMP is reviewed for relevancy).
NC22	PA 07_0127, S5, C4	Annual Reporting By the end of November 2009, and annually thereafter, the Proponent shall submit an AEMR to the Director-General and to all relevant agencies. This report must: (a) identify the standards and performance measures that apply to the project; (b) describe the works carried out in the last 12 months; (c) describe the works that would be carried out in the next 12 months; (d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years; (e) include a summary of the monitoring results for the project during the past year; (f) include an analysis of these monitoring results against the relevant: • impact assessment criteria/limits; • monitoring results from previous years; and • predictions in the EA; (g) identify any trends in the monitoring results over the life of the project; (h) identify any non-compliance during the previous year; and (i) describe what actions were, or are being, taken to ensure compliance.	CC	Consult with the DPE and DRE to confirm details of AEMR reporting including: definition of relevant agencies, reporting period (calendar year or financial year) and submission dates.  Include within the AEMRs, an analysis of monitoring results against the results of previous years monitoring and the EA predictions and include an analysis of trends over the life of the project.
NC23	PA07_012 7, S5, C5	By the end of November 2010, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project.	CC	An IEA has not been conducted every 3 years as required. No recommendations are required for this non-compliance.

#	Criteria	Requirement	Responsibility	Recommendation
		<p>This audit must:</p> <ul style="list-style-type: none"> <li>(a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;</li> <li>(b) include consultation with the relevant agencies;</li> <li>(c) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any associated EPL or Mining Lease (including any strategy, plan or program required under these approvals);</li> <li>(d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate,</li> <li>(e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals.</li> </ul> <p>Note: This audit team must be led by a suitably qualified Auditor and include experts in the fields of ecology and mine site rehabilitation.</p>		
NC24	PA 07_0127, S5, C9	<p>Within 3 months of the approval of any strategy/plan/ program required under this approval (or any subsequent revision of these strategies/plans/ programs), or the completion of the audits or AEMRs required under this approval, the Proponent shall:</p> <ul style="list-style-type: none"> <li>(a) provide a copy of the relevant document/s to the relevant agencies and CCC; and</li> <li>(b) put a copy of the relevant document/s on its website.</li> </ul>	Coalpac	The Condition of Approval requires all audit reports to be uploaded to the mine website. As the audit report covers the period prior to CC ownership, it is recommended that CC seek DP&E approval to waive this requirement for the first audit report.
NC25	PA 07_0127, S5, C10	<p>From the end of November 2009, and thereafter during the project, the Proponent shall:</p> <ul style="list-style-type: none"> <li>(a) provide a copy of this approval as may be modified from time to time on its website;</li> <li>(b) provide a comprehensive, running summary of monitoring results required under this approval on its website; and</li> <li>(c) update these results on a regular basis (at least every three months).</li> </ul>	CC	Provide a comprehensive running summary of monitoring results as required under the PA on the website.
NC26	SOC, C3.3	Organise the regular collection of industrial wastes (fortnightly).	CC	Organise the collection of all industrial wastes (including oil, grease and other liquid wastes) by a licensed contractor. It is noted that the frequencies are relevant to full scale operations and are reported to be reduced during the care and maintenance phase.

#	Criteria	Requirement	Responsibility	Recommendation
				Ensure records of waste disposal are retained on site for a period of 7 years.
NC27	SOC, C3.4	Store waste oils and grease at the maintenance workshop for collection by a licensed waste recycling contractor (Bi-monthly)	CC	<ul style="list-style-type: none"> <li>*Ensure all liquid waste containers are stored within secondary containment / in bunding.</li> <li>*Undertake maintenance and cleaning of the wastewater catch drain system.</li> <li>*Retain all records of maintenance of equipment for a period of 7 years.</li> <li>*Retain all records of waste disposal for a period of 7 years.</li> <li>*Install bunding around the waste oil collection tank (if it is to remain operational).</li> <li>*Repair the PVC pipe in the waste oil collection system and investigate any residual contamination.</li> <li>* Conduct a maintenance inspection and integrity test of the waste oil collection system tanks and piping.</li> </ul>
NC28	SOC, C3.6	Store hydrocarbon contaminated water in the oil/water separator for regular removal from site by a licensed contractor (as required).	CC	See recommendations for 3.3 and 3.4 above.
NC29	SOC, C4.2	Stabilise earthworks, drainage lines and disturbed areas no longer required for mine related activities (as areas become available).	CC	Areas of rehabilitation in the north of site, seeded during 2012, have not been successfully stabilised. Stabilise rehabilitation areas to the satisfaction of DPE (soil re-profiling, or adapted seeding and tubestock planting methods are required as remedial action). Provide update in 2016 AEMR.
NC30	SOC, C4.4	Utilise native tree, shrub and grass species and / or pasture species comparable with either the existing vegetation communities or those which occurred in the area prior to mining and agriculture-related disturbance (ongoing during rehabilitation activities).	Coalpac	Modify seed mix for all future rehabilitation, as per the Landscape Management Plan, and recommendations in the 2015 Annual Biodiversity Monitoring report (Kleinfelder, 2015).
NC31	SOC, C5.8	Ensure the on-site road network is well maintained to limit body noise from empty trucks travelling on internal roads (ongoing).	CC	Maintain the on-site road network by repairing existing scouring and erosion. This will help to limit noise levels associated with vehicle movements at the site.
NC32	SOC, C7.12	Include a vertebrate pest control program as part of the mining operation (within 12 months of commencement of mining).	CC	Undertake assessment of the need for vertebrate pest control, as described in the LMP and Biodiversity Monitoring reports. Undertake control activities, as advised.

#	Criteria	Requirement	Responsibility	Recommendation
NC33	SOC, C8.1	Construct a fence around the site "Invincible OS1" and identify this as a culturally sensitive area at the site and on all mine plans (prior to commencement of the project).	CC	Update plans in all management documents to include the location of the cultural heritage site "Invincible OS1". Re-erect signs on the fencing at the 'Invincible OS1' Aboriginal heritage site as outlined in the Aboriginal Heritage Management Plan (i.e. Warning and Notice signs).
NC34	SOC, C8.3	Inform all site personnel to the presence of the site and their obligations under the National Parks and Wildlife Act 1974 (NPW Act, 1974) in relation to site protection (prior to commencement of construction).	CC	Ensure that the care and maintenance period site induction for staff and contractors, includes an appropriate Aboriginal Heritage induction that includes the location of the site and obligations under the NPW Act 1974. Ensure that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site, before working on the site.
NC35	SOC, C8.5	Conduct a Cultural Heritage Awareness Induction Course for staff, contractors and any heritage monitors working on the Project Site (ongoing).	CC	Ensure that the care and maintenance period site induction for staff and contractors, includes an appropriate Aboriginal Heritage induction that includes the location of the site and obligations under the NPW Act 1974. Ensure that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site, before working on the site.
NC36	SOC, C9.4	Undertake quarterly (groundwater) sampling and general observation of water within the main Colliery Dam and analyse / inspect for signs of ferrous iron oxidation or other contamination (quarterly).	CC	Ensure monthly environmental monitoring reports include the results of visual inspections for ferrous iron oxidation and other contamination.
NC37	SOC, C9.6	Operate the existing clean water diversion structures in accordance with the Invincible Colliery Soil and Water Management Plan (ongoing).	CC	Engage a suitably qualified and experienced person to inspect the surface water management system structures and conduct maintenance/repairs/rectifications as required.
NC38	SOC, C9.8	Inspect the diversion banks and other clean water management structures on a regular basis, or following rainfall of >25mm/24 hours, and undertake maintenance work as necessary (Quarterly or following rainfall of >25m/24hours).	CC	Dams and drains are inspected regularly. Erosion issues require maintenance. Engage a suitably qualified and experienced person to inspect the surface water management system structures and conduct such maintenance/repairs/rectifications as required.
NC39	SOC, C9.9	Construct low flow contour bank(s) discharging to a sediment basin(s) downstream of the proposed open cut mine extension (Prior to commencement of open cut mining).	CC	Banks and sediment basins are installed. Erosion issues were identified. Engage a suitably qualified and experienced person to inspect and review the surface water management system structures and conduct maintenance/repairs/rectifications as required. The review should assess the adequacy of the size of the sediment basins.

#	Criteria	Requirement	Responsibility	Recommendation
NC40	SOC, C9.11	Inspect the settlement ponds and sediment basins on a regular basis, or following rainfall of >25mm/24 hours, and clean out the sediment basins of consolidated sediment once capacity reduced by 20% (Quarterly or following rainfall of >25mm/24 hours).	CC	Dams and drains are inspected, some basins require maintenance. Engage a suitably qualified and experienced person to inspect the surface water management system structures and conduct maintenance/repairs/rectifications as required
NC41	SOC, C9.14	Ensure any water discharged from nominated discharge point (No. 2) meets the criteria of EPL 1095, as follows. TSS <50mg/L. pH: 5.5 to 8.5. Oil & grease <10mg/L. Within 24 hours of discharge event.	Coalpac	A historical monitoring result from 2014 identified a minor exceedance of the pH range. Continue to monitor water quality in accordance with the requirements of the EPL, including identification of trends relating to pH.
NC42	SOC, C9.15	Securely store all hydrocarbon products (ongoing)	CC	Ensure all liquid chemical containers are stored within secondary containment / in bunding that is in good working order.
NC43	SOC, C9.17	Direct all water from wash-down areas and workshops to oil/water separators and containment systems (ongoing).	CC	Refer to actions in NC 44 below.
NC44	SOC, C9.18	Ensure all storage tanks are either self-bunded tanks or bunded with an impermeable surface and have a capacity to contain a minimum 110% of the largest storage tank capacity (ongoing).	CC	<ul style="list-style-type: none"> <li>*Ensure all liquid waste containers are stored within secondary containment / in bunding.</li> <li>*Undertake maintenance and cleaning of the wastewater catch drain system.</li> <li>*Retain all records of maintenance of equipment for a period of 7 years.</li> <li>*Retain all records of waste disposal for a period of 7 years.</li> <li>*Install bunding around the waste oil collection tank (if it is to remain operational).</li> <li>*Repair the breakage in the pipe that leads from the wastewater catch drain to the oil/water separator and waste oil collection tank. Investigate whether any soil contamination has resulted from the breakage.</li> <li>* Conduct a maintenance inspection and integrity test of the waste oil collection system tanks and piping.</li> </ul>
NC45	SOC, C12.2	Monitor water quality within the Main Colliery Dam (quarterly).	CC	Monitoring commenced in December 2015. It is recommended that the Water Management Plan be revised to clearly identify the sampling locations.  Review the nomenclature used for sampling locations (Main Dam and LD002) to clearly distinguish between the two locations. Ensure monthly environmental monitoring reports provide clear identification of the different sampling locations when reporting the results.

#	Criteria	Requirement	Responsibility	Recommendation
NC46	SOC, C12.3	Undertake quarterly attended and unattended monitoring at the "Hillview", "Billabong", Cullen Bullen south and Cullen Bullen west residences for the life of the Invincible Colliery (quarterly).	Coalpac	Consult with DPE to confirm the current noise monitoring requirements of the Project Approval and the application of attended monitoring only.
NC47	SOC, C12.7	Update the Invincible Colliery Blasting Management Plan to account for the proposed implementation of highwall mining and production increase (within 3 months of approval).	Coalpac	Pending approval to extend mining operations, review the Blast Monitoring and Management Plan (June 2009) to include information on high wall mining and production increases as appropriate.
NC48	SOC, C12.9	Monitor deposited dust deposition at locations IDD-1 to IDD-6 surrounding the Invincible Colliery (monthly).	Coalpac	Consult with DPE to confirm current dust deposition sampling requirements of the Project Approval, particularly with respect to removal of IDD6 from the monitoring program.
NC49	SOC, C12.12	Undertake annual monitoring of rehabilitation success (annual).	CC	Fixed monitoring plots should be established in all years of rehabilitation across the site to achieve compliances and enable review of the performance against the completion criteria set out in the LMP.
NC50	EPL, A2.1	Premises or plant to which the licence applies. The licence applies to the following premises: THE INVINCIBLE COLLIERY, CASTLEREAGH HIGHWAY, CULLEN BULLEN, NSW 2790 LOT 1 DP 180294, LOT 113 DP 877190 PART BEN BULLEN STATE FOREST. INVINCIBLE COLIERY HOLDING	CC – the Auditor notes this was carried over from the EPL transferred from Coalpac to CC	Review premises details specified in condition A2.1 of the EPL to ensure that it is consistent with the area covered by the Project Approval. Vary the EPL if required.
NC51	EPL, L1.1	Pollution of waters Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Coalpac	A historical monitoring result from 2014 identified a minor exceedance of the pH range. Continue to monitor water quality in accordance with the requirements of the EPL, including identification of trends relating to pH. It is also recommended that CC clarify the different nomenclature of water quality monitoring locations previously reported at the Main Dam (i.e. LDP2/LD002/ LD002 (point 2), Main Dam). Update relevant management plans (as required) and all future monitoring reports.
NC52	EPL, L2.4	Water and/or Land Concentration Limits Oil and grease – 10 mg/L, pH – 6.5-8.5, Total suspended solids – 30 mg/L	Coalpac	A historical monitoring result from 2014 identified a minor exceedance of the pH range. Continue to monitor water quality in accordance with the requirements of the EPL, including identification of trends relating to pH.

#	Criteria	Requirement	Responsibility	Recommendation
NC53	EPL, L4.3	<p>Noise limits</p> <p>The noise emission limits identified in this licence apply under all meteorological conditions except:</p> <p>a) during rain and wind speeds (at 10m height) greater than 3m/s; and</p> <p>b) under "non-significant weather conditions".</p> <p>Note: Field meteorological indicators for non-significant weather conditions are described in the NSW Industrial Noise Policy, Chapter 5 and Appendix E in relation to wind and temperature inversions.</p>	CC – the Auditor notes this was carried over from the EPL transferred from Coalpac to CC	Quarterly noise monitoring reports to provide a statement of compliance with respect to EPL conditions L4.1 to L4.3. The monitoring reports are to ensure an assessment against the meteorological conditions in the EPL is undertaken.
NC54	EPL, O1.1	<p>Activities must be carried out in a competent manner</p> <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>	CC	<p>Review chemical storage areas and implement corrective actions to ensure that all chemicals are stored within secondary containment; the chemical register and MSDS are current and readily available; the waste collection system is inspected, maintained and repaired (as required).</p> <p>Maintain records of waste disposal and retain on site.</p> <p>Ensure that the care and maintenance period site induction for staff and contractors, 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.</p> <p>Ensure that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site.</p>

#	Criteria	Requirement	Responsibility	Recommendation
NC55	EPL, O2.1(a)	<p>Maintenance of plant and equipment</p> <p>All plant and equipment installed at the premises or used in connection with the licensed activity:</p> <p>a) must be maintained in a proper and efficient condition; and</p>	CC	<p>Undertake maintenance and cleaning of the wastewater catch drain system.</p> <p>Conduct a maintenance inspection and integrity test of the wastewater collection system including bunding, tanks and piping.</p> <p>Repair the breakage in the piping that leads from the wastewater catch drain to the oil/water separator and waste oil collection tank. Investigate whether any soil contamination has resulted from the breakage.</p> <p>Install bunding around the waste oil collection tank (if it is to remain operational).</p> <p>Ensure all plant and equipment required during care and maintenance is maintained in a proper and efficient manner as per a maintenance schedule or manufacturer's instructions.</p> <p>Retain maintenance and servicing records for all plant and equipment used at the site.</p> <p>Investigate the status of UST (which has not been used for 3 years). Undertake integrity testing and report results in the AEMRs. If no longer required, decommission the UST in accordance with WorkSafe NSW and NSW EPA requirements. If the tank is proposed to be used in the future, it is recommended that CC arrange for the tank and associated piping be tested prior to recommissioning.</p>
NC56	EPL, M1.1	<p>Monitoring records</p> <p>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.</p>	Coalpac	<p>Ensure environmental monitoring data for the last 4 years is readily available on site in accordance with the EPA Advisory Letter dated 6 January 2016 (including raw data).</p>
NC57	EPL, M1.2	<p>Monitoring records</p> <p>All records required to be kept by this licence must be:</p> <p>a) in a legible form, or in a form that can readily be reduced to a legible form;</p> <p>b) kept for at least 4 years after the monitoring or event to which they relate took place; and</p> <p>c) produced in a legible form to any authorised officer of the EPA who asks to see them.</p>	CC	<p>Ensure environmental monitoring data for the last 4 years is readily available on site in accordance with the EPA Advisory Letter dated 6 January 2016 (including raw data).</p>

#	Criteria	Requirement	Responsibility	Recommendation
NC58	EPL, M1.3	<p>Monitoring records</p> <p>The following records must be kept in respect of any samples required to be collected for the purposes of this licence:</p> <ul style="list-style-type: none"> <li>a) the date(s) on which the sample was taken;</li> <li>b) the time(s) at which the sample was collected;</li> <li>c) the point at which the sample was taken; and</li> <li>d) the name of the person who collected the sample.</li> </ul>	Coalpac	Ensure all future environmental monitoring reports captures all details required to be reported by EPL condition M1.3. This includes date, time and location of sampling, and name of person collecting the sample.
NC59	EPL, M2.2	Requirement to monitor concentration of pollutants discharged - Air Monitoring Requirements	CC – the Auditor notes that the method of TSP sampling was also undertaken by Coalpac	<p>The EPL specifies that particulate matter (TSP) is sampled using a high volume air sampler. In practice, at IDD1 (EPA point 3), TSP is estimated from PM10 data that is collected using a high volume air sampler. This revised sampling methodology is outlined in the Air Quality Management Plan, however is in contravention to the current EPL conditions. Consult with the EPA and DPE regarding the appropriateness of the sampling method used for measurement of TSP at IDD1 (EPA point 3). Retain copies of correspondence.</p> <p>If the change in sampling method for TSP is accepted by the relevant agencies, document the methodology for estimation of TSP from PM10 data and ensure this is recorded within the monthly air quality monitoring reports.</p> <p>Monthly monitoring reports to specify sampling methods to demonstrate compliance with EPL sampling method requirements.</p>

#	Criteria	Requirement	Responsibility	Recommendation
NC60	EPL, M3.1	<p>Testing methods - concentration limits</p> <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> <p>Note: The Protection of the Environment Operations (Clean Air) Regulation 2010 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>	CC	Refer to recommendations in NC59.
NC61	ML1635, C2	<p>Rehabilitation</p> <p>Any disturbance resulting from the activities carried out under this mining lease must be rehabilitated to the satisfaction of the Minister.</p>	CC	Address rehabilitation performance within ML1635 area and report remedial action in 2016 AEMR.
NC62	ML1635, C4(a)	<p>Compliance Report</p> <p>(a) The lease holder must submit a Compliance Report to the satisfaction of the Minister. The report must be prepared in accordance with any relevant guidelines or requirements published by the Minister for compliance reporting.</p>	CC	<p>An Annual Compliance Report (as per Condition 4 of the Mining Lease) is required to be submitted to the DRE by the lease anniversary date for each lease. A compliance report (the Auditor was not provided with a copy of this report) was submitted to DRE on 10 February 2016 which is not in line with the mine lease anniversary date.</p> <p>Ensure that subsequent Annual Compliance Reports are prepared and issued to DRE by the relevant lease anniversary to DRE in accordance with relevant guidelines.</p> <p>Establish a compliance register (that includes Mine Lease conditions) to enable compliance tracking and reporting.</p>
NC63	ML1635, C4(c)	<p>Compliance Report</p> <p>(c) The Compliance Report must be lodged with the Department annually on the grant anniversary date for the life of this mining lease.</p>	CC	See response to NC61.

#	Criteria	Requirement	Responsibility	Recommendation
NC64	ML1638, C2	Rehabilitation Any disturbance resulting from the activities carried out under this mining lease must be rehabilitated to the satisfaction of the Minister.	CC	Address rehabilitation performance within ML 1638 area and report remedial action in 2016 AEMR.
NC65	ML1638, C4(a)	Compliance Report (a) The lease holder must submit a Compliance Report to the satisfaction of the Minister. The report must be prepared in accordance with any relevant guidelines or requirements published by the Minister for compliance reporting.	CC	An Annual Compliance Report (as per Condition 4 of the Mining Lease) is required to be submitted to the DRE by the lease anniversary date for each lease. A compliance report (the Auditor was not provided with a copy of this report) was submitted to DRE on 10 February 2016 which is not in line with the mine lease anniversary date.  Ensure that subsequent Annual Compliance Reports are prepared and issued to DRE by the relevant lease anniversary to DRE in accordance with relevant guidelines.  Establish a compliance register (that includes Mine Lease conditions) to enable compliance tracking and reporting.
NC66	ML1638, C4(c)	Compliance Report (c) The Compliance Report must be lodged with the Department annually on the grant anniversary date for the life of this mining lease.	CC	See response to NC65.

**Table 8: Improvement Opportunities**

#	Criteria	Recommendation
IO1	PA 07_0127, S2, C14 (b)	Ensure that the site induction includes efficient operation of plant and equipment and that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site.
IO2	PA 07_0127, S3, C2	Noise monitoring reports should include a description of the sampling locations to demonstrate that the locations meet the requirements of PA07_0127 Schedule 3, Condition 2.
IO3	PA 07_0127, S3, C5 & SOC 5.18	Upon approval of any future mining operations at the site, obtain and review the Noise Pollution Reduction Program (required by PA 07_0127 Schedule 3, Condition 5 and SOC 5.18) and consult with the DPE and EPA to enable implementation of any outstanding actions resulting from this condition.. Ensure all mobile plant to be used on site have appropriate reversing alarms.
IO4	PA 07_0127, S3, C11	Engage a qualified technician to undertake an operation, maintenance and calibration check of the meteorological station and gain written confirmation that it complies with the requirements of the <i>Approved Methods for Sampling of Air Pollutants in New South Wales</i> guideline (in line with PA 07_0127, Schedule 3, Condition 11).
IO5	PA 07_0127, S3, C39	Ensure that the care and maintenance period site induction for staff and contractors, includes an appropriate Aboriginal Heritage induction that includes the location of the site and obligations under the <i>NPW Act 1974</i> . Ensure that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site, before working on the site.
IO6	PA 07_0127, S3, C42(a)	Review the Energy Savings Action Plan to confirm it meets the requirements of PA 07_0127 Schedule 3, Condition 42.
IO7	PA 07_0127, S5, C1(a)	Consult with the DPE to verify whether the Environmental Management Strategy (Coalpac, November 2009) has been approved by the DPE as required by PA 07_0127 Schedule 5, Condition 1.
IO8	SOC, C3.8	Retain records of licensed waste collection and disposal for the onsite septic systems.
IO9	SOC, C4.5	Statement of Commitment Condition 4.5 requires planting of <i>Eucalyptus cannonii</i> . The 2013 AEMR (Coalpac, 2013b) describes the planting of <i>E. cannonii</i> (Section 3.8.1) although this species does not appear on the Rehabilitation Seed Species List in Table 17. It is recommended that future AEMRs provide consistency between relevant sections of the report, or supplementary information on the planting of <i>Eucalyptus cannonii</i> is documented.
IO10	SOC, C5.3	Ensure all equipment used on site is regularly serviced and all service records are kept on file. Conduct periodic checks of the sound power levels of equipment used on site during noise generating maintenance works to compare against the levels used in the modelling and confirm compliance with noise criteria (as required by SOC Condition 5.3).
IO11	SOC, C5.4	Inspect all mobile plant onsite to ensure it is fitted with mid-high frequency broadband reverse beepers prior to use.
IO12	SOC, C7.5	Review target noxious weed species in subsequent control programs to capture the species identified during the site inspection on 28 January 2016, including Scotch Thistle ( <i>Onopordum acanthium</i> ) that were not known to be targeted during recent control spraying.

#	Criteria	Recommendation
IO13	SOC, C7.11	Requires planting of <i>Eucalyptus cannonii</i> . The 2013 AEMR (Coalpac, 2013b) describes the planting of <i>E. cannonii</i> (Section 3.8.1) although this species does not appear on the Rehabilitation Seed Species List in Table 17 of the AEMR. It is recommended that future AEMRs provide consistency between relevant sections of the report, or supplementary information on the planting of <i>Eucalyptus cannonii</i> is documented.
IO14	SOC, C8.2	Conduct inspections of the Aboriginal Heritage site 'Invincible OS1' prior to any planned pumping activity in the vicinity of the site, to ensure that planned water movements do not cause flood impacts to this area in accordance with the requirements of SOC Condition 8.2. Monitor the 'Invincible OS1' site during heavy rainfall periods and implement non-intrusive measures to divert water away from this area as required to minimise flooding impacts.
IO15	SOC, C9.3	If no longer applicable, it is recommended that SOC Condition 9.3 (relating to groundwater discharge point at the Main Colliery Dam) be removed in consultation with DPE and a record of consultation retained.
IO16	SOC, C9.13 & SOC, C12.1	Ensure water quality discharge monitoring reports identify whether sampling was undertaken within 24 hours of the commencement of discharge.
IO17	SOC, C9.15	Ensure all liquid chemical containers are stored within secondary containment / in bunding.
IO18	SOC, C11.15	Inspect all mobile plant onsite to ensure it is fitted with exhaust controls which satisfy NSW EPA emission requirements prior to use.
IO19	SOC, C11.16	Ensure all plant and equipment required during care and maintenance is maintained in a proper and efficient manner as per a maintenance schedule or manufacturer's instructions. Retain service records for all plant and equipment installed at the premises or currently used in connection with Project.
IO20	SOC, C11.19	Environmental monitoring reports should include information about meteorological conditions as they relate to the dispersion of air contaminants (at the time of air quality monitoring).
IO21	EPL, A3.1	Obtain a copy of the EPL application and review current works and activities to determine compliance with EPL condition A3.1. Establish and maintain a compliance register and include the requirements of the EPL application to enable compliance tracking.
IO22	EPL, P1.3	Update the maps within relevant Environmental Management plans (including the Water Management Plan to clearly identify the location of the wet weather discharge monitoring point (EPA identification 2).
IO23	EPL, L4.2	Quarterly noise monitoring reports to provide a statement of compliance with respect to EPL conditions L4.1 to L4.3.
IO24	EPL, O2.1(b)	Ensure that the site induction includes efficient operation of plant and equipment and that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site to satisfy the requirement of EPL Condition O2.1(b).
IO25	EPL, M2.3	Monthly environmental monitoring reports to specify sampling methods to demonstrate compliance with the sampling method specified in EPL Condition M2.3.
IO26	EPL, M3.2	Monthly environmental monitoring reports to specify testing methods to demonstrate compliance with the testing method specified in EPL Condition M3.2.

#	Criteria	Recommendation
IO27	ML1635, 3(f)(ii)	Confirm Annual reporting requirements with the DRE with respect to submission due dates for reports and the reporting period (i.e. financial year vs calendar year) for ML1635.
IO28	ML1635, 4(d) (ii)	Retain evidence of submission of a Compliance Report to the DRE with the ML1635 mining licence transfer application. Establish a compliance register and include the conditions of the Mine Lease to enable compliance tracking.
IO29	ML1635, 8	Retain evidence of submission of the group security required by Mining Lease 1635.
IO30	ML1638, 1(a)	Establish a compliance register and include the conditions of the Mine Lease to enable compliance tracking.
IO31	ML1638, 3(f)(ii)	Confirm Annual reporting requirements with the DRE with respect to submission due dates for reports and the reporting period (i.e. financial year vs calendar year) for ML1638.
IO32	ML1638, 4(d) (ii)	Retain evidence of submission of a Compliance Report to the DRE with the ML1638 mining licence transfer application. Establish a compliance register and include the conditions of the Mine Lease to enable compliance tracking.
IO33	ML1685, 8	Retain evidence of submission of the group security required by Mining Lease 1638.
IO34	LMP S7.1.1	Annual flora and fauna and rehabilitation monitoring has not recorded the following parameters during the audit period: - Species Diversity (the presence of at least four overstorey and four understorey species in 20m x 10m plot per 10ha); - Stem densities. Minimum total tree/shrub densities for sown areas are: (i) Year 2 - 3,000 stems/ha (ii) Year 5 - 2,000 stems/ha (iii) Year 7 - 600 stems/ha. This is not reported in the AEMRS. There are no fixed monitoring plots within rehabilitation post 2011. It is recommended that a review of rehabilitation performance against the stated criteria in the LMP is undertaken.
IO35	LMP S7.2(e)	The LMP (Section 7.2) requires areas not vegetated with established/remnant native trees and shrubs to be deep ripped in preparation for planting or seeding. No evidence that deep ripping has occurred within the BOA grassland areas during the site inspection. It is recommended that the need for this requirement be reviewed in the next monitoring session, and reported within the AEMR. Undertake deep ripping, if deemed appropriate.
IO36	LMP S7.2(f)	The LMP (Section 7.2) requires seeds to be sown in areas not designated for tubestock planting. No seeding was reported in the AEMRs. It is recommended that the need for this requirement be reviewed following the next monitoring session, and reported within the AEMR. Undertake seeding in appropriate areas, as recommended.
IO37	LMP S7.2(g)	The LMP (Section 7.2) requires tubestock planting in areas which contain already established native grasses. No tubestock planting was reported in the AEMR. It is recommended that the need for this requirement be reviewed following the next monitoring session, and reported within the AEMR. Undertake planting in appropriate areas, as recommended.
IO38	LMP S7.2(h)	The LMP (Section 7.2) requires the addition of fertiliser during the sowing and tubestock planting process. No fertiliser application in BOA was reported in the AEMR. It is recommended that the need for this requirement be reviewed following the next monitoring session, and reported within the AEMR. Undertake in appropriate areas, as recommended.

#	Criteria	Recommendation
IO39	LMP S8.1(b)	The LMP (Section 8.1) requires regular walk-through site assessment (minimum once a year). Walk-through site assessments have been conducted as part of the annual monitoring, however it is unclear if all areas of rehabilitation have been inspected annually. This should be clarified/updated as part of future monitoring.
IO40	LMP S8.1(c)	The LMP (Section 8.1) requires formal long-term monitoring using fixed monitoring plots. These have been established in older rehabilitation areas (centred within and around the 2008 block). However, monitoring plots are absent from 2012 and part of 2011 rehabilitation areas. It is recommended that fixed monitoring plots are established within all blocks of rehabilitation, including the 2012 rehabilitation areas. Monitoring should occur from the next season.
IO41	Ecology	Specific ecological adaptive management recommendations have been made by Kleinfelder (2015), as part of the Annual Flora, Fauna and Rehabilitation Monitoring report, and these are supported by observations and recommendations resulting from the site inspection by Cumberland Ecology. The rehabilitation program should be updated as per the findings of the Cumberland Ecology assessment and the recommendations of annual monitoring.
IO42	Ecology	Additional statistical data analysis could be performed to gain a greater understanding of the changes in species composition over time in the BOA, and this would strengthen the monitoring reports.
IO43	Ecology	2012 rehabilitation was in very poor condition. Exotic species were found to dominate the understorey with native eucalypt and acacia species germination found to be limited. No tubestock planting was observed in this area. It is therefore recommended that slope stabilisation, seeding, and subsequent tubestock planting (after the slope is stabilised) be undertaken in this area of rehabilitation.
IO44	Ecology	The key area for continuing improvement of flora, fauna and rehabilitation management is the remedial action within failed and poor quality rehabilitation areas, particularly the 2012 blocks.
IO45	Ecology	Low condition grasslands were not observed to be regenerating and adaptive management should be reviewed.
IO46	Ecology	Actions such as deep-ripping have not been employed at the edges of the moderate quality woodland and native dominated grasslands, which would be likely to improve natural regeneration. Bush regeneration techniques to promote natural regeneration, and then supplementing with tubestock planting and seeding, as part of an adaptive and ongoing approach would be suitable, and should be reviewed in the final MOP and supporting management plans.
IO47	Ecology	A low intensity ecological burn within the BOA has been recommended in each monitoring report. This recommendation has not been followed; and is supported by the findings of the Cumberland Ecology site inspection. Controlled ecological burn are very useful for promoting natural regeneration, and are suitable for all the vegetation types present in the BOA and should be considered.
IO48	Records	In general it was difficult to locate documentation to demonstrate compliance often due to the unique circumstance of a change in ownership throughout the audit period and access to records of the previous mine operator being limited. For current records, it is recommended that a review of the sites record management system be undertaken so that documents (including raw monitoring data) can be located easily by relevant parties on site. This will also assist in ensuring compliance with relevant conditions requiring presentation of information to regulators upon request (e.g. EPA).

#	Criteria	Recommendation
IO49	PIRMP	The PIRMP is current and was updated in February 2016. The PIRMP has not yet been tested and it is recommended that this be undertaken when required.
IO50	UST	The UST and its management or maintenance is not recorded in any documents relevant to the audit period. It is recommended that the UST be included within the Care and Maintenance MOP and regular maintenance be carried out and reported in the AEMRs. If the tank is no longer required, it should be decommissioned in accordance with WorkCover and NSW EPA requirements.

## 7. Conclusion

KMH Environmental has completed an IEA of the Invincible Colliery as required by PA 07\_0127. The audit comprised a site inspection on the 28 January 2016, document review, interviews with personnel, consultation with agencies and reporting of the findings.

Operations during the site inspection were generally observed to be carried out in a competent manner. The mine is inspected regularly, and records of this inspection are maintained. A number of improvement opportunities were identified relating to chemical storage, maintenance and repair of wastewater management system, surface water management/erosion and sediment control, heritage signage and rehabilitation.

The mine operators have developed and implemented an EMS to assist in the management of key issues with the potential to impact on the environment and local community. EMPs are in place to assist in the management and measurement of the environmental performance of the operation. These documents include mitigation measures required for the appropriate control of each. A number of recommendations have been made to assist in improving these plans.

A review of the AEMRs and Annual Return summaries on the POEO Public Register indicated that the site is generally compliant with environmental monitoring criteria and there have been no reportable incidents within the audit period. Since their engagement, Sedgman have implemented improved environmental reporting at the site and are working on improvements to internal record keeping (via an intranet). They have demonstrated a proactive and effective approach to community and government agency consultation.

This IEA has identified non-compliances with approvals and licences (refer to Compliance Registers). Recommendations are provided to assist Invincible Colliery improve environmental performance and achieve full compliance with approval and licence requirements.

## 8. Limitations

This section should be read before reliance is placed on any of the opinions, advice, recommendations or conclusions herein set out.

This report has been prepared for and at the request of Castlereagh Coal (The Client) pursuant to their appointment of KMH Environmental Pty Ltd (KMH) to act as its Environmental Auditor.

Save for The Client no duty is undertaken or warranty or representation made to any party in respect of the opinions, advice, recommendations or conclusions herein set out.

Regard should be had to the terms and conditions of KMH's Proposal when considering this report and reliance to be placed on it.

All work carried out in preparing this report has used, and is based upon, KMH's professional knowledge and understanding of the current relevant environmental legislation.

Changes in the below may cause the opinion, advice, recommendations or conclusions set out in this report to become inappropriate or incorrect. KMH will have no obligation to advise the Client of any such changes, or of their repercussions.

This report is based on observations during the Environmental Audit and information provided by the client. The information collected during the audit is believed to be true and is solely based on visual inspection and information provided by the auditee. KMH are of the belief that all the information provided by the auditee is correct and true at the time of the audit.

Assessment of the adequacy of any environmental management strategies, plans and programs was limited to a brief desktop review only. The EMS was not reviewed against ISO14001.

The content of this report represents the professional opinion of experienced environmental consultants. KMH does not provide specialist legal advice and the advice of appropriate legal professionals may be required.

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## Appendix A

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Compliance Register – Project Approval 07\_0127

**Invincible Colliery****Independent Environmental Audit****Detailed Findings and Recommendations****Project Approval - 07\_0127, Part Ben Bullen State Forest, Lot 1/DP 180294, Lot 113/DP877190, Lot 112/DP 877190**

January 2009 Modification in red, July 2009 modification in blue, October 2010 modification in green

The period covered by this audit is May 2013 to January 2016 (care and maintenance period only).

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation	Responsibility for Non-Compliance
<b>SCHEDULE 2 - ADMINISTRATIVE CONDITIONS</b>						
<b>Obligation to Minimise Harm to the Environment</b>						
S2.1	The Proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.	<b>Not Compliant (Low)</b>	The AEMRs stated that there were no reportable incidents of material harm to the environment during the audit period. A site inspection and review of documentation found no significant issues, however non-compliances have been identified. In the Auditors' opinion, the intent of this condition to minimise harm to the environment has been established via various environmental management plans and the engagement of Sedgman in 2015 to manage implementation of these plans during the care and maintenance period.	Site observation/interviews (28/01/16) AEMRs 2013 to 2015	The recommendations in this audit identify where improvements could be made to further prevent and/or minimise any harm to the environment that may result from the project.	Castlereagh Coal
<b>Terms of Approval</b>						
S2.2	The Proponent shall carry out the project generally in accordance with the: (a) EA; (b) statement of commitments; (c) the modification application 07_0127 MOD 2 and accompanying documents entitled: • 'Proposed Modification to Project Approval 07_0127 for the Invincible Colliery Open Cut Mine, May 2009'; and • 'Addendum to the Proposed Modification to Project Approval 07_0127 for the Invincible Colliery Open Cut Mine, July 2009'; and (d) modification application 07_0127 – MOD 3 and the accompanying Environmental Assessment prepared by Hansen Bailey and dated June 2010; and (e) the conditions of this approval. Note: The statement of commitments is reproduced in Appendix 2.	<b>Not Compliant (Low)</b>	This scope of the audit incorporated a review of compliance against the Project Approval, Statement of Commitments, EPL and Mine leases only.  Non-compliances with the conditions of the Project Approval (S2.2e) and Statement of Commitments (S2.2b) were identified during the audit as outlined in this compliance table.	Project Approval 07_0127 EPL 1095 (14/5/2015) Mine Lease 1635 Mine Lease 1638 Site observation/interviews (28/01/16)	Implementation of the recommendations in this audit will assist in ensuring the project is carried out in accordance with the Project Approval and Statement of Commitments.	Castlereagh Coal
S2.3	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.	<b>Noted</b>	n/a	n/a	n/a	n/a
S2.4	The Proponent shall comply with any reasonable and feasible requirements of the Director-General arising from the Department's assessment of: (a) any reports, plans, programs, strategies or correspondence that are submitted in accordance with the conditions of this approval; and (b) the implementation of any actions or measures contained in these reports, plans, programs, strategies or correspondence.	<b>Compliant</b>	The Annual Environmental Management Reports (AEMR) are reviewed by the Department of Planning and Environment (DPE). The AEMRs for 2013, 2014 and 2015 detail the results of the DPE's review of the previous AEMR and how these have been addressed in the current AEMR.  Correspondence from the DPE was issued to Andrew O'Brien of Sedgman Pty Ltd (Site Environmental Manager) on 9/12/2015, requesting the Independent Environmental Audit be completed (following an application for postponement due to the mine being in care and maintenance since 2013). Invincible Colliery has complied with this direction, with the engagement of the Auditor Environmental in December 2015.	AEMRs 2013 to 2015  DPE Letter to Sedgman dated 9/12/15	n/a	n/a
S2.4A	The Proponent shall prepare revisions of any strategies, plans or programs required under this project approval if directed to do so by the Director-General. Such revisions shall be prepared to the satisfaction of, and within a timeframe approved by, the Director-General.	<b>Not Compliant (Low)</b>	Sedgman reported that there have been no requests for revisions of any strategies, plans or programs required under the Project Approval since they were appointed Environmental Manager in May 2015. A letter from the Department of Planning (DoP) dated 6th July 2009 was sighted and refers to Coalpac's (former mine operator) application, submitted on 30th May 2009, for approval of monitoring programs, environmental management plans and an Energy Action Savings Plan. The Department requested the Energy Action Savings Plan (ESAP) be updated to include assessment and monitoring of greenhouse gas emissions from the sites open cut and auger mining operations in accordance with condition 42 (b) and (c) of Schedule 3. The Coalpac ESAP, dated June 2009, available on the Coalpac website, did not include details on the assessment and monitoring of greenhouse gas emissions, despite this information being reported in the AEMRs.	Site interviews (28/01/16)  Letter from Department of Planning dated 6/07/09  Energy Savings Action Plan, June 2009  Consultation with DPE (phone call 4/02/16)	Consult with the DPE to confirm the status of the approval of the Energy Savings Action Plan.  Upon approval of any application to continue mining activities, review the Energy Savings Action Plan to ensure it includes the assessment and monitoring of greenhouse gas emissions, including the duty to report under the National Greenhouse and Energy Reporting Scheme (NGERS).	Coalpac

Surrender of Project Approval 05_0065						
S2.5	By the end of November 2009, the Proponent shall surrender project approval 05_0065 to the satisfaction of the Director-General.	Not Verified	The Environmental Management Strategy notes that this approval expired on 7th September 2011. This was not verified during the audit.	Environmental Management Strategy, November 2009	n/a	n/a
Limits on Approval						
S2.6	Mining operations may take place on the site for 8 years from the date of this approval.	Compliant	The Project Approval 07_0127 is dated 2008, modified in January 2009, July 2009 and October 2010. Mining operations at the site ceased in April 2013 and in May 2013 the site was placed under Care and Maintenance. An application for recommencement of mining operations outside of the currently approved area is currently pending.	Site interviews (28/01/16) AEMR 2014	n/a	n/a
S2.7	The Proponent shall not extract more than 1.2 million tonnes of ROM coal per calendar year from the site.	Not Triggered	Mining operations ceased in April 2013. Compliance with this condition was not assessed as this activity was undertaken prior to the audit period.	AEMR 2013 Site interviews (28/01/16)	n/a	n/a
S2.8 (a)	The Proponent shall not: (a) transport more than 1.2 million tonnes of product coal per calendar year from the site;	Not Verified	During the audit period coal was transported from the site up until September 2013. The 2013 AEMR does not clearly identify the total amount of product coal transported from the mine. It indicates that 366,361 tonnes of product coal was generated at the site in 2013; and that a total of 30,873 t of coal was dispatched to domestic destinations other than the Mount Piper or Wallerawang Power Stations. The amount of coal transported to these power stations was not specified and it has been assumed that the maximum amount of coal transported from the site to be up to 366,361 tonnes. However this could not be verified.	AEMRs 2013, 2014, 2015	n/a	n/a
S2.8 (b)	The Proponent shall not: (b) permit more than 146 laden coal truck movements from the site per day, averaged over a week, with a maximum of 16 laden coal truck movements per hour.	Not Verified	From May to September 2013, the average laden truck movements per day were 5. This meets the criteria of 146 movements per day, averaged over the week. The last coal transported from the site was in September 2013.  Records showing the number of truck movements per hour was not available as it pre-dates the current mine operators records and therefore compliance with this condition during the audit period could not be verified.	AEMRs 2013, 2014, 2015	n/a	n/a
Hours of Operation						
S2.9 (a)	The Proponent is permitted to: (a) undertake mining operations and coal processing between the period of 7 am and 10 pm, Monday to Saturday, with the exception of public holidays, subject to the provisions of condition 10; and	Not Triggered	Mining operations and coal processing ceased in April 2013. Compliance with this condition was not assessed as this activity was undertaken prior to the audit period.	AEMR 2013 Site interviews (28/01/16) Care and Maintenance Mining Operations Plan, 2013	n/a	n/a
S2.9 (b)	The Proponent is permitted to: (b) undertake maintenance activities, and safety procedures as agreed with the I&I NSW, at any time.	Compliant	Maintenance activities are undertaken as outlined in the approved Care and Maintenance Mining Operations Plan (2013).	Site interviews (28/01/16) Care and Maintenance Mining Operations Plan, 2013	n/a	n/a
Prohibition on Evening Operations in the West, Central and Southern Pits						
S2.10	For the open cut pits depicted in Figure 3 of Appendix 1 as the West, Renown (Central), and South pits, the Proponent is not permitted to undertake mining operations between the hours of 6 pm and 10 pm. <i>Note: This condition does not apply if the Proponent can provide written noise agreements in accordance with condition 2 of Schedule 3, for all 15 residences predicted in the EA to receive noise levels in excess of 40dB(A) during evening operations.</i>	Not Triggered	Mining operations ceased in April 2013. Compliance with this condition was not assessed as this activity was undertaken prior to the audit period.	AEMR 2013 Site interviews (28/01/16)	n/a	n/a
Management Plans / Monitoring Programs						
S2.11 (a)	The Proponent may: (a) with the approval of the Director-General, submit any management plan or monitoring program required by this approval on a progressive basis; and	Not Compliant (Low)	The Department of Planning approved (via letter dated 6th July 2009) the following monitoring and management plans: - Noise Monitoring Program (condition 6 of schedule 3); - Air Quality Monitoring Program (condition 10 of schedule 3); - Water Management Plan (condition 13 of schedule 3); - Blast Monitoring Program (condition 30 of schedule 3); - Landscape Management Plan incorporating a Rehabilitation and Offset Management Plan (condition 34 and 35 of schedule 3); - Aboriginal Heritage Management Plan (condition 40 of schedule 3).  The letter approved a request for an alternative timetable for the submission of a Mine Closure Plan, required by conditions 34 and 36 of schedule 3. The plan was to be submitted by 30th June 2010. It was reported that a Mine Closure Plan has not yet been prepared and therefore was not submitted to the Department of Planning and Environment (DPE) by the required date and evidence of an extension to that date was not sighted during the audit. It is noted that an Environmental Management Strategy, Environmental Monitoring Program and Energy Savings Action Plan has also been submitted progressively.	Aboriginal Heritage Management Plan 2009; Air Quality Monitoring Program 2009; Blast Monitoring and Management Plan 2009; Environmental Management Strategy 2009; Environmental Monitoring Program 2009; Landscape Management Plan 2009; Noise Monitoring Program 2009; Water Management Plan 2009; Energy Savings Action Plan 2009.  Letter from DoP dated 6th July 2009	Consult with the DPE to obtain approval for an alternative timetable for the submission of a Mine Closure Plan, in consideration of the proposal to extend mining operations at the site.	Coalpac

S2.11 (b)	The Proponent may: (b) continue to implement management plans and monitoring programs produced in compliance with project approval 05_0065 (to the satisfaction of the Director-General) until replaced by management plans and monitoring programs approved in accordance with the conditions of this approval.	Compliant	The site no longer operates under any management plans and monitoring programs produced in compliance with project approval 05-0065. Monitoring programs and Management Plans were approved by the DoP on 6th July 2009.	Aboriginal Heritage Management Plan 2009; Air Quality Monitoring Program 2009; Blast Monitoring and Management Plan 2009; Environmental Management Strategy 2009; Environmental Monitoring Program 2009; Landscape Management Plan 2009; Noise Monitoring Program 2009; Water Management Plan 2009, Energy Savings Action Plan 2009. Letter from DoP dated 6th July 2009	n/a	n/a
<b>Structural Adequacy</b>						
S2.12	The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. Notes: • Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. • Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.	Not Triggered	Review of the AEMRs and site interviews confirmed that there had been no new construction on the site during the audit period.	AEMRs 2013, 2014, 2015 Site Interviews (28/01/16)	n/a	n/a
<b>Demolition</b>						
S2.13	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.	Not Triggered	Review of the AEMRs and site interviews confirmed that no demolition took place during the audit period. In November 2013, two demountable buildings were removed from site in November 2013 after the site was placed into care and maintenance, however this was not considered to comprise demolition work.	AEMRs 2013, 2014, 2015 Site Interviews (28/01/16)	n/a	n/a
<b>Operation of Plant and Equipment</b>						
S2.14 (a)	The Proponent shall ensure that all the plant and equipment used on site is: (a) maintained in a proper and efficient condition; and	Not Compliant (Medium)	The 2015 AEMR reports that most mobile plant and equipment has been removed from the site. Remaining equipment (such as excavators and dozers used for erosion control and rehabilitation maintenance and a mobile water pump) is periodically run, where possible, with pre-start inspections conducted at each instance. Sedgman advise that light vehicles are serviced off-site as required and no records are kept on site. Maintenance/pre-start inspection records for mobile equipment were not verified. It is noted that the mobile water pump is new and has not required servicing.  Stationary plant and equipment that is currently used on site during the care and maintenance period, as observed during the site inspection, includes (but is not limited to): a 75,000L diesel AST and a wastewater collection system. This system comprises a bulk waste oil tank and liquid waste storage facility that is bunded and contained by a catch drain network that leads to an oil/water separator and a 6,000L waste oil collection tank.  During the site inspection, the following observations were made by the Auditor: 1. The catch drain system contained (in sections) oily sediment and debris. 2. A break in the PVC pipes that leads from the catch drains to the oil/water separator and waste oil collection tank. Should any spills within the bunded area occur, this would leak onto the soil and vegetation on the embankment. 3. The 6000L waste oil collection tank is not bunded.  The wastewater collection system is designed to capture any spills from the current diesel AST refuelling area, the bunded waste oil tank and the liquid waste storage area. As such it is required to be maintained in proper and efficient working condition during the care and maintenance period.	Site Inspection (28/1/16) AEMR 2015 Induction Record 11/4/12	Undertake maintenance and cleaning of the wastewater catch drain system.  Conduct a maintenance inspection and integrity test of the wastewater collection system including bunding, tanks and piping.  Repair the breakage in the piping that leads from the wastewater catch drain to the oil/water separator and waste oil collection tank. Investigate whether any soil contamination has resulted from the breakage.  Install bunding around the waste oil collection tank (if it is to remain operational).  Retain maintenance and servicing records for all plant and equipment used at the site.	Castlereagh Coal
S2.14 (b)	The Proponent shall ensure that all the plant and equipment used on site is: (b) operated in a proper and efficient manner.	Compliant	During the site inspection, the only plant and equipment observed to be in operation was a water pump. The Mine Manager was sighted checking the pump and turning it off when no longer required demonstrating proper and efficient use of current equipment. Based on the observation of plant and equipment being used on site at the time of the audit, this condition is assessed as compliant.	Site Inspection (28/1/16)	Ensure that the site induction includes efficient operation of plant and equipment and that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site.	n/a
<b>Community Enhancement Contribution</b>						
S2.15	Prior to 30 May 2009, the Proponent shall contribute \$80,000 to Lithgow City Council for the provision of community facilities in the Cullen Bullen area. Any monies not expended within 2 years of their receipt by Council, may be reclaimed by the Proponent.	Not Verified	Compliance with this condition was not verified due to limited access to records relating to this period.	Site Interview (28/01/2016)	n/a	n/a

SCHEDULE 3 - SPECIFIC ENVIRONMENTAL CONDITIONS						
Noise						
Note: These conditions should be read in conjunction with sections 5 and 12 of the Statement of Commitments.						
S3.1	<b>Acquisition Upon Request</b> Upon receiving a written request for acquisition from the owner of any land listed in Table 1, the Proponent shall acquire the land in accordance with the procedures in conditions 6-8 of schedule 4. Land subject to acquisition upon request: Billabong Hillview	Not Triggered	The 2015 AEMR and site interviews confirmed that the Billabong and Hillview properties were acquired by the previous mine operator, Coalpac in 2010. As such, there were no written requests for acquisition from these properties during the audit period.	AEMR 2015 Site interview (28/01/16)	n/a	n/a
S3.2	<b>Impact Assessment Criteria</b> The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria set out in Table 2 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.  However, if the Proponent has a written negotiated noise agreement with any landowner and a copy of this agreement has been forwarded to the Department and DECCW, then the Proponent may exceed the noise limits in Table 2 on that land in accordance with the negotiated noise agreement.  Notes: To determine compliance with the noise limits, noise from the project is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary. The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable. These limits apply under meteorological conditions of: wind speeds of 3 m/s at 10 metres above ground level; or up to 3 degrees Celsius/100 m temperature inversion strength for all receivers, plus a 2 m/s source-to-receiver component drainage flow wind at 10 metres above ground level for those receivers where applicable.	Not Verified	Quarterly attended noise monitoring has been undertaken at the site for the duration of the audit period at three locations: Cullen Bullen South, Cullen Bullen West and Cullen Bullen Centre. Global Acoustics quarterly noise monitoring reports for 2013, 2014 and 2015 were sighted.  - The AEMRs 2013 to 2015 and the quarterly monitoring reports state there were no exceedances of the Project Approval criteria. - The monitoring reports provide an assessment of modifying factors for tonal, impulsive or intermittent noise in accordance with the NSW Industrial Noise Policy. - A statement of compliance with the location elements of this condition is not included in the monitoring reports and as the monitoring is attended, compliance with this aspect of the condition was not able to be verified (but is considered likely to be compliant). - Application of the meteorological conditions provided in the project approval are referenced and applied in the monitoring reports.  Most monitoring reports are provided on the Coalpac and Castlereagh Coal websites. The Q3 and 4 2014 and Q1 2015 reports were provided by Sedgman.  The Auditor was advised that there are no written negotiated noise agreements with any landowners currently in place.	Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015. AEMRs 2013, 2014, 2015	Noise monitoring reports to include a description of the sampling locations to demonstrate full compliance with condition 2 of schedule 3.	n/a
S3.3	<b>Land Acquisition Criteria</b> If the noise generated by the project exceeds the criteria in Table 3 at any residence on privately-owned land, or on more than 25% of any privately-owned land, the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 6, 8 of schedule 4.	Not Triggered	The AEMRs and quarterly monitoring reports for 2013 to 2015 confirmed that there were no exceedances of the Project Approval criteria during the audit period. The Auditor was also advised during site interviews that there have been no written requests for acquisition during this time.	Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015. AEMRs 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.4	<b>Additional Noise Mitigation Measures</b> Upon receiving a written request after 30 May 2009 from the land owner of either Billabong or Hillview properties or the land a landowner of any residence on privately-owned land where subsequent noise monitoring shows the noise generated by the project is equal to, or greater than 3 dB(A) LAeq (15 min) above the noise impact assessment criteria in Table 2 (unless a negotiated noise agreement is in place), the Proponent shall implement additional reasonable and feasible noise mitigation measures (such as double glazing, insulation and/or air conditioning) at the residence in consultation with the landowner.  If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.	Not Triggered	The 2015 AEMR and site interviews confirmed that the Billabong and Hillview properties were acquired by the previous mine operator, Coalpac in 2010. Based on the information reviewed (refer to S3.2 and S3.3), all other receptor sites were compliant with noise criteria. This condition was not triggered.	Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015. AEMRs 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.5	<b>Additional Noise Mitigation Measures</b> The Proponent shall develop and implement a Pollution Reduction Program (PRP) to the satisfaction of the DECCW. The Proponent shall include measures in the PRP to attenuate noise emissions from: (a) the rotary breaker at the Invinible coal preparation plant; (b) the jig washer at the Invinible coal preparation plant; (c) reversing alarms on all mobile plant; and (d) the operation of the jig washer and/or front end loader at the Invinible coal preparation plant during evening hours.	Not Verified	Consultation with the NSW EPA (9/02/16) confirmed that a Pollution Reduction Program (PRP) relating to noise commitments was submitted to the EPA in 2008. The Noise Monitoring Program (2009) states this was completed on 24th October 2008. The PRP was not sighted by the Auditor during this audit as it pre-dates the current mine operators records. Approval of the PRP by the DoP or DECCW was not sighted and implementation of the plan could not be verified within the scope of this audit.	EPA Email (9/02/16) Noise Monitoring Program, 2009	Upon approval of any future mining applications at the site, obtain and review the Pollution Reduction Program and consult with the DPE and EPA to enable implementation of any outstanding actions resulting from this condition.  Ensure all mobile plant to be used on site has appropriate reversing alarms.	n/a
S3.6 (a)	<b>Monitoring</b> The Proponent shall prepare and implement a Noise Monitoring Program for the project to the satisfaction of the Director-General. This program must: (a) be prepared in consultation with the DECCW;	Not Verified	Consultation with the NSW EPA indicated that the agency was consulted during the development of the Noise Monitoring Program. Verifiable evidence of consultation with DECCW (now NSW EPA) was not sighted however, as the current mine operators' access to these records is limited.	EPA Email (9/02/16) Noise Monitoring Program, 2009	Ensure the EPA is consulted during any future revisions to the Noise Monitoring Program, and evidence of consultation is retained.	n/a
S3.6 (b)	<b>Monitoring</b> This program must: (b) be submitted to the Director-General for approval prior to 30 May 2009;	Compliant	The Auditor sighted a letter from the Department of Planning (DoP) dated 6th July 2009. The letter refers to Coalpac's (former mine operator) application, submitted on 30th May 2009, for approval of a number of plans including the Noise Monitoring Program as required by the project approval. The Department approved the plans within this correspondence. The plan submission date was met and therefore this condition is assessed as compliant.	Letter from DoP dated 6th July 2009	n/a	n/a

S3.6 (c.)	<b>Monitoring</b> This program must: (c) include attended noise monitoring measures; and	<b>Compliant</b>	Section 8.1.3 of the Noise Monitoring Program (2009) addresses this requirement.  Global Acoustic quarterly noise monitoring reports provide evidence of implementation of the quarterly attended monitoring.	Noise Monitoring Program, 2009 Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015. AEMRs 2013, 2014, 2015	n/a	n/a
S3.6 (d)	<b>Monitoring</b> This program must: (d) set out and explain how the Proponent would respond to any exceedance of the noise impact assessment criteria in Tables 2 and 3.	<b>Compliant</b>	Section 8.2 to 8.8 of the Noise Monitoring Program (2009) addresses this requirement.  Global Acoustic quarterly monitoring reports indicate that there have been no exceedance of the noise impact assessment criteria that would trigger these response protocols.	Noise Monitoring Program, 2009 Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015.	n/a	n/a
S3.7	<b>Continuous Improvement</b> The Proponent shall: (a) implement all reasonable and feasible best practice noise mitigation measures; (b) continue to investigate ways to reduce the noise generated by the project; and (c) report on these investigations and the implementation and effectiveness of these measures in the AEMR, to the satisfaction of the Director-General.	<b>Compliant</b>	The site is currently in care and maintenance and generates minimal noise. All noise monitoring results reviewed indicate compliance with the relevant project criteria.  The AEMRs reported on all measures implemented to reduce noise generated by the project. The AEMRs are reviewed by the DPE and any issues arising from this review are reported in the following AEMR. No noise related issues were reported in the AEMRs as a result of the DPE review.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16) Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015.	n/a	n/a
<b>Air Quality</b> <small>Note: These conditions should be read in conjunction with sections 11 and 12 of the Statement of Commitments.</small>						
S3.8	<b>Impact Assessment Criteria</b> The Proponent shall ensure that dust and particulate emissions generated by the project do not cause additional exceedances of the criteria listed in Tables 4 to 6 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.	<b>Compliant</b>	Deposited dust is monitored on a monthly basis at five representative locations around the mine site (dust deposition gauges IDD1 to IDD5). Monitoring of particulate matter is conducted on a 24-hour basis (recorded continuously and collected weekly) using a HVAS located at the boundary of the Invincible Colliery site. Total suspended particulates are estimated from the PM10 concentrations as outlined in the AQMP.  The AEMRs for 2013 to 2015 confirmed that there were no exceedances of the Project Approval criteria detected at air monitoring stations located on privately-owned land during the audit period. It is noted that high depositional dust readings were recorded at dust gauge IDD5 in 2014. This gauge is located in the centre of the mine site. As the site was in care and maintenance for the 2014 reporting period and the high levels recorded by IDD5 were reported to be inconsistent with all other air quality monitoring sites, including the HVAS, it was considered to either reflect measurement errors/equipment malfunction or the result of external influence (insect activity, human interference etc.).	Site interviews (28/01/16) AEMRs 2013, 2014, 2015 Monthly monitoring reports May 2013 to December 2015 Air Quality Monitoring Program, June 2009	n/a	n/a
S3.9	<b>Land Acquisition Criteria</b> If the dust and particulate emissions generated by the project exceed the criteria in Tables 7 to 9 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land, the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 6-8 of schedule 4.	<b>Not Triggered</b>	Sedgman advise that there has been no written requests for acquisition within the audit period.	Site interviews (28/01/16)	n/a	n/a
S3.10 (a)	<b>Monitoring</b> The Proponent shall prepare and implement an Air Quality Monitoring Program for the project to the satisfaction of the Director-General. This program must: (a) be submitted to the Director-General prior to 30 May 2009;	<b>Compliant</b>	The Auditor sighted a letter from the Department of Planning (DoP) dated 6th July 2009. The letter refers to Coalpac's (former mine operator) application, submitted on 30th May 2009, for approval of a number of plans including the Air Quality Monitoring Program as required by the project approval. The Department approved the plans within this correspondence. The plan submission date was met and therefore this condition is assessed as compliant.	Letter from DoP dated 6th July 2009	n/a	n/a
S3.10 (b)	<b>Monitoring</b> This program must: (b) be prepared in consultation with the DECCW;	<b>Not Verified</b>	Consultation with the NSW EPA as part of this audit indicated that the agency was consulted during the development of the Air Quality Monitoring Program. Verifiable evidence of consultation with DECCW (now NSW EPA) was not sighted however, as the current mine operators' access to these records is limited.	EPA Email (9/02/16) Air Quality Monitoring Program, 2009	Ensure the EPA is consulted during any future revisions to the Air Quality Monitoring Program, and evidence of consultation is retained.	n/a
S3.10 (c.)	<b>Monitoring</b> This program must: (c) use a combination of high volume samplers and dust deposition gauges to monitor the performance of the project.	<b>Compliant</b>	Section 9 of the Air Quality Monitoring Program (2009) addresses this requirement.	Air Quality Monitoring Program, 2009	n/a	n/a
<b>Meteorological Monitoring</b>						
S3.11	During the life of the project, the Proponent shall ensure that there is a suitable meteorological station in the vicinity of the site that complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline.	<b>Not Verified</b>	A meteorological monitoring station was observed on site during inspection on 28/01/16. It was reported by Sedgman that the weather station was established in 2009 in accordance with Australian Standards and Guidelines the specifications have not been able to be located as they pre-date records held by Castlereagh Coal and Sedgman who took over management of the site in 2015.  The 2011 IER reported that the weather station was upgraded in May 2009 to rectify data capture reliability issues. No issues were reported following this upgrade.  In 2012 ALS completed two Operation, Maintenance and Data Dissemination inspections. No issues with the equipment were reported, however the report identified a calibration check to be completed during the next inspection. No records of this being undertaken were sighted during the audit.	Site Inspection 28/01/16 ALS, Coalpac Weather Station Operation Maintenance and Data Dissemination Report, July 2012 ALS, Coalpac Weather Station Operation Maintenance and Data Dissemination Report, October 2012	Engage a qualified technician to undertake an operation, maintenance and calibration check of the meteorological station and gain confirmation that it complies with the requirements of the <i>Approved Methods for Sampling of Air Pollutants in New South Wales</i> guideline.	n/a

Soil and Water						
S3.12	<b>Discharge</b> Except as may be expressly provided for by an EPL, or in accordance with section 120 of the Protection of the Environment Operations Act 1997, the Proponent shall not discharge any mine water from the site.	Not Compliant (Medium)	The EPL permits wet weather discharge from the overflow point located at the water storage dam below the washery and labelled as Discharge Point #2 on plan titled 'Invincible Open Cut Environmental Monitoring Sites' dated 29 June 2001. A copy of the plan was not available at the time of the audit and is required to verify the location as per this figure, however the description appears to match the discharge location used.  It was reported during site interviews, that dirty water storage dams are utilised during heavy rainfall events, these are the Sump Dam (SDC3-7) and Crib Hut Dam (SD-C3-6, now SD4). All water captured in these two dams is either pumped or drains into the underground workings or is reused on site when required. This is approved in the Care and Maintenance Mining Operations Plan (2013) but is not expressly provided for within the EPL.  Consultation with the Department of Primary Industries - Water also indicated that the site needs to consider the Aquifer Interference Policy for all surface water movement activities.	AEMRs 2013, 2014, 2015 Care and Maintenance Mining Operations Plan, 2013. Consultation with Department of Primary Industries - Water by phone (9/02/16)	Review the current operations against the Aquifer Interference Policy.  Apply to the EPA for a modification of the Environment Protection Licence to permit discharge via the underground workings.	Coalpac
S3.13 a	<b>Water Management Plan</b> The Proponent shall prepare and implement a Water Management Plan to the satisfaction of the Director-General. This Plan must: (a) be prepared in consultation with NOW;	Not Verified	Section 3 of the Water Management Plan (2009) indicates that consultation with the Department of Water and Energy was made on 19 May 2009 regarding any additional requirement other than those stipulated in the Project Approval. The plan states that no additional requirements were requested. Consultation with the Department of Primary Industries-Water undertaken during this audit indicated that the agency was consulted during the development of the Water Management Plan Program. Verifiable evidence to support these statements was not sighted however.	Consultation by phone with Department of Primary Industries - Water (9/02/16) Water Management Plan, 2009	Ensure the DPI-Water is consulted during any future revisions to the Water Management Plan, and evidence of consultation is retained.	n/a
S3.13 b	<b>Water Management Plan</b> This Plan must: (b) be submitted to the Director-General for approval prior to 30 May 2009; and	Compliant	The Auditor sighted a letter from the Department of Planning (DoP) dated 6th July 2009. The letter refers to Coalpac's (former mine operator) application, submitted on 30th May 2009, for approval of a number of plans including the Water Management Plan as required by the project approval. The Department approved the plans within this correspondence. The plan submission date was met and therefore this condition is assessed as compliant.	Letter from DoP dated 6th July 2009	n/a	n/a
S3.13 c (i)	<b>Water Management Plan</b> This Plan must include a site water balance with: - details of sources and security of water supply; - details of water use and management on site, as well as any off site water transfers; and - measures to minimise water use by the project;	Compliant	Section 7 of the Water Management Plan (2009) references the requirements of this condition.	Water Management Plan, 2009	n/a	n/a
S3.13 c (ii)	<b>Water Management Plan</b> This Plan must include an erosion and sediment control plan for all surface works in the mining area that is consistent with the requirements of Managing Urban Stormwater: Soils and Construction Manual (Landcom 2004, or its latest version);	Not Compliant (Medium)	Section 8 of the Water Management Plan (2009) provides an Erosion and Sediment Control Plan. Erosion was observed on site during the site inspection and has been noted by others during recent inspections of the rehabilitation areas (Kleinfelder, 2015), indicating that review and maintenance of controls is required.	Water Management Plan, 2009 Kleinfelder, Annual Flora, Fauna and Rehabilitation Monitoring Report, 2015	Update the Erosion and Sediment Control Plan with reference to the latest guidelines for Managing Urban Stormwater: soils and construction, Volume 2E Mines and quarries (Blue Book).	Coalpac
S3.13 c (iii)	<b>Water Management Plan</b> This Plan must include a surface water monitoring program with: - detailed baseline data on surface water flows and quality in the watercourses that could be affected by the development; - surface water impact assessment criteria, including trigger levels for investigating potentially adverse surface water impacts of the development; and - a program to monitor surface water flows and quality in the watercourses that could be affected by the development;	Compliant	Section 9 of the Water Management Plan (2009) references the requirements of this condition.	Water Management Plan, 2009	n/a	n/a
S3.13 c (iv)	<b>Water Management Plan</b> This Plan must include a groundwater monitoring program with: - baseline data of groundwater levels and quality in the region, including details of any privately-owned groundwater bores which could be affected by the development; - groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts of the development; and - a program to monitor: o groundwater inflows to the open cut mining operations; & o impacts of the development on the region's aquifers, groundwater bores and surrounding watercourses; and	Not Compliant (Low)	Section 10 of the Water Management Plan (2009) references a Groundwater Monitoring Program. The plan includes baseline data, groundwater impact assessment criteria and trigger levels, however it lacks a detailed monitoring program to assess groundwater inflows to the open cut mining operations or impacts of the development on the regions water resources. The 2014 and 2015 AEMRs indicate that groundwater monitoring is undertaken from up and downgradient wells, however this monitoring is not detailed in the WMP.	Water Management Plan, 2009 Environment and Natural Resource Solutions, Groundwater Monitoring Event (GME) report Round 6, July 2014	Update the Water Management Plan to include a groundwater monitoring program that satisfies the requirements of the Project Approval.	Coalpac
S3.13 c (v)	<b>Water Management Plan</b> This Plan must include a surface and groundwater response plan which describes the measures and/or procedures that would be implemented to: - respond to any exceedances of the surface water and groundwater assessment criteria; and - compensate landowners of privately-owned land whose water supply is adversely affected by the development.	Compliant	Section 11 of the Water Management Plan (2009) references the requirements of this condition.	Water Management Plan, 2009	n/a	n/a

Transport						
Note: These conditions should be read in conjunction with sections 2 and 10 of the Statement of Commitments.						
S3.14	<b>Monitoring of Coal Transport</b> The Proponent shall keep records of the amount of coal transported from the mine site and number of coal truck movements each year and include these records in the AEMR.	Not Compliant (Low)	During the audit period, coal was transported from the mine site between May to September 2013. Records showing coal transport volumes and truck movements were not available at the time of the audit, as these activities were recorded by the previous mine operator and access to records is limited.  The 2013 AEMR does not clearly identify the total amount of product coal transported from the mine. It indicates that 366,361 tonnes of product coal was generated at the site in 2013; and that a total of 30,873 t of coal was dispatched to domestic destinations other than the mount Piper or Wallerawang Power Stations. The amount of coal transported to these power stations was not specified and it has been assumed that the maximum amount of coal transported from the site to be up to 366, 361 tonnes.  The 2013 AEMR states that the average laden truck movements per day were five. However it did not report the total number of truck movements during the period.	AEMR 2013	As this condition relates to previous mining operations, there are no current recommendations related to this non-compliance.	Coalpac
S3.15	<b>Coal Transportation Hours</b> The Proponent shall only transport coal from the site by road between the hours of 7 am and 9:30 pm Monday to Saturday, and at no time on Sundays or public holidays.	Not Verified	Coal transport activities were undertaken within the audit period from May 2013 to September 2013, after which time no further coal transport was undertaken. The operating hours were specified in the 2013 AEMR and no incidents or complaints relating to out of hours works were recorded during the relevant period. It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.16	<b>Coal Haulage Limits</b> The Proponent shall ensure that coal haulage from the project within the Lithgow local government area is conveyed only on the Castlereagh Highway, the Great Western Highway and Boulder Road, except with the approval of the Director-General.	Not Verified	It was not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.17	<b>Coal Haulage Limits</b> The Proponent shall ensure the Castlereagh Highway between its junction with Boulder Road and the Wallerawang Power Station is not used to transport coal to the Wallerawang Power Station for more than two weeks in any three month period, and only after prior notification has been given by the Proponent to all landowners of residences within 200 metres of this route, unless otherwise approved by the Director-General.	Not Verified	It was not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.18	<b>Coal Haulage Limits</b> Subject to conditions 7 and 8 of schedule 2, the Proponent is permitted to transport up to 200,000 tonnes of coal per calendar year by road to domestic destinations other than the Mount Piper or Wallerawang power stations. <i>Note: Prior to the surrender of project approval 05_0065 under condition 5 of schedule 2, conditions 16 and 17 include any entitlements under that approval.</i>	Not Verified	During the audit period, coal was transported from site in 2013 only. No coal was transported off site in 2014 or 2015. In 2013, a total of 30,873 t of coal was dispatched to domestic destinations other than the mount Piper or Wallerawang Power Stations. This is well below the approval limit of 200,000t per annum. Based on the information presented in the AEMR, this condition is considered compliant, however was not able to be verified.	AEMR 2013	n/a	n/a
S3.18A	<b>Coal Haulage Limits</b> The Proponent shall install a truck wheel wash with sprays by 31 December 2010 and following this date, must ensure that all coal trucks have their tyres and vehicles cleaned of mud and dust prior to exiting the Colliery, to the satisfaction of the Director-General. The truck wheel wash with sprays must remain in place unless replaced by equivalent mitigation measures to the satisfaction of the Director-General.	Administrative Non Compliance	The 2011 AEMR reported the installation of the wheel wash at the site in 2011. The wheel wash was not installed by the required date. There are no recommendations required to address this administrative non-compliance.  The wheel wash was observed in operating condition during the site inspection.	AEMR 2011, 2012, 2013 Site inspection (28/01/16)	There are no recommendations required to address this administrative non-compliance.	Coalpac
Blasting and Vibration						
Note: These conditions should be read in conjunction with sections 6 and 12 of the Statement of Commitments.						
S3.19	<b>Airblast Overpressure Impact Assessment Criteria</b> The Proponent shall ensure that the airblast overpressure level from blasting at the project does not exceed the criteria in Table 10 at any residence on privately-owned land.	Not triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.20	<b>Ground Vibration Impact Assessment Criteria</b> The Proponent shall ensure that the ground vibration level from blasting, or any other activity at the project does not exceed the criteria in Table 11 at any residence on privately-owned land.	Not triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.21	<b>Blasting Hours</b> The Proponent shall only carry out blasting on the site between 9 am and 5 pm Monday to Saturday, and at no time on public holidays.	Not triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.22	<b>Blasting Frequency</b> The Proponent shall not carry out more than: (a) 2 blasts a day; or (b) 5 blasts a week, averaged over any 12 month period; without the approval of the Director-General.	Not triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a

S3.23	<b>Operating Conditions</b> During mining operations on site, the Proponent shall implement best blasting practice to: (a) protect the safety of people, property, public infrastructure and livestock; and (b) minimise the dust and fume emissions from blasting.	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.24	<b>Operating Conditions</b> The Proponent shall not undertake blasting within 500 metres of any privately-owned land, unless suitable arrangements have been made with the landowner and any tenants to minimise the risk of flyrock-related impact to the property to the satisfaction of the Director-General.	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.25	<b>Road Closure</b> Prior to blasting within 500 metres of any public road, the Proponent shall prepare and implement a Road Closure Management Plan to the satisfaction of RTA and I&I NSW.	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.26 a	<b>Public Notice</b> During mining operations on site, the Proponent shall: (a) notify any person who registers an interest in being notified about the <u>blasting schedule at the mine</u> .	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.26 b	<b>Public Notice</b> During mining operations on site, the Proponent shall: (b) operate a Blasting Hotline, or alternate system agreed to by the Director-General, to enable the public to get up-to-date information on the blasting schedule at the project;	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.26 c	<b>Public Notice</b> During mining operations on site, the Proponent shall: (c) advertise the blasting hotline number in a local newspaper each year; and	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.26 d	<b>Public Notice</b> During mining operations on site, the Proponent shall: (d) provide signage, with updated details of proposed blasting times, immediately to the north and south of the mine site on the Castlereagh Highway.	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.27	<b>Property Inspections</b> Before carrying out blasting within 2 km of any privately-owned land, the Proponent shall advise such landowners, and any other landowner nominated by the Director-General, that they are entitled to a property inspection to establish the baseline condition of any residence or other significant structure.	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.28	<b>Property Inspections</b> If the Proponent receives a request for a property inspection from such a landowner, the Proponent shall: (a) commission a suitably qualified person, whose appointment has been approved by the Director-General, to inspect and report on the condition of any building or structure on the land, and recommend measures to mitigate any potential blasting impacts; and (b) give the landowner a copy of this property inspection report. <i>Note: It is preferable for the property inspection to be carried out prior to the commencement of blasting activities on the site, and the Proponent should facilitate this occurring wherever possible.</i>	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.29	<b>Property Investigations</b> If any owner of privately-owned land within 2 km of proposed blasting activities, or any other landowner nominated by the Director-General, claims that any building or structure on his/her property, including vibration-sensitive infrastructure such as water supply or underground irrigation mains, has been damaged as a result of blasting at the project, the Proponent shall within 3 months of receiving this request: (a) commission a suitably qualified person whose appointment has been approved by the Director-General to investigate the claim; and (b) give the landowner a copy of the finalised property investigation report. If this independent investigation confirms the landowner's claim, and both parties accept these findings, then the Proponent shall repair the damages to the satisfaction of the Director-General. If the Proponent or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Director-General for resolution. The Proponent shall repair the damages to the satisfaction of the Director-General.	<b>Not triggered</b>	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
S3.30 (a)	<b>Monitoring</b> The Proponent shall prepare and implement a Blast Monitoring Program for the project to the satisfaction of the Director-General. This program must: (a) be prepared in consultation with the DECCW;	<b>Not Verified</b>	Consultation with the NSW EPA indicated that the agency was consulted during the development of the Blast Monitoring Program. Verifiable evidence of consultation with DECCW (now NSW EPA) was not sighted however, as the current mine operators' access to these records is limited.	EPA Email (9/02/16) Blast Monitoring and Management Plan, 2009	Ensure the EPA is consulted during any future revisions to the Blast Monitoring Program, and evidence of consultation is retained.	n/a

S3.30 (b)	<b>Monitoring</b> This program must: (b) be submitted to the Director General for approval by 30 May 2009;	<b>Compliant</b>	the Auditor sighted a letter from the Department of Planning (DoP) dated 6th July 2009. The letter refers to Coalpac's (former mine operator) application, submitted on 30th May 2009, for approval of a number of plans including the Blast Monitoring Program as required by the project approval. It is assumed that this is the same as the report titled 'Blast Monitoring and Management Plan, 2009'. The Department approved the plans within this correspondence. The plan submission date was met and therefore this condition is assessed as compliant.	Letter from DoP dated 6th July 2009 Blast Monitoring and Management Plan, 2009	n/a	n/a
S3.30 (c)	<b>Monitoring</b> This program must: (c) include a protocol for evaluating blasting impacts on, and demonstrating compliance with the blasting criteria in this approval for all privately-owned residences and structures.	<b>Compliant</b>	The Blast Monitoring and Management Plan generally outlines the protocols and compliance monitoring and reporting requirements of this condition.	Blast Monitoring and Management Plan, 2009	n/a	n/a
<b>Landscape</b> <small>Note: These conditions should be read in conjunction with sections 4, 6, 7, and 12 of the Statement of Commitments.</small>						
S3.31	<b>Biodiversity Offsets</b> The Proponent shall implement the Biodiversity Offset Strategy summarised in Table 12 and described in: (a) the document titled Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension, prepared by RW Corkery & Co Pty Ltd and dated May 2008; (b) the document titled Lot 112, DP 877190 Biodiversity Offset Area, Prepared as Supplementary Information to the Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension, prepared by RW Corkery & Co Pty Ltd and dated July 2008; and (c) section 5.7.2 of the EA titled Proposed Extension of Invincible Open Cut Mine and Rehabilitation Activities, prepared by Craven, Elliston & Hayes (Lithgow) Pty Ltd and dated March 2006. to the satisfaction of the Director-General. <i>Note: Where there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency.</i>	<b>Compliant</b>	The Biodiversity Offset Strategy has been implemented and includes: - Lot 112 DP 877190 - Lot 1 DP 180294 - Lot 113 DP 877190  This provides for a total offset area of 120.5 ha	- Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension, prepared by RW Corkery & Co Pty Ltd and dated May 2008; - Lot 112, DP 877190 Biodiversity Offset Area, Prepared as Supplementary Information to the Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension, prepared by RW Corkery & Co Pty Ltd and dated July 2008;	n/a	n/a
S3.32	<b>Biodiversity Offsets</b> Within 2 years of the date of this approval, the Proponent shall provide appropriate long term security for the biodiversity offset strategy, to the satisfaction of the Director-General. <i>Note: The long-term security of the offset can be achieved through one, or a combination, of the following: Deed of Agreement with the Minister, rezoning the land under the Lithgow Local Environment Plan, caveats on the title under the Conveyancing Act 1919, etc.</i>	<b>Not Compliant (Low)</b>	Evidence of the provision of appropriate long-term security for the Biodiversity Offset Strategy was not provided by Sedgman or Castlereagh Coal.	Interview with Liz Clough of Sedgman on 28/1/16	It is recommended that the leaseholder provide appropriate security for the Biodiversity Offset Strategy such as rezoning of Lot 112 DP877190, Lot 113 DP 877190 and Lot 1 DP180294 or the application of a protective covenant (such as a Section 88B Covenant) on title. Consult with the DPE.	Coalpac
S3.33	The Proponent shall progressively rehabilitate the site in a manner that is generally consistent with the final landform set out in the EA (shown conceptually in Figure 5 of Appendix 1) to the satisfaction of the Director-General and I&I NSW.	<b>Not Compliant (Low)</b>	Progressive rehabilitation of the site has generally been consistent with the final landform set out in the EA. Although the maximum slope has been exceeded in some areas of rehab, particularly the 2012 seeded areas. This has resulted in top soil loss and erosion, in parts, and the failed establishment of native vegetation, seeded as part of rehabilitation measures (aerial seeding in particular) in the north-western portion of the site. Although there has been no new rehabilitation areas established by CC and rehabilitation performance is assessed annually, re-evaluation of the establishment of failed rehabilitation areas, particularly on steep slopes is required.	Consolidated Project Approval AEMR 2015	Review Rehabilitation progress and performance, including the establishment of failed rehabilitation areas on steep slopes. Update Rehabilitation programme, as per the findings of an assessment, and as per the recommendations of the Annual monitoring.	Castlereagh Coal
S3.34 (a)	<b>Landscape Management Plan</b> The Proponent shall prepare and implement a detailed Landscape Management Plan for the site to the satisfaction of the Director-General and I&I NSW. This plan must: (a) be prepared in consultation with Lithgow City Council and NOW by suitably qualified expert/s whose appointment/s have been approved by the Director-General;	<b>Not Compliant (Medium)</b>	A Landscape Management Plan (LMP), dated June 2009 was reviewed. Section 1.2 of the plan indicates that it was prepared in consultation with Lithgow City Council (LCC) and NOW as required by this condition. Records were not available to verify this condition has been met. The plan states that it was developed in consultation variously between relevant mine personnel, Global Soil Systems (GSS) and LCC and DWE. Records showing the approved appointment of GSS by the DPE were not available to verify this condition.  Site inspection confirmed that the Landscape Management Plan (LMP) was not implemented according with all criteria set out in the plan. In particular with regard to planting in the Biodiversity Offset Areas, successful establishment of progressive rehabilitation areas, and the annual monitoring of each new area of rehabilitation.	Landscape Management Plan, 2009	Ensure the Lithgow City Council and the DPI-Water is consulted during any future revisions to the Water Management Plan, and evidence of consultation is retained.  Implement the LMP in terms of achieving performance criteria for rehabilitation, and following recommendations from Annual Flora, Fauna and Rehabilitation Monitoring.	Castlereagh Coal
S3.34 (b)	<b>Landscape Management Plan</b> This plan must: (b) be submitted to the Director-General for approval by 30 May 2009;	<b>Compliant</b>	The Auditor sighted a letter from the Department of Planning (DoP) dated 6th July 2009. The letter refers to Coalpac's (former mine operator) application, submitted on 30th May 2009, for approval of a number of plans including the Landscape Management Plan. The Department approved the plans within this correspondence. The plan submission date was met and therefore this condition is assessed as compliant.		n/a	n/a

S3.34 (c.)	<b>Landscape Management Plan</b> This plan must: (c) include a: • Rehabilitation and Offset Management Plan; and • Mine Closure Plan. <i>Note: The Department accepts that the initial Landscape Management Plan may not include the detailed Mine Closure Plan. However, if this occurs, the Proponent will be required to seek approval from the Director-General for an alternative timetable for the completion and approval of the Mine Closure Plan.</i>	Not Compliant (Medium)	The LMP includes the Rehabilitation and Offset Management Plan. A Mine Closure Plan has not been prepared. The Department of Planning (via letter dated 6th July 2009) approved a request for an alternative timetable for the submission of a Mine Closure Plan, required by conditions 34 and 36 of schedule 3. The plan was to be submitted by 30th June 2010. It is reported that a Mine Closure Plan has not been completed and therefore was not submitted to the Department of Planning and Environment (DPE) by this date and evidence of an extension to this date was not sighted during the audit.	Letter from DoP dated 6th July 2009 Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015) Landscape Management Plan, 2009 - Section 1.2 and Review History table on second title page and Table 1. Site interviews (28/01/16) <a href="http://www.planningportal.nsw.gov.au/find-a-property">www.planningportal.nsw.gov.au/find-a-property</a> ; searched for zoning of each BOA	Consult with the DPE to obtain approval for an alternative timetable for the submission of a Mine Closure Plan, in consideration of the proposal to extend mining operations at the site.	Coalpac
S3.35 a	<b>Rehabilitation and Offset Management Plan</b> The Rehabilitation and Offset Management Plan must include: (a) the objectives for rehabilitation of the site and biodiversity offset areas;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 4	Landscape Management Plan (Coalpac, 2009) Section 4.1	n/a	n/a
S3.35 b	<b>Rehabilitation and Offset Management Plan</b> The Rehabilitation and Offset Management Plan must include: (b) strategic description of how the rehabilitation of the site and biodiversity offset areas would be integrated with surrounding land use;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 5	Landscape Management Plan (Coalpac, 2009) Section 5	n/a	n/a
S3.35 c	<b>Rehabilitation and Offset Management Plan</b> The Rehabilitation and Offset Management Plan must include: (c) details of the vegetation species and communities to be established in the biodiversity offset areas;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 6	- Landscape Management Plan (Coalpac, 2009) Section 6.	n/a	n/a
S3.35 d	<b>Rehabilitation and Offset Management Plan</b> The Rehabilitation and Offset Management Plan must include: (d) detailed performance and completion criteria for the rehabilitation of the site and the implementation of the biodiversity offsets;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 7	Landscape Management Plan (Coalpac, 2009) Section 7	n/a	n/a
S3.35 e	<b>Rehabilitation and Offset Management Plan</b> (e) a detailed description of how the performance of the rehabilitation works and the biodiversity offset areas would be monitored over time to achieve the stated objectives;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 8	Landscape Management Plan (Coalpac, 2009) Section 8	n/a	n/a
S3.35 f	<b>Rehabilitation and Offset Management Plan</b> (f) a detailed description of the short, medium and long-term measures that would be implemented to: • rehabilitate the site; • implement the biodiversity offsets; • manage the remnant vegetation and habitat on the site and in the biodiversity offset areas; • maximise effective vegetative linkages for the biodiversity offset areas to the Ben Bullen State Forest; • minimise impacts on fauna; • minimise visual impacts; • conserve and reuse topsoil; • control weeds, feral pests and access; • manage bushfires; and • manage any potential conflicts between the rehabilitation works and/or biodiversity offsets and Aboriginal cultural heritage;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009), as follows: Section 9 - S9.1 - S9.2 - S9.3 and 9.4 - S9.5 - S9.6 - S9.7 - S9.8 - S9.9, 9.10 and 9.11 - S9.12 - S9.13	Landscape Management Plan (Coalpac, 2009); Section 9	n/a	n/a
S3.35 g	<b>Rehabilitation and Offset Management Plan</b> (g) a description of the potential risks to successful rehabilitation and/or revegetation and a description of the contingency measures that would be implemented to mitigate these risks; and	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 10	Landscape Management Plan (Coalpac, 2009); Section 10	n/a	n/a
S3.35 h	<b>Rehabilitation and Offset Management Plan</b> (h) details of who is responsible for monitoring, reviewing and implementing the plan.	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 11	Landscape Management Plan (Coalpac, 2009); Section 11	n/a	n/a
S3.36	<b>Mine Closure Plan</b> The Mine Closure Plan must: (a) define the objectives for the site following the cessation of mining operations under this approval; (b) investigate options for the future use of the site; (c) investigate ways to minimise the adverse socio-economic effects associated with the conclusion of the project, including reduction in local and regional employment levels; (d) describe the measures that would be implemented to minimise or manage the on-going environmental effects of the project; and (e) describe how the performance of these measures would be monitored over time.	Not Compliant (Low)	The Department of Planning (via letter dated 6th July 2009) approved a request for an alternative timetable for the submission of a Mine Closure Plan, required by conditions 34 and 36 of schedule 3. The plan was to be submitted by 30th June 2010. It is reported that a Mine Closure Plan has not been completed and therefore was not submitted to the Department of Planning and Environment (DPE) by this date and evidence of an extension to this date was not sighted during the audit.	Letter from DoP dated 6th July 2009	Consult with the DPE to obtain approval for an alternative timetable for the submission of a Mine Closure Plan, in consideration of the proposal to extend mining operations at the site.	Coalpac

S3.37	<b>Biodiversity Offset Strategy Implementation Bond</b> Within 3 months of the approval of the Landscape Management Plan, the Proponent shall lodge a Biodiversity Offset Strategy implementation bond with either the I&I NSW or the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with the performance and completion criteria of the Landscape Management Plan. The sum of the bond shall reflect the full cost of implementing the Biodiversity Offset Strategy and be determined by employing a suitably qualified rehabilitation expert or quantity surveyor. Notes: <ul style="list-style-type: none"> <li>• If the Biodiversity Offset Strategy is implemented to the satisfaction of the Director-General and I&amp;I NSW, then the bond holder will release the implementation bond.</li> <li>• If the Biodiversity Offset Strategy is not implemented to the satisfaction of the Director-General and I&amp;I NSW, then all or part of the bond may be used to ensure the satisfactory completion of the relevant works.</li> <li>• The bond may be incorporated into rehabilitation bonding arrangements under the Mining Act 1992.</li> </ul>	Not Compliant (Low)	Evidence of the Biodiversity Offset Strategy Implementation Bond was not provided by Sedgman or Castlereagh Coal.	- Site interviews (28/01/16)	Consult with DPE and DRE to rectify this non-compliance. Provide evidence of Biodiversity Offset Strategy Implementation Bond, or evidence of DG sign-off on the implementation of the Biodiversity Offset Strategy.	Coalpac
<b>Subsidence</b>						
S3.38	Prior to undertaking auger mining in any seam, the Proponent must undertake an assessment of potential subsidence impacts in accordance with the requirements of NSW DPI Technical Reference for a Notification of Highwall Mining and Auger Mining (DPI, August 2008, or its latest version), to the satisfaction of I&I NSW.	Not Triggered	The AEMRs stated that there was no auger mining undertaken during the audit period. Assessment of compliance against this condition is not required.	AEMRs 2013, 2014, 2015	n/a	n/a
<b>Heritage</b>						
<small>Note: These conditions should be read in conjunction with section 8 of the Statement of Commitments.</small>						
S3.39	<b>Management of Aboriginal Heritage Site Invincible OS1</b> The Proponent must prevent any further disturbance to the Aboriginal heritage site Invincible OS1, unless: (a) detailed justification for the disturbance is provided to the Director-General; and (b) the disturbance is undertaken in accordance with the procedures recommended by the Bathurst Local Aboriginal Land Council in its letter dated 17 June 2007 and reproduced in the EA.	Compliant	No disturbance to the Aboriginal heritage site was observed or reported.	Site inspection/interviews (28/01/16)	n/a	n/a
S3.40 (a)	<b>Aboriginal Heritage Management Plan</b> The Proponent shall prepare and implement an Aboriginal Heritage Management Plan for the project to the satisfaction of the Director-General. The Plan must: (a) be prepared in consultation with DECCW and the Aboriginal community;	Not Compliant (Medium)	Verifiable evidence of consultation with DECCW (now NSW OEH) or the Aboriginal Community was not reviewed as the current mine operators' access to these records is limited. The Aboriginal Heritage Management Plan states that consultation with the Bathurst Local Aboriginal Land Council was made by phone and that they agreed with the conditions of the Project Approval and those detailed within the plan, in terms of its provisions for site material should any such material be found during the course of the project. The Aboriginal Heritage Management Plan (June 2009) requires 'Invincible OS1' to be fenced and sign posted (Warning and Notice signs). During the site inspection, the Auditor observed: - a fence around the heritage site "Invincible OS1"; however no signage was visible. - maps showing the location of the heritage site on the noticeboard at the main office. It was reported that signage had been installed, but was not visible to the auditor during the audit.	Aboriginal Heritage Management Plan, 2009 Site inspection (28/01/16) Noticeboard information Mining Operations Plan, 2013.	Ensure the EPA and the Aboriginal Community is consulted during any future revisions to the Aboriginal Heritage Management Plan, and evidence of consultation is retained.  Re-erect the signs at the 'Invincible OS1' Aboriginal heritage site as outlined in the Aboriginal Heritage Management Plan (i.e Warning and Notice signs).  Update plans in all management documents to include the location of the cultural heritage site "Invincible OS1".	Castlereagh Coal
S3.40 (b)	<b>Aboriginal Heritage Management Plan</b> The Plan must: (b) be submitted to the Director-General for approval prior to carrying out any open cut mining operations under this approval; and	Not Verified	The Auditor sighted a letter from the Department of Planning (DoP) dated 6th July 2009. The letter refers to Coalpac's (former mine operator) application, submitted on 30th May 2009, for approval of a number of plans including the Aboriginal Heritage Management Plan as required by the project approval. The Department approved the plans within this correspondence. It could not be verified from available information whether the plan was approved prior to carrying out any open cut mining operations.	Letter from DoP dated 6th July 2009	n/a	n/a
S3.40 (c)	<b>Aboriginal Heritage Management Plan</b> The Plan must: (c) include a: • program for the recording, salvage and surface collection of any Aboriginal objects/sites that may be encountered within the project area; • description of the measures that would be implemented if any Aboriginal skeletal remains are discovered during the project; and • protocol for the ongoing consultation and involvement of the Aboriginal community in the conservation and management of the Aboriginal heritage of the objects/sites.	Compliant	The Aboriginal Heritage Management Plan outlines the protocols for discovery and consultation as required by this condition.  It is noted that the plan specifies development of a detailed salvage and surface collection protocol in consultation with the Bathurst Local Aboriginal Land Council and/or archeologist once an application to the OEH has been approved for the removal, relocation, destruction and/or return of any Aboriginal objects found within the site.	Aboriginal Heritage Management Plan, 2009	n/a	n/a

Visual						
S3.41	<b>Visual</b> The Proponent shall: (a) ensure no outdoor lights shine above the horizontal; (b) ensure that all external lighting associated with the project complies with Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting; (c) take all practicable measures to mitigate off-site lighting impacts from the project; and (d) minimise the visual impacts of the project to the satisfaction of the Director-General.	Not Verified	Lighting at the site during the care and maintenance period is minimal. Security lighting is installed around the administration building. Flood lighting is installed at the processing area. It is reported that lighting is directed downwards and the illuminated areas are located below the crest of the surrounding hills and therefore do not impact surrounding land uses. Sedgman advise that mobile lighting is not currently required at the site.  The AEMRs specify measures implemented to mitigate lighting related visual impacts. The Auditor has reviewed the complaints register and there have been no complaints related to visual impacts. Restoration of the site is progressive.  Evidence of compliance with AS4282 or correspondence with the DG was not reviewed and therefore this is assessed as not-verified.	AEMRs 2013, 2014, 2015 Site inspection/interviews (28/01/16)	n/a	n/a
Greenhouse and Energy Efficiency						
Note: These conditions should be read in conjunction with section 11 of the Statement of Commitments.						
S3.42 (a)	<b>Greenhouse and Energy Efficiency</b> The Proponent shall prepare and implement an Energy Savings Action Plan for the project to the satisfaction of the Director-General. This plan must: (a) be generally in accordance with the Guidelines for Energy Savings Action Plans (DEUS 2005, or its latest version);	Not Verified	Section 5 of the Energy Action Savings Plan (2009) specifies an energy management review process that was developed in compliance with Guidelines for Energy Savings Action Plans (DUES, 2005). A full review of the ESAP against the requirements of this guideline was not undertaken within the scope of this audit.	Energy Savings Action Plan, 2009	Review the Energy Savings Action Plan to confirm it meets the requirements of condition 42 of schedule 3 of the Project Approval.	n/a
S3.42 (b)	<b>Greenhouse and Energy Efficiency</b> This plan must: (b) be submitted to the Director-General for approval by 30 May 2009;	Compliant	A letter from the Department of Planning (DoP) dated 6th July 2009 was sighted and refers to Coalpac's (former mine operator) application, submitted on 30th May 2009, for approval of a number of plans including the Energy Savings Action Plan. The plan submission date was met and therefore this condition is assessed as compliant.	Letter from DoP dated 6th July 2009	n/a	n/a
S3.42 (c,d,e)	<b>Greenhouse and Energy Efficiency</b> This plan must: (c) include a program to monitor greenhouse gas emissions and energy use generated by the project; (d) include a framework for investigating and implementing measures to reduce greenhouse gas emissions and energy use at the site; (e) describe how the performance of these measures would be monitored over time	Not Compliant (Low)	Refer to response to S2.4A. The Energy Action Savings Plan (2009) as available on the Coalpac website does not reference greenhouse gas emissions and as such does not include a program to assess or monitor greenhouse gas emissions generated by the project. The DoP requested that the plan be updated to incorporate this.	Site interviews (28/01/16) Letter from Department of Planning dated 6/07/09 Energy Savings Action Plan, June 2009	Consult with the DPE to determine whether the ESAP was approved in accordance with PA 07_0127 Schedule 3, Condition 42. If required, seek approval to provide a revised plan upon approval to continue mining operations. The revised plan is to ensure it meets all requirements of the Project Approval.	Coalpac
Waste						
Note: These conditions should be read in conjunction with section 3 of the Statement of Commitments.						
S3.43 (a)	<b>Waste Minimisation</b> The Proponent shall: (a) monitor the amount of waste generated by the project;	Not Compliant (Low)	The 2015 AEMR states that General industrial waste is collected by a licenced contractor as required. A waste disposal receipt was sighted (Suez Environment, 30/09/2015, general solid waste dry) to demonstrate compliance. The 2013 AEMR stated that less than 5000L of waste oil was removed from site by a licensed contractor for recycling. The 2014 AEMR stated that less than 1000L of waste oil was disposed in 2014. The 2015 AEMR did not quantify the volume of any waste disposed in 2015. Records of industrial liquid waste or recycling volumes relevant to the audit period were not sighted by the Auditor and therefore this is considered to be a non-compliance with this condition, which requires monitoring of the amount of waste generated by the project.	Site inspection/interview (28/01/16) Suez Environment waste disposal receipt 30/09/15 AEMR 2013, 2014, 2015 MOP 2013	Ensure records of waste disposal are retained on site for a period of 7 years.  Monitor the amount of waste generated by the project. Include detailed waste monitoring requirements in the Environmental Monitoring Program.	Castlereagh Coal
S3.43 (b)	<b>Waste Minimisation</b> The Proponent shall: (b) investigate ways to reuse, recycle, or minimise the waste generated by the project;	Compliant	As the site is in care and maintenance, waste generation is minimised.	AEMR 2015 Site interview (28/01/16)	n/a	n/a
S3.43 (c.)	<b>Waste Minimisation</b> The Proponent shall: (c) implement reasonable and feasible measures to minimise waste generated by the project;	Compliant	As the site is in care and maintenance, waste generation is minimised.	AEMR 2015 Site interview (28/01/16)	n/a	n/a
S3.43 (d)	<b>Waste Minimisation</b> The Proponent shall: (d) ensure irrigation of treated wastewater is undertaken in accordance with Environmental Guidelines: Use of Effluent by Irrigation (DEC, 2004), or its latest version; and	Not Triggered	The 2015 AEMR states that the septic system used on site is a pump out system. No irrigation of wastewater is undertaken on site.	AEMR 2015 Site interview (28/01/16)	n/a	n/a
S3.43 (e.)	<b>Waste Minimisation</b> The Proponent shall: (e) report on waste management and minimisation in the AEMR to the satisfaction of the Director-General.	Not Compliant (Low)	AEMRs for 2013, 2014 and 2015 report on waste management processes employed at the site. The 2013 and 2014 AEMR provided estimates of waste volume and recycling volumes, however the 2015 provided no data on waste volumes.	AEMR 2011, 2013, 2014, 2015	Report the total volume of waste to landfill and recycling in the AEMR.	Castlereagh Coal

SCHEDULE 4 - ADDITIONAL PROCEDURES						
Notification of Landowners						
S4.1	If the results of monitoring required in schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria in schedule 3, then the Proponent shall notify the Director-General and the affected landowners and/or existing or future tenants (including tenants of mine owned properties) accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the criteria in schedule 3. However, no notification is required if the impact is predicted in the EA or where an agreement has been negotiated with a landowner that excludes the requirement for ongoing notification of such impacts.	Not triggered	A review of the AEMRs and available monitoring data indicates that the requirements of this condition are not triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
Independent Review						
S4.2	If a landowner considers the project to be exceeding the impact assessment criteria in schedule 3, except where this is predicted in the EA, then he/she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land. If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 2 months of the Director-General's decision: (a) consult with the landowner to determine his/her concerns; (b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to: • determine whether the project is complying with the relevant impact assessment criteria in schedule 3; and • identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and (c) give the Director-General and landowner a copy of the independent review.	Not Triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
S4.3	If the independent review determines that the project is complying with the relevant impact assessment criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General. If the landowner disputes the results of the independent review then either the Proponent or the landowner may refer the matter to the Director-General for resolution. Where matters referred to the Director-General under this condition cannot be resolved by the Director-General within 28 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process.	Not triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
S4.4	If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 3, and that the project is primarily responsible for this non-compliance, then the Proponent shall: (a) take all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria and conduct further monitoring to determine whether these measures ensure compliance; or (b) secure a written agreement with the landowner to allow exceedances of the relevant criteria; or (c) offer to acquire all or part of the landowner's land in accordance with the procedures in conditions 6-8 below to the satisfaction of the Director-General.	Not triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
S4.5	If further monitoring under condition 4(a) determines that the project is complying with the relevant impact assessment criteria, then the Proponent may discontinue the independent review with the approval of the Director-General. If further monitoring under condition 4(a) determines that measures implemented under that condition have not achieved compliance with the land acquisition criteria in schedule 3, and the Proponent cannot secure a written agreement with the landowner under condition 4(b) to allow these exceedances, then the Proponent shall, upon receiving a written request from the landowner, acquire all or part of the landowner's land in accordance with the procedures in conditions 6-8 below.	Not triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a

Land Acquisition						
S4.6	<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> <ul style="list-style-type: none"> <li>(a) the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the development the subject of the development application, having regard to the: <ul style="list-style-type: none"> <li>• existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and</li> <li>• presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the 'additional noise mitigation measures' in condition 4 of schedule 3;</li> </ul> </li> <li>(b) the reasonable costs associated with: <ul style="list-style-type: none"> <li>• relocating within the Lithgow local government area, or to any other local government area determined by the Director-General;</li> <li>• obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and</li> <li>(c) reasonable compensation for any disturbance caused by the land acquisition process.</li> </ul> </li> </ul> <p>If, within 28 days of the Proponent making this offer, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.</p>	Not triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
S4.6 cont	<p>Upon receiving such a referral, the Director-General shall request the President of the NSW Division of the Australian Property Institute (the API) to appoint a qualified independent valuer to:</p> <ul style="list-style-type: none"> <li>• consider submissions from both parties;</li> <li>• establish a fair market valuation for the land and determine reasonable costs and compensation for the acquisition, in accordance with paragraphs (a)-(c) above and any guidance or guidelines that the Director-General may prepare relating to this condition; and</li> <li>• propose any appropriate fair and reasonable terms of acquisition.</li> </ul> <p>The appointed valuer is to provide a full report and explanation of their valuation, determinations and proposed terms of acquisition to the Director-General, the Proponent and the landowner. The Director-General shall consider the report and decide whether the valuation, determinations and any proposed terms of acquisition are fair and reasonable.</p>	Not triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
S4.6 cont	<p>Within 14 days of receiving the Director-General's decision that the independent valuer's report is fair and reasonable, the Proponent shall make a written offer to purchase the land at a price and according to terms not less than set out in the independent valuer's report.</p> <p>If the Director-General is of the opinion that the valuation and/or determination is not fair and/or reasonable, they shall give notice to the parties that a further independent valuation and determination will be undertaken in accordance with this condition and duly request a further appointment by the API.</p> <p>If the landowner refuses to accept within 6 months a written offer duly made by the Proponent under this condition, then the Proponent's obligations to acquire the land shall cease, unless otherwise agreed by the Director-General.</p>	Not triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
S4.7	The Proponent shall bear the full costs of any independent valuer's valuation, determination and report.	Not triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
S4.8	If the Proponent and landowner agree that only part of the land shall be acquired, then the Proponent shall pay all reasonable costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of the plan at the Office of the Registrar-General.	Not triggered	The requirements of this condition have not been triggered.	AEMRs 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a

SCHEDULE 5 - ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING						
Note: This schedule should be read in conjunction with sections 17 and 18 of the Statement of Commitments.						
Environmental Management Strategy						
SS.1a	<b>Environmental Management Strategy</b> The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must: (a) be submitted to the Director-General for approval by 30 November 2009;	<b>Not Verified</b>	The Environmental Management Strategy was prepared by Coalpac on 30 November 2009 as required by PA 07_0127. However, approval of the plan by DPE could not be verified during this IEA. The updated MOP (Sedgman, 2016) does not list the EMS within its summary of approved management plans. Approval of the plan by the DPE is required to meet the conditions of the Project Approval.	Environmental Management Strategy, 2009	Consult with the DPE to determine whether the Environmental Management Strategy has been approved by the DPE.	n/a
SS.1 b	<b>Environmental Management Strategy</b> This strategy must (b) provide for the strategic context for the environmental management of the project;	<b>Compliant</b>	The EMS specifies that it forms part of the Integrated Mine Management System and provides context by the inclusion of the components required by this approval.	Environmental Management Strategy, 2009	n/a	n/a
SS.1 c	<b>Environmental Management Strategy</b> This strategy must (c) identify the statutory requirements that apply to the project.	<b>Compliant</b>	Section 3 of the EMS provides a review of the statutory requirements that apply to the site.	Environmental Management Strategy, 2009	n/a	n/a
SS.1 d (i)	<b>Environmental Management Strategy</b> This strategy must (d)(i) describe the procedures that would be implemented to keep the local community and relevant agencies informed about the operation and environmental performance of the project.	<b>Compliant</b>	Section 6 of the EMS provides a communication procedures.	Environmental Management Strategy, 2009	n/a	n/a
SS.1d (ii)	<b>Environmental Management Strategy</b> This strategy must (d)(ii) describe the procedures that would be implemented to <del>receive, handle, respond to, and record complaints</del>	<b>Compliant</b>	Section 7 of the EMS provides complaints handling procedures.	Environmental Management Strategy, 2009	n/a	n/a
SS.1d (iii)	<b>Environmental Management Strategy</b> This strategy must (d)(iii) describe the procedures that would be implemented to resolve any disputes that may arise during the course of the project.	<b>Compliant</b>	Section 8 of the EMS provides dispute resolution procedures.	Environmental Management Strategy, 2009	n/a	n/a
SS.1d (iv)	<b>Environmental Management Strategy</b> This strategy must (d)(iv) describe the procedures that would be implemented to respond to any non-compliance.	<b>Compliant</b>	Section 9 of the EMS provides a non-compliance response procedure.	Environmental Management Strategy, 2009	n/a	n/a
SS.1d (v)	<b>Environmental Management Strategy</b> This strategy must (d)(v) describe the procedures that would be implemented to <del>manage cumulative impacts</del>	<b>Compliant</b>	Section 10 of the EMS describes how cumulative impacts are to be managed.	Environmental Management Strategy, 2009	n/a	n/a
SS.1 d (vi)	<b>Environmental Management Strategy</b> This strategy must (d)(vi) describe the procedures that would be implemented to <del>respond to emergencies</del>	<b>Observation</b>	Section 11 of the EMS provides emergency response procedures, however it does not reference the PIRMP.	Environmental Management Strategy, 2009	The EMS should be updated to reference the Pollution Incident Response Management Plan (PIRMP).	Castlereagh Coal
SS.1 e	<b>Environmental Management Strategy</b> This strategy must (e) include environmental monitoring program for the project that includes all the monitoring requirements of this approval;	<b>Administrative Non Compliance</b>	Section 12 of the EMS states that Environmental Monitoring Programs have been prepared pursuant to Schedule 3, Condition 6, 10, 13 and 30 of PA 07_0127. This relates to noise, air, water and blast monitoring only and does not include the requirement to monitor waste generation (Schedule 3, Condition 43), rehabilitation (Schedule 3, Condition 35), greenhouse and energy efficiency (Schedule 3, Condition 42), coal transport etc. Section 12 states that the included monitoring plans have been consolidated into a single document as described within Appendix 2. However, the plans included in Appendix 2 of the EMS could not be verified as Appendix 2 is not attached to the EMS (on the CC website). An Environmental Monitoring Program (Coalpac, 2009) is provided on the CC website. This plan states that it has been developed as required by Schedule 5, Condition 1 (e), however, the date of this report (December 2009) does not indicate that it is the Appendix 2 of the EMS (November 2009).	Environmental Management Strategy, 2009	Inclusion of the current Environmental Monitoring Program within the EMS is required to meet the conditions of the Project Approval. A full copy of the EMS should be uploaded to the website and the EMS should be updated to reference the EMP (ensuring also that the EMP is reviewed for relevancy).	Castlereagh Coal
SS.1 f	<b>Management Plan Requirements</b> This strategy must (f) describe how the various incident and approval reporting requirements of the project would be integrated into a single reporting system; and	<b>Compliant</b>	Section 6 of the EMS provides a communication procedures.	Environmental Management Strategy, 2009	n/a	n/a
SS.1 g	<b>Management Plan Requirements</b> This strategy must (g) describe the role, responsibility, authority and accountability of all the key personnel involved in the environmental management of the project.	<b>Compliant</b>	Section 4 of the EMS provides roles and responsibilities.	Environmental Management Strategy, 2009	n/a	n/a

Reporting						
SS.2	<b>Incident Reporting</b> Within 24 hours of detecting the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall notify the Department and other relevant agencies of the incident.	Not Triggered	The AEMRs and site interviews confirm that there were no reportable incidents within the audit period.	Site interviews (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
SS.3	<b>Incident Reporting</b> Within 6 days of notifying the Department and other relevant agencies of an incident, the Proponent shall provide the Department and these agencies with a written report that: (a) describes the date, time, and nature of the incident; (b) identifies the cause (or likely cause) of the incident; (c) describes what action has been taken to date; and (d) describes the proposed measures to address the incident.	Not Triggered	Refer to SS.2 above. This condition is not triggered.	Site interviews (28/01/16)	n/a	n/a
SS.4	<b>Annual Reporting</b> By the end of November 2009, and annually thereafter, the Proponent shall submit an AEMR to the Director-General and to all relevant agencies. This report must: (a) identify the standards and performance measures that apply to the project; (b) describe the works carried out in the last 12 months; (c) describe the works that would be carried out in the next 12 months; (d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years; (e) include a summary of the monitoring results for the project during the past year; (f) include an analysis of these monitoring results against the relevant: • impact assessment criteria/limits; • monitoring results from previous years; and • predictions in the EA; (g) identify any trends in the monitoring results over the life of the project; (h) identify any non-compliance during the previous year; and (i) describe what actions were, or are being, taken to ensure compliance.	Not Compliant (Low)	AEMRs relevant to the audit period are: 2013, 2014 and 2015. These reports cover January to December (reporting by calendar year). The condition requires submission of the AEMR annually by 30 November. It is considered likely that the intent of this condition, is for the AEMR to report using the financial year. It is noted that the AEMR is required by both the DPE (as per the project approval) and the DRE (as per the mining lease). The mining lease conditions however have recently changed and a Rehabilitation Report and Compliance Report now replace the AEMR for that Department. The requirement to submit an AEMR to the DPE remains however, the 2015 AEMR was not submitted to the DPE.  Consultation with the DRE indicated that the AEMR should be reported per financial year, as it is due for submission on the Mining Lease anniversary date of (10th September and 6th November for ML1635 and ML1638 respectively).  The AEMRs are compliant with the content requirements specified in SS.4, with the following exceptions: - Analysis of monitoring results against the monitoring results from previous years and predictions in the EA is not consistently undertaken. - Trends in monitoring results over the life of the project is not included.  It was not verified which relevant agencies were provided the AEMR over the audit period.	AEMRs 2013-2015 Site interviews (28/01/16) Consultation with DRE (phone call 8/02/16)	Consult with the DPE and DRE to confirm details of AEMR reporting including: definition of relevant agencies, reporting period (calendar year or financial year) and submission dates.  Include within the AEMRs, an analysis of monitoring results against the results of previous years monitoring and the EA predictions and include an analysis of trends over the life of the project.	Castlereagh Coal
Independent Environmental Audit						
SS.5	By the end of November 2010, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must: (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any associated EPL or Mining Lease (including any strategy, plan or program required under these approvals); (d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate, (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals. Note: This audit team must be led by a suitably qualified Auditor and include experts in the fields of ecology and mine site rehabilitation.	Not Compliant (Low)	The first Independent Environmental Audit (IEA) was undertaken by GSSE in December 2010 and the audit report was completed in February 2011. The next IEA was due to be completed in November 2013.  The Auditor sighted a letter from Coalpac to the DPE dated 31 October 2013. Coalpac requested an extension of 6 months or more due to a business moratorium after they went into voluntary administration on 18th October 2013. Written response from the DPE was not sighted to verify whether this extension was granted. This condition is therefore assessed as not compliant.  The Auditor sighted a letter from the DPE to Sedgman dated 9/12/2015, requesting the Independent Environmental Audit be completed (following an application for postponement due to the mine being in care and maintenance since 2013) and acknowledging that an audit had not been completed since the GSSE audit and was due to be provided by the end of March 2016.  The Auditor Environmental was approved by the DPE on 16th December 2015. The audit was completed on 28/01/2016 and will be reported in accordance with the requirements of SS.5 by end of March.	DPE letter to Sedgman dated 9/12/15  GSSE, IEA, 2011  Letter from Coalpac to DPE dated 31/10/13  Letter from DPE approving Ken Holmes of the Auditor as Auditor dated 16/12/15	No actions are recommended for this non-compliance.	Castlereagh Coal
SS.6	Within six weeks of the completing of this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.	Noted	The DPE has requested the audit report be completed by end of March 2016.	DPE letter to Sedgman dated 9/12/15	n/a	n/a
SS.7	Within 3 months of submitting the audit report to the Director-General, the Proponent shall review, and if necessary revise the strategies/plans/programs required under this approval to the satisfaction of the Director-General.	Noted	n/a	n/a	n/a	n/a

Community Consultative Committee						
55.8	<p>The Proponent shall maintain a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General. This CCC must be operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version), to the satisfaction of the Director-General.</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>• The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the proponent complies with this approval.</li> <li>• With the approval of the Director-General, this CCC may be combined with the CCC for Cullen Valley mine.</li> </ul>	Compliant	<p>Meeting minutes of the Community Consultative Committee were reviewed on the Castlereagh Coal website. In the audit period there were two meetings held, December 2013 and August 2015. A detailed review of the CCC against the guidelines specified in this condition was not undertaken.</p> <p>Castlereagh Coal is committed to actively participating in regular CCC meetings. The next CCC meeting is to be held in late February/early March 2016.</p> <p>Castlereagh Coal is in the process of engaging a specialist consultant to design and implement a community consultation program. It is expected that this program will consist of dissemination of project information and obtaining stakeholder and community feedback through methods such as near-neighbour mail-outs, government agency briefings and community information sessions.</p>	Care and Maintenance Mining Operations Plan, 2015	n/a	n/a
Access to Information						
55.9	<p>Within 3 months of the approval of any strategy/plan/ program required under this approval (or any subsequent revision of these strategies/plans/ programs), or the completion of the audits or AEMRs required under this approval, the Proponent shall:</p> <p>(a) provide a copy of the relevant document/s to the relevant agencies and CCC; and</p> <p>(b) put a copy of the relevant document/s on its website.</p>	Not Compliant (Low)	<p>Sedgman advise that all current AEMRs, MOPs, strategies, plans and programs were provided to the CCC members (either on USB or in hard copy) following the August 2015 meeting. Audit results and 2015 AEMRs will be provided to members once these are finalised.</p> <p>The 2011 IEA is not available on the Coalpac website and therefore this is assessed as not compliant. The Condition of Approval requires all audit reports to be uploaded to the mine website. As the audit report covers the period prior to CC ownership, it is recommended that CC seek DP&amp;E approval to waive this requirement for the first audit report.</p>	<p>CCC meeting minutes signed by the facilitator sent by email 2 Feb.</p> <p>Site interviews (28/01/16)</p> <p>GSSE, IEA (2011)</p>	Seek DP&E approval to waive this requirement for the first audit report.	Coalpac
55.10	<p>From the end of November 2009, and thereafter during the project, the Proponent shall:</p> <p>(a) provide a copy of this approval as may be modified from time to time on its website;</p> <p>(b) provide a comprehensive, running summary of monitoring results required under this approval on its website; and</p> <p>(c) update these results on a regular basis (at least every three months).</p>	Not Compliant (Low)	<p>A copy of the approval is available on the website.</p> <p>Monitoring results are available on the website, with the exception of the following: Noise monitoring reports for Q3 and 4 2014 and Q1 2015; and environmental monitoring reports for September 2014 to April 2015, August 2013 and September 2013. These reports are during Coalpac's operations and CC has limited access to Coalpacs records.</p> <p>Groundwater monitoring is not available on the website.</p> <p>A comprehensive running summary of monitoring results required under the PA is not available on the website.</p>	Castlereagh Coal and Coalpac website	Provide a comprehensive running summary of monitoring results required under the approval.	Castlereagh Coal

## Appendix B

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### Compliance Register - Statement of Commitments

## Invincible Colliery

## Independent Environmental Audit

## Detailed Findings and Recommendations

## Statement of Commitments - Appendix 2 of the Project Approval

The period covered by this audit is May 2013 to January 2016 (care and maintenance period only).

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation	Responsibility for Non-Compliance
Area of Activities								
1.1	All approved activities are undertaken in the area(s) nominated on the approved plans and figures (unless moved slightly to avoid individual trees).	Survey and mark the boundaries of the areas of disturbance on the ground.	Prior to any vegetation clearing	Compliant	The site has been in care and maintenance since May 2013, with minimal activities being undertaken on site for the duration of the audit period. At the time of the site inspection, the Auditor observed the use of a water pump to relocate surface water between sediment dams. This activity was located within a previously disturbed area within the approved project boundary. No vegetation clearance was observed. The 2013, 2014 and 2015 AEMRs state that no vegetation clearance occurred during the audit period. Segman confirmed this during site interviews. Based on observations of current operations at the site, this condition is assessed as compliant.	Site interview (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
Operating Hours								
2	Management of operations in accordance with the approved operating hours.	A) Undertake open cut mining, coal processing and rehabilitation activities between the hours of 7:00am and 10:00pm Monday to Saturday.	During Operations	Compliant	The site was placed in care and maintenance in May 2013. The Coal Preparation Plant (CCP) was shut down in January 2013 and mining operations ceased in April 2013. Therefore, open cut mining and coal processing activities fall outside the scope of this audit. With regards to rehabilitation, the AEMRs state that active rehabilitation activities have not been undertaken at the site during the care and maintenance period, with the exception of the shaping of some spoil dumps and maintenance of sediment controls. No incidents or complaints related to out of hours works were recorded during the audit period. Based on observations of current operations at the site at the time of the site inspection, this condition is assessed as compliant.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
		B) Undertake coal transportation: • between 7:00am and 9:30pm Monday to Saturday, and at no time on Sundays or public holidays for coal hauled to the Mount Piper Power Station; and • between 7:00am and 6:00pm Monday to Saturday, and at no time on Sundays or public holidays for coal hauled to other destinations.	During Operations	Not Verified	Coal transport activities were undertaken within the audit period from May 2013 to September 2013, after which time no further coal transport was undertaken. The operating hours were specified in the 2013 AEMR and no incidents or complaints relating to out of hours works were recorded during the relevant period. It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
		C) Undertake blasting between 9:00am and 5:00pm Monday to Friday.	During Operations	Not triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
Waste Management								
3.1	Minimisation of general waste creation and maximisation of recycling, wherever possible.	Place all paper and general wastes originating from the Site Facilities Area, together with routine maintenance consumables from the daily servicing of equipment in garbage bins located adjacent to the various buildings.	Ongoing	Compliant	The 2015 AEMR states that all paper and general wastes from administration and workshop areas is disposed of in garbage bins located adjacent to the administration buildings. General waste bins were observed during the site inspection. Based on observations of current operations at the site, this condition is assessed as compliant.	Site inspection/interview (28/01/16) AEMR 2013, 2014, 2015	n/a	n/a
3.2		Collect general waste bins daily and place contents in large waste skip bins positioned adjacent to the heavy vehicle maintenance building to await removal by licensed contractor.	Daily	Compliant	The 2015 AEMR states that general waste bins are regularly collected and the contents placed in large waste skip bins positioned adjacent to the heavy vehicle maintenance building to await removal by a licensed industrial waste collector. General waste bins and large industrial skip bins were observed during the site inspection. Based on observations of current operations at the site, this condition is assessed as compliant.	Site inspection/interview (28/01/16)	n/a	n/a
3.3	Minimisation of the potential risk of environmental impact due to waste creation, storage and/or disposal.	Organise the regular collection of industrial wastes.	Fortnightly	Not Compliant (Low)	<u>Solid waste</u> The 2015 AEMR states that General industrial waste that is collected in skip bins (see 3.2), is collected by a licenced contractor as required. A waste disposal receipt was sighted (Suez Environment, 30/09/2015, general solid waste dry) to demonstrate compliance. <u>Liquid waste</u> The 2013 AEMR states that in May 2013, liquid wastes from storage tanks and sumps were removed, the inlet bay where oily water enters the oil and water separator was pumped out and cleaned and less than 5000L of waste oil was removed from site by a licensed contractor for recycling. Liquid waste disposal and infrastructure maintenance records were not sighted as the current mine operator has limited access to previous records. During the site inspection, a number of containers of liquid waste were observed in and near the workshop. The containers held a moderate volume of industrial liquid waste which is assumed to have been generated since the May 2013 clean up. The 2014 AEMR stated that less than 1000L of waste oil was disposed in 2014. The 2015 AEMR did not quantify the volume of waste disposed in 2015. Records of industrial liquid waste collection relevant to the audit period were not sighted and therefore this is considered to be a non-compliance with this condition, which requires fortnightly (or regular) collection of industrial wastes and the 2013 MOP which states these wastes will be collected twice a month or as required.	Site inspection/interview (28/01/16) Suez Environment waste disposal receipt 30/09/15 AEMR 2013, 2014, 2015 Care and Maintenance Mining Operations Plan (MOP) 2013	Organise the collection of all industrial wastes (including oil, grease and other liquid wastes) by a licensed contractor. Ensure records of waste disposal are retained on site for a period of 7 years.	Castlereagh Coal

## Statement of Commitments

3.4	Minimisation of the potential risk of environmental impact due to waste creation, storage and/or disposal (continued).	Store waste oils and grease at the maintenance workshop for collection by a licensed waste recycling contractor.	Bi-monthly	Not Compliant (Medium)	Waste oils and grease are stored within drums in the maintenance workshop. The 2015 AEMR states that waste oils and grease from workshop areas is collected in the waste oil storage tank. The above ground waste oil tank is located in bunding near the mechanical servicing area. A number of other chemical storage containers are located within this bunded area. A catch drain is adjacent to the waste oil tank to capture any material in the unlikely event that waste oil or other chemicals are spilled. This drain leads to an oil/water separator and a 6,000L waste oil collection tank. The 2015 AEMR reports that minor servicing may be undertaken on site using this infrastructure however maintenance records or liquid waste disposal records were not sighted.  During the site inspection, a number of observations were recorded as follows: 1. The catch drain system was (in sections) filled with oily sediment and debris and as the area is still in use for chemical storage, it requires cleaning and maintenance. 2. A break in the PVC pipes that leads from the catch drains to the oil/water separator and waste oil tank was observed. Should any spills within the bunded area occur, this would leak onto the soil and vegetation on the embankment. The piping needs repair and the integrity of the system requires testing. 3. The waste oil collection tank is not bunded. 4. Liquid waste/product containers stored within the workshop are not bunded.	AEMR 2013, 2014, 2015 Site inspection (28/01/16)	*Ensure all liquid waste containers are stored within secondary containment / in bunding. *Undertake maintenance and cleaning of the wastewater catch drain system. *Retain all records of maintenance of equipment for a period of 7 years. *Retain all records of waste disposal for a period of 7 years. *Install bunding around the waste oil collection tank (if it is to remain operational). *Repair the PVC pipe in the waste oil collection system and investigate any residual contamination. * Conduct a maintenance inspection and integrity test of the waste oil collection system tanks and piping.	Castlereagh Coal
3.5		Collect all parts and packaging and transfer to the maintenance workshop for disposal or recycling.	As required	Compliant	The 2015 AEMR states that minor servicing may be undertaken on the site. Sedgman advised that mobile equipment servicing is currently undertaken off-site. All maintenance waste was observed to be located within the maintenance workshop. Based on observations of current operations, this condition is considered to be compliant.	Site inspection/interview (28/01/16)	n/a	n/a
3.6		Store potentially hydrocarbon contaminated water in the oil/water separator for regular removal from site by a licensed contractor.	As required	Not Compliant (Medium)	See Item 3.3 and 3.4 above. Disposal receipts for the regular removal of liquid wastes is not recorded and the infrastructure to store the liquid waste is in need of repair.	Site inspection/interview (28/01/16)	See recommendations for 3.3 and 3.4 above.	Castlereagh Coal
3.7		Install adequate toilet and ablution facilities within the mine facilities area for the site workforce and visitors.	During site establishment	Compliant	Facilities are provided in the mine facilities area.	Site inspection (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
3.8		Direct sewage to a septic system which would be pumped out by a licensed waste collection & disposal contractor.	As required	Not Verified	There are two septic systems located at the administration office and the CPP. The 2015 AEMR states that the systems are regularly pumped out and serviced by a licensed contractor on an as-needs basis. Disposal records were not sighted, therefore compliance with this condition could not be verified. The 2013 MOP states that Lithgow City Council inspected the septic tanks on 12 November 2012, found them to be in sound working order and approved for use for a further five year period.	Site interview (28/01/16) AEMRs 2013, 2014, 2015 Care and Maintenance Mining Operations Plan, 2013	Retain all records of licensed waste collection and disposal for the onsite septic systems.	n/a
3.9	Manage coarse and fine rejects material generated by the Invincible Colliery Processing Plant in a manner to minimise potential for impact on the local environment.	Collect and transfer all coarse rejects to completed sections of the open cut and incorporate into backfill operations.	Ongoing	Not Verified	The 2013 AEMR states that 278 t of coarse reject was produced in 2013 and was collected in a storage bin within the CCP and was then transported to an active waste dump area by truck. The material was co-disposed within overburden and interburden material and emplaced within the void of the open cut areas. No coarse reject material was generated during 2014 or 2015. It is not possible to verify if this condition has been satisfied as these activities were completed prior to the site inspection.	Site interview (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
3.10		Pump fine rejects to Fines Rejects Ponds	Ongoing	Not Verified	The 2013 AEMR states that 56 t of fine reject material was produced from the CCP in 2013 and pumped to a series of Fines Reject Dams on site.No fine reject material was generated during 2014 or 2015. It is not possible to verify if this condition has been satisfied as these activities were completed prior to the site inspection.	Site interview (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
Rehabilitation								
4.1	The creation of a stable final landform, available for the proposed future use(s) of agriculture and/or nature conservation.	Adopt a progressive approach to rehabilitation to ensure that completed areas are quickly shaped and vegetated to provide a stable landform.	Ongoing	Compliant	Progressive rehabilitation was completed each year of operations until between 2010 and 2012, until operations ceased in 2013.	AEMR 2015	n/a	n/a
4.2		Stabilise earthworks, drainage lines and disturbed areas no longer required for mine related activities.	As areas become available	Not Compliant (High)	Areas of rehabilitation in the north of site, seeded during 2012, have not been successfully stabilised, as evident from site inspection. Reports from DPE inspection correspond to this finding. This has been classified by Cumberland Ecology as a high risk as further erosion is likely, and failure of the rehabilitation to establish a native vegetation community.	Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal Minutes from interview with Christopher Schultz of DPE dated 4/2/16	Stabilise rehabilitation areas to the satisfaction of DPE (soil re-profiling, or adapted seeding and tubestock planting methods are required as remedial action). Provide update in 2016 AEMR.	Castlereagh Coal
4.3		Blend the created landforms with the surrounding land fabric.	Ongoing during rehabilitation activities	Compliant	Seeding has occurred on all created landforms, which attempts to replicate the natural woodland and forest environment. Some areas of rehabilitation have failed, but are planned for re-seeding.	Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal AEMR 2015	n/a	n/a
4.4		Utilise native tree, shrub and grass species and / or pasture species comparable with either the existing vegetation communities or those which occurred in the area prior to mining and agriculture-related disturbance.	Ongoing during rehabilitation activities	Not Compliant (Low)	Rehabilitation seed mix includes inappropriate species that are not components of the vegetation types present prior to mining. This is particularly the case with grass species used on slopes adjoining areas of retained native vegetation, and Ben Bullen State Forest.	Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal AEMR 2015	Modify seed mix for all future rehabilitation, as per the Landscape Management Plan, and recommendations in the 2015 Annual Biodiversity Monitoring report (Kleinfelder, 2015)	Coalpac

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4.5		Collect, sow and replant tube stock of <i>Eucalyptus cannonii</i> and <i>E. viminalis</i> over the final landform.	Ongoing during rehabilitation activities	Compliant and Observation	Seed collection has not been documented. Planting of <i>Eucalyptus viminalis</i> has occurred. The 2013 AEMR describes the planting of <i>E. cannonii</i> (Section 3.8.1), although this species does not appear on the Rehabilitation Seed Species List in Table 17.	AEMRs 2010 - 2015	Provide consistency between relevant sections of the AEMR, or ensure supplementary information on the planting of <i>Eucalyptus cannonii</i> is documented.	Coalpac
4.6	The creation of a stable final landform, available for the proposed future use(s) of agriculture and/or nature conservation (continued).	Remove tree hollows and relocate these to areas within the biodiversity offset areas which will not be disturbed by the project.	Prior to disturbance	Compliant	Incorporation of hollows within the final landform has occurred and was observed during site inspection.	Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal AEMR 2013	n/a	n/a
4.7		Retain cleared trees and branches for use in stabilising slopes identified for rehabilitation with native woodland communities.	Ongoing during rehabilitation activities	Compliant	Incorporation of logs within the final landform has occurred and was observed during site inspection.	Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal AEMR 2013	n/a	n/a
4.8		Include the rehabilitation of disturbance associated with the abandoned Cullen Main East open cut to the south of the proposed open cut extension and in the final landform.	Ongoing during rehabilitation activities	Compliant	Rehabilitation of the abandoned Cullen Main East open cut commenced in 2012.	Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal AEMR 2013	n/a	n/a
4.9	Incorporate rehabilitation activities associated with the proposed modification with existing rehabilitation and landscape management of the site.	Update the approved Rehabilitation Management Plan to include the open cut mine extension area.	Prior to disturbance of the previously rehabilitated area	Compliant	The Approved Care and Maintenance Mining Operations Plan (Coalpac, 2013) includes the updated Rehabilitation Management Plan to include the open cut mine extension area	MOP 2013, Sections 4 and 5	n/a	n/a
4.10		Commission an annual inspection of rehabilitation success against objectives such as ground cover, biodiversity, weed invasion, erosion and sedimentation, and general condition.	Annual	Compliant	Annual Biodiversity Monitoring has been conducted by Kleinfelder (formerly EcoBiological) during the current audit period	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015)	n/a	n/a
Noise								
5.1	All open cut mining and coal crushing / screening activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.	Restrict surface clearing activities to only one of the more noisy activities at a time eg. tree felling or topsoil stripping. If unavoidable, these noisier activities would only occur simultaneously after 9:00am when the affects of local temperature inversions are likely to be minimal.	During clearing and soil stripping activities	Not Triggered	The 2013, 2014 and 2015 AEMRs state that there was no clearing or soil stripping activities undertaken during the audit period.	AEMR 2013, 2014, 2015	n/a	n/a
5.2		Construct a 15m high earth bund adjacent to northwest (Year 1 and 2) open cut operations for all scenarios where activity occurs within this region.	As part of initial soil and overburden stripping activities	Not verified	The Coalpac Noise Monitoring Program (2009), states that 'the open cut extension at locations close to the Castlereagh Highway (i.e. West Pit Area) would be undertaken such that initial soil and overburden stripped and removed to expose the coal seam would be stockpiled to provide an acoustic (and visual) barrier (i.e. earth bund) of the operations. These stockpiles to be approximately 15m in height in the West Pit only'.  A 15m high earth bund adjacent to the northwest open cut operations was not sighted during the site inspection. This action was required as part of initial soil and overburden stripping activities prior to the site inspection. Therefore it is assessed as not verified. There are no longer any operations in this area.	Site inspection (28/01/16) Noise Monitoring Program, 2009	n/a	n/a
5.3		Regularly service all equipment used on site to ensure the sound power levels remain at or below the levels used in the modelling to assess generated noise levels and compliance with the criteria.	Ongoing	Not Verified	The 2013 and draft 2015 Care and Maintenance Mining Operations Plans (MOP) states that all mining related equipment will be kept in a reasonable condition during the care and maintenance period by conducting periodic electrical and mechanical inspections in accordance with relevant legislation and approved Management Plans. In addition, it states that pre-start inspections will be conducted when equipment is periodically run. As the site is in care and maintenance, the only equipment used on site would be during maintenance and rehabilitation works.  Servicing or pre-start inspection records for all equipment used on site were not sighted during the audit, therefore compliance with this condition could not be verified. In addition, it could not be determined whether the equipment is being assessed to ensure that the sound power levels remain at or below the level used in the modelling.	Site interview (28/01/16) MOP 2013, 2015	Ensure all equipment used on site is regularly serviced and all service records are kept on file.  Conduct periodic checks of the sound power levels of equipment used on site during noise generating maintenance works to compare against the levels used in the modelling and confirm compliance with noise criteria.	n/a
5.4		Fit mobile mining equipment with mid-high frequency broadband reverse beepers, decreasing sound power levels by 2dB(A) to 3dB(A).	Ongoing	Not Verified	Most mobile plant and equipment has been removed from the site. Small excavators and dozers will be used periodically for short periods for specific tasks such as erosion controls and rehabilitation maintenance. It was not verified during the audit whether the equipment remaining on the site was fitted with mid-high frequency broadband reverse beepers.	Site inspection (28/01/16) AEMR 2015 MOP 2013, 2015	Inspect all mobile plant onsite to ensure it is fitted with mid-high frequency broadband reverse beepers prior to use.	n/a
5.5		Use equipment with lower sound power levels in preference to more noisy equipment.	Ongoing	Compliant	The MOP states that small equipment will be used where required for rehabilitation maintenance. A new water pump has recently been purchased and was observed in use during the site inspection. It was deemed to be appropriately sized for the task observed. Based on the observations during the site inspection, this condition has been assessed as compliant.	Site inspection (28/01/16) MOP 2013, 2015	n/a	n/a
5.6		Minimise surface open cut mining activities (within 10m of surface) between 6:00pm and 10:00pm.	Ongoing	Not Triggered	Mining operations ceased in April 2013. Therefore this condition relates to activities undertaken prior to and outside the scope of the audit period.	AEMRs 2013, 2014, 2015.	n/a	n/a
5.7		Cease surface open cut mining activities (within 10m of surface) between 6:00pm and 10:00pm should noise enhancing winds (from the east) prevail at speeds between 0.5m/s and 3.0m/s.	Ongoing	Not Triggered	Mining operations ceased in April 2013. Therefore this condition relates to activities undertaken prior to and outside the scope of the audit period.	AEMRs 2013, 2014, 2015.	n/a	n/a

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5.8	All open cut mining and coal crushing / screening activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents (continued).	Ensure the on-site road network is well maintained to limit body noise from empty trucks travelling on internal roads.	Ongoing	<b>Not Compliant (Low)</b>	Inspection of the on-site road network indicated that roads have not been adequately maintained during the care and maintenance period. Although activities on the site are low during this period and noise monitoring indicates that noise emissions from the site are compliant at off-site monitoring locations, this condition relating to the carrying out of maintenance is assessed as not compliant.	Site inspection/interviews (28/01/16)	Maintain the on-site road network by repairing existing scouring and erosion. This will help to limit noise levels associated with vehicle movements at the site.	Castlereagh Coal
5.9		Operate the coal crushing and screening equipment immediately behind coal stockpiles of, on average, 6m in height.	Ongoing	<b>Not Triggered</b>	The CCP was shut down in January 2013 and mining operations ceased in April 2013. Therefore, this condition relates to activities undertaken outside the scope of the audit.	AEMRs 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.10	All highwall mining operations are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.	Position the highwall mining equipment at least 15m below surface level or behind appropriate bunding.	During highwall mining operations	<b>Not triggered</b>	No highwall mining operations were undertaken during the audit period.	AEMRs 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.11		Create a low wall bund of at least 5m in height between the highwall mining equipment and receivers.	Prior to commencement of highwall mining	<b>Not triggered</b>	No highwall mining operations were undertaken during the audit period.	AEMRs 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.12	All Invincible Colliery Processing Plant (CPP) operations are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.	Enclose or otherwise attenuate noise of the Bradford Breaker, to reduce the sound power level (SPL) by at least 10dB(A).	Within 6 months of project approval	<b>Not triggered</b>	The CCP was shut down in January 2013. This condition relates to activities undertaken outside of the scope of the audit and was therefore not verified. It is noted that the previous IEA reported this as compliant.	AEMRs 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.13		Implement measures to reduce noise emissions from the jig washer	By 2 March 2009	<b>Not triggered</b>	The CCP was shut down in January 2013. This condition relates to activities undertaken outside of the scope of the audit and was therefore not verified.	AEMRs 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.14		Implement measures to restrict the operation of the jig washer and/or front end loader during evening hours in noise enhancing weather conditions	By 2 March 2009	<b>Not triggered</b>	The CCP was shut down in January 2013. This condition relates to activities undertaken outside of the scope of the audit and was therefore not verified.	AEMRs 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.15	All transport operations are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.	Adhere to the approved hours of coal transportation.	Ongoing	<b>Not Verified</b>	See # 2 above. Coal transport activities were undertaken during the audit period from May 2013 to September 2013, after which time no further coal transport was undertaken. The operating hours were specified in the 2013 AEMR and no incidents or complaints relating to out of hours works were recorded during the relevant period. It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.16		Instruct all truck drivers to avoid the use of engine brakes when approaching the Project Site entrance on the Castlereagh Highway and to be mindful of local residences when accelerating the truck uphill.	Ongoing	<b>Not Verified</b>	It was not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited. The previous IER reported this condition as compliant, sighting inclusion of this information in the contractor induction and transport rules. These documents were not sighted.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.17	No activities with the potential to generate sleep disturbing noise are to be undertaken.	Instruct the mining contractor to restrict on site activities between the hours of 10:00pm and 7:00am to low noise maintenance activities such as oil changes.	Ongoing	<b>Not Verified</b>	As the site is in care and maintenance, there is currently no mining contractor on site and no nightworks are currently undertaken on the site. However, during the audit period, the previous mining contractor is assumed to have remained on the site until the last coal was transported off-site in September 2013. There were no records sighted demonstrating an instruction to limit noisy activities at night during this period, therefore compliance could not be verified. It is noted that these activities were undertaken by the previous mine operator and the current mine operators access to these records is limited.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
5.18	Provide for the reduction of noise levels generated by the Invincible Colliery over the life of the project.	Prepare to the satisfaction of the DECCW and DoP, a Pollution Reduction Programme which incorporates the commitments made.	Prior to commencement of any project related activity	<b>Not Verified</b>	Consultation with the NSW EPA (9/02/16) confirmed that a Pollution Reduction Program relating to noise commitments was submitted to the EPA in 2008. The PRP was not sighted by the Auditor during the audit as it pre-dates the current mine operators records. Approval of the PRP by the DoP or DECCW was not sighted and therefore full compliance with this condition could not be verified.  It is noted that the 2011 IEA reported that DECCW rejected the Coalpac PRP due to Coalpac inadvertently misconstruing the difference between sound power levels and sound pressure levels. It was reported that in consultation with DECCW, the PRP was removed from the EPL and provision was made for a noise monitoring report, that is reported to have been provided to DECCW by June 2009. No further details were available to the current mine operator at the time of this audit.	EPA Email (9/02/16) GSSE Independent Environmental Audit, 2011.	Upon approval of any future mining applications at the site, obtain and review the Pollution Reduction Program and consult with the DPE and EPA to enable implementation of any outstanding actions resulting from this condition.	n/a

Blasting								
6.1	All blasting is designed and carried out to industry standards, to meet nominated airblast and ground vibration criteria and to minimise impacts on surrounding land owners of the Project Site.	Blast design and implementation would be undertaken by a suitably qualified blasting engineer and/or experienced and appropriately certified shot-firer.	Ongoing	Not triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
6.2		Orientate the blast face, where practical, away from or at an oblique angle to nearby residences.	Ongoing	Not triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
6.3		Implement blast hole spacing in accordance with blast design.	Ongoing	Not triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
Flora and Fauna								
7.1	Minimisation of long term impact on flora and fauna on and around the Project Site.	Manage all overburden storage within the completed sections of the open cut and areas previously disturbed by mining activities.	Ongoing	Compliant	Overburden storage was observed to be undertaken within the areas of the site previously disturbed by mining activities. Based on the observations of current operations, this condition has been assessed as compliant.	Site inspection (28/01/16)	n/a	n/a
7.2		Minimise clearing to be consistent with operational requirements.	During clearing	Not Triggered	The 2013, 2014 and 2015 AEMRs state that no vegetation clearance occurred during the audit period. Sedgman confirmed this during site interviews.	Site interview (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
7.3		Clearly define all areas to be cleared and conduct all soil stripping in campaigns on an as-needs basis.	Prior to clearing	Not Triggered	The 2013, 2014 and 2015 AEMRs state that no vegetation clearance occurred during the audit period. Sedgman confirmed this during site interviews.	Site interview (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
7.4		Construct any additional internal roads required on the cleared lands well away from stands of native vegetation.	Ongoing	Compliant	No new internal roads were identified as being constructed during the audit period. The AEMRs reported that no construction works were undertaken. Based on current site observations at the time of the audit, this is assessed as compliant.  The 2011 IEA stated that there was 'evidence of the internal road ways encroaching native vegetation stands in a number of locations, one being the Capertee Stringybark conservation area'. In response to this, Coalpac commented in the 2011 AEMR that 'the internal road referred to by the Auditor is a pre-existing road that pre-dates current approval. All future roads will be constructed with the mining pit disturbance areas and will be incorporated into the revegetation program'. No further action was taken.	IEA 2011 Site inspection/Interview (28/01/16) AEMR 2011	n/a	n/a
7.5		Manage noxious weeds on the Invincible Colliery Site.	Ongoing	Observation	The Landscape Management Plan (2009) requires management of weeds at the site. At the time of the audit, a weed spraying program was in place, and a purchase order and email were sighted to demonstrate that a contractor had been engaged in 2015/2016 to carry out weed control works at the mine site.  Noxious species identified during monitoring have been controlled across the mining lease and BOA, including: St John's Wort and Blackberry. Additional noxious species were identified during the site inspection, including Scotch Thistle ( <i>Onopordum acanthium</i> ) that were not known to be targeted during control spraying.	Landscape Management Plan, June 2009 Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015); - Services Agreement; Weed Management at the Invincible Colliery and Cullen Valley Mine (Kleinfelder, 2015); - Purchase Order for weed spraying at Coal Mine (from Manildra Group and Kleinfelder, dated 28/1/16)	Review target noxious weed species in subsequent control programs to capture the species identified during the site inspection on 28 January 2016, including Scotch Thistle ( <i>Onopordum acanthium</i> ) that were not known to be targeted during control spraying.	Castlereagh Coal
7.6		Identify, remove and relocate tree hollows within the footprint of the proposed open cut mine extension.	Prior to clearing	Not Triggered	The 2013, 2014 and 2015 AEMRs state that no vegetation clearance occurred during the audit period. Segman confirmed this during site interviews. This activity is outside the scope of this audit. It is noted that this was identified as a non compliance in the 2011 IEA. The previous Auditor commented that this was not occurring prior to clearing. Coalpac responded in the 2011 AEMR stating that 'all trees, including hollows, are removed and relocated back onto rehabilitated surface'.	Site inspection/Interview (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
7.7		Carry out, where possible, tree removal, especially the mature trees in late spring and early autumn to avoid spring nesting birds and over-wintering bats.	Ongoing	Not Triggered	The 2013, 2014 and 2015 AEMRs state that no vegetation clearance occurred during the audit period. Sedgman confirmed this during site interviews.	Site inspection/Interview (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
7.8		Undertake inspections of mature trees for nesting birds and roosting bats prior to each clearing campaign.	Prior to clearing	Not Triggered	The 2013, 2014 and 2015 AEMRs state that no vegetation clearance occurred during the audit period. Sedgman confirmed this during site interviews.	Site inspection/Interview (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a
7.9		Relocate any nesting and roosting hollows, as well as nests, used by listed threatened species to appropriate locations nearby.	Ongoing	Compliant	Incorporation of hollows within the final landform has occurred and was observed during site inspection.	Site inspection/Interview (28/01/16) AEMR 2013	n/a	n/a
7.10		Place all branches and tree trunks <300mm in diameter or containing hollows over the areas of the final landform designated for the reestablishment of native vegetation.	Ongoing	Compliant	Incorporation of logs within the final landform has occurred and was observed during site inspection.	Site inspection/Interview (28/01/16) AEMR 2013	n/a	n/a
7.11		Rehabilitate the final landform using tube stock of the species <i>Eucalyptus cannonii</i> and <i>E. viminalis</i> .	Ongoing	Observation	Seed collection has not been documented. Planting of <i>Eucalyptus viminalis</i> and <i>E. cannonii</i> tubestock is described in the 2013 AEMR. The 2013 AEMR describes the planting of <i>E. cannonii</i> (Section 3.8.1), although this species does not appear on the Rehabilitation Seed Species List in Table 17.	AEMR 2013, 2014, 2015	Provide consistency between relevant sections of the AEMR with respect to species lists, or provide supplementary information on the planting of <i>Eucalyptus cannonii</i> .	Coalpac

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7.12	Minimisation of long term impact on flora and fauna on and around the Project Site (continued).	Include a vertebrate pest control program as part of the mining operation.	Within 12 months of commencement of mining	Not Compliant (Low)	Feral Pest Control methods are described in the Landscape Management Plan (S9.10). Biodiversity Monitoring Reports and AEMR's for the current audit period have not documented any vertebrate pest control activities. No evidence of inspections, or development of a feral pest control plan have been reviewed.	Landscape Management Plan, 2009 Section 9.10 Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015); AEMRs 2013, 2014, 2015	Undertake assessment of the need for vertebrate pest control, as described in the LMP and Biodiversity Monitoring reports. Undertake control activities, as advised.	Castlereagh Coal
7.13		Design drainage line crossings to ensure that natural creek flows are not interfered with.	Prior to commencement of the project.	Not Triggered	Compliance with this condition was required prior to the commencement of the project and is outside the audit period.	n/a	n/a	n/a
Cultural Heritage								
8.1	Provide appropriate protection to identified Aboriginal artefacts.	Construct a fence around the site "Invincible OS1" and identify this as a culturally sensitive area at the site and on all mine plans.	Prior to commencement of the Project	Not Compliant (Medium)	The Aboriginal Heritage Management Plan (June 2009) requires 'Invincible OS1' to be fenced and sign posted (Warning and Notice signs). During the site inspection, the Auditor observed: - a fence around the heritage site "Invincible OS1"; however no signage was visible. - maps showing the location of the heritage site on the noticeboard at the main office. It was reported that signage had been installed, but was not visible to the auditor during the audit. A review of monitoring and management plans indicated that the location of the heritage site is not identified on all mine plans. For example, the 2013 MOP does not include the site on plans 1, 2A, 3, 4A. The Aboriginal Heritage Management Plan does not include the site's location on the overall mine site layout on Figure 2.	Site inspection (28/01/16) Noticeboard information Mining Operations Plan, 2013. Aboriginal Heritage Management Plan, June 2009	Update plans in all management documents to include the location of the cultural heritage site "Invincible OS1".  Re-erect the signs at the 'Invincible OS1' Aboriginal heritage site as outlined in the Aboriginal Heritage Management Plan (i.e. Warning and Notice signs).	Castlereagh Coal
8.2		Manage drainage in the vicinity of the site such that it would not be subject of flooding.	Ongoing	Not Verified	The OS1 Aboriginal site is identified in the Aboriginal Heritage Management Plan as stretching for approximately 100 metres in roughly an east-west direction along the southern side of the existing farm dams and spillway. It was reported during site interviews that no works have been undertaken within the vicinity of the heritage site.	Site inspection/interviews (28/01/16) AEMR 2011	Conduct inspections of the Aboriginal Heritage site 'Invincible OS1' prior to any planned pumping activity in the vicinity of the site, to ensure that planned water movements do not cause flood impacts to this area.  Monitor the site during heavy rainfall periods and implement non-intrusive measures to divert water away from this area as required to minimise flooding impacts.	n/a
8.3		Inform all site personnel to the presence of the site and their obligations under the National Parks and Wildlife Act 1974 (NPW Act, 1974) in relation to site protection.	Prior to commencement of construction	Not Compliant (Medium)	A template site induction competency assessment record, dated October 2012, was reviewed. The most recent completed record reviewed was dated 11 April 2012. The induction presentation or more recent (post 2012) site induction records were not available. Whilst this condition states that the induction is required prior to commencement of construction, it is the Auditor's opinion, that the intent of this measure is to ensure that site workers are inducted before working on the site (at any stage of the project). Therefore, this condition is assessed as not compliant.	Site interviews (28/01/16) Induction Record 11/4/12 Induction competency assessment template, October 2012.	Ensure that the care and maintenance period site induction for staff and contractors, includes an appropriate Aboriginal Heritage induction that includes the location of the site and obligations under the NPW Act 1974.  Ensure that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site, before working on the site.	Castlereagh Coal
8.4	Minimise potential to impact upon unidentified Aboriginal artefacts.	Cease work at any area if further Aboriginal objects are uncovered during the course of the Project, and contact the DECCW (NPWS) for advice.	Ongoing	Noted	The AEMRs do not report any Aboriginal Heritage finds during the audit period.	AEMR 2013, 2014, 2015	n/a	n/a
8.5	Employees who are sensitive and respectful of possible identified Aboriginal sites and artefacts.	Conduct a Cultural Heritage Awareness Induction Course for staff, contractors and any heritage monitors working on the Project Site.	Ongoing	Not Compliant (Medium)	the Auditor sighted the following: - Map of the Aboriginal heritage site on notice board near the office - A template site induction competency assessment record, dated October 2012, which has a question on what to do if a new heritage site is found. - A completed site induction record dated 11 April 2012.  Records pertaining to a Cultural Heritage Awareness Induction and induction records post-2012 were not sighted. The site is currently in care and maintenance, however, some ground disturbing works may be undertaken during rehabilitation and maintenance of erosion and sediment controls. It is therefore considered that continued cultural heritage induction is required during this period.	Site inspection/interviews (28/01/16) Induction Record 11/4/12 Induction competency assessment template, October 2012.	Ensure that the care and maintenance period site induction for staff and contractors, includes an appropriate Aboriginal Heritage induction that includes the location of the site and obligations under the NPW Act 1974.  Ensure that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site, before working on the site.	Castlereagh Coal

Water Resources								
9.1	Provide for a constant source of water for operational and environmental purposes.	Obtain appropriate water licences for the extraction of groundwater from the Invincible Colliery underground workings.	Prior to extraction of water from existing and proposed groundwater bores	Compliant	the Auditor sighted a copy of the water licences for the site. - Groundwater Licence 10BL602586 - 19 Feb 2013 to 18 Dec 2018 (replaced with WAL36485 and approval 10WA118764) - Groundwater Licence 10BL602584 - 24 Dec 2012 to 23 Dec 2017 (replaced with WAL35978 and works approval 10WA118581) the Auditor also spoke with the DPI-Water as part of the required consultation for this audit, who confirmed that the licences allow the extraction of groundwater from the Invincible Colliery underground workings.	Consultation DPI-Water (8/02/16) Groundwater Licences as noted.	n/a	n/a
9.2	Manage groundwater at surface to prevent contamination.	Cease pumping and discharge of groundwater to the Cox's River (under EPL 1095) in the event of observed ferrous iron oxidation, i.e. iron staining.	Ongoing	Noted	The AEMRs indicate that groundwater was not discharged to the Cox's River during the reporting period.	AEMR 2013, 2014, 2015	n/a	n/a
9.3		Locate the groundwater discharge point to the Main Colliery Dam on a float towards the middle of the dam.	Prior to extraction of water from existing and proposed groundwater bores.	Not Triggered	Mining operations ceased in April 2013. Therefore this condition relates to activities undertaken prior to and outside the scope of the audit. The AEMRs indicate that groundwater was not extracted from groundwater bores during the reporting period.	AEMR 2013, 2014, 2015	If no longer applicable, it is recommended that SOC condition 9.3 be removed in consultation with DPE and a record of consultation retained.	If no longer applicable, it is recommended that SOC condition 9.3 be removed in consultation with DPE and a record of consultation retained.
9.4		Undertake quarterly sampling and general observation of water within the main Colliery Dam and analyse / inspect for signs of ferrous iron oxidation or other contamination.	Quarterly	Not Compliant (Low)	The Water Management Plan (June 2009) specifies that water quality monitoring will be undertaken monthly within the Main Colliery Dam.  Review of the AEMRs indicates that this monthly monitoring was primarily not undertaken throughout the audit period, with the 2015 AEMR reporting that this monitoring commenced at the site in December 2015. The Auditor notes the proposal by the current mine operator to implement monthly monitoring of the dam (regardless of whether discharge is occurring) from this point forward, and that this is an increased frequency to what is required by this condition.  The monthly environmental monitoring reports reviewed, did not include the results of visual inspections for ferrous iron oxidation or other contamination, as required by this condition. It is noted that the reports reviewed were summary reports and the analytical and field data (which is reported to contain this information) was not available for review at the time of the audit.	AEMRs 2013 to 2015 Environmental monitoring reports 2013 to 2015	Ensure monthly environmental monitoring reports include the results of visual inspections for ferrous iron oxidation and other contamination.	Castlereagh Coal
9.5	Diversion of clean water flows away from areas of project related disturbance.	Cease pumping and discharge of groundwater to the Main Colliery Dam in the event of observed ferrous iron oxidation or signs of other contamination.	Ongoing	Not Triggered	It was reported that there is currently no groundwater pumping occurring on site.	Site interviews (28/01/16)	n/a	n/a
9.6		Operate the existing clean water diversion structures in accordance with the Invincible Colliery Soil and Water Management Plan	Ongoing	Not Compliant (Low)	The Water Management Plan (June 2009) stipulates the installation of clean water diversions. A full review of clean water diversion structures was not undertaken however, some erosion was observed during the site inspection and it was noted that roads other areas require maintenance.	Site inspection (28/01/16)	Engage a suitably qualified and experienced person to inspect the surface water management system structures and carry out maintenance/repairs/rectification works as required.	Castlereagh Coal
9.7		Construct a diversion banks upstream of the proposed extension areas of the open cut, diverting water to an adjacent natural drainage features.	Prior to disturbance of previously rehabilitated area	Not Triggered	It is reported that no previously rehabilitated areas were disturbed during the audit period.	Site interviews (28/01/16)	n/a	n/a
9.8		Inspect the diversion banks and other clean water management structures on a regular basis, or following rainfall of >25mm/24 hours, and undertake maintenance work as necessary.	Quarterly or following rainfall of >25m/24hours	Not Compliant (Medium)	Inspection records were sighted, including the OCE Designated District Inspection Reports (8/7/15-25/1/16), General Area Inspection Reports (8/7/15-25/1/16) and inspection check sheets (30/12/15-28/01/16).  During the site inspection, some areas of erosion were observed requiring maintenance. Additional maintenance works are required to be undertaken at the site.	OCE Designated District Inspection Reports (8/7/15-25/1/16) General Area Inspection Reports (8/7/15-25/1/16) Inspection checksheets (30/12/15-28/01/16) Site inspection (28/01/16)	Engage a suitably qualified and experienced person to inspect the surface water management system structures and carry out maintenance/repairs/rectification works as required.	Castlereagh Coal

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9.9	Capture of dirty water flows from areas of project related disturbance.	Construct low flow contour bank(s) discharging to a sediment basin(s) downstream of the proposed open cut mine extension.	Prior to commencement of open cut mining	Not Compliant (Medium)	The Water Management Plan (June 2009) stipulates the installation of dirty water retention structures. Contour banks are constructed and discharge to sediment ponds. Some areas of erosion were observed across the site and a review of the dirty water retention structures (including low flow contours) should be undertaken.	Site inspection (28/01/16)	Engage a suitably qualified and experienced person to inspect the surface water management system structures and carry out maintenance/repairs/rectification works as required. The review should assess the adequacy of the size of the sediment basins.	Castlereagh Coal
9.10		Construct road-side sediment basins to capture run-off from the internal haul road.	Complete	Compliant	Road side sediment basins were observed on the western side of the internal haul road during the audit.	Site inspection (28/01/16)	n/a	n/a
9.11		Inspect the settlement ponds and sediment basins on a regular basis, or following rainfall of >25mm/24 hours, and clean out the sediment basins of consolidated sediment once capacity reduced by 20%.	Quarterly or following rainfall of >25mm/24 hours	Not Compliant (Medium)	Inspection records were sighted, including the OCE Designated District Inspection Reports (8/7/15-25/1/16), General Area Inspection Reports (8/7/15-25/1/16) and inspection check sheets (30/12/15-28/01/16). This includes a check of 'dams and drains'.  During the site inspection, it was evident that maintenance of water management structures is required.	OCE Designated District Inspection Reports (8/7/15-25/1/16) General Area Inspection Reports (8/7/15-25/1/16) Inspection checksheets (30/12/15-28/01/16) Site inspection (28/01/16)	Engage a suitably qualified and experienced person to inspect the surface water management system structures and carry out maintenance/repairs/rectification works as required.	Castlereagh Coal
9.12		Excavate temporary sumps within the open cut area to capture rainfall and runoff within the open cut.	As part of open cut mining activities	Not Triggered	Mining ceased in 2013. This activity falls outside of the audit period.	AEMR 2013	n/a	n/a
9.13	Discharged water quality to meet nominated criteria.	Undertake monitoring of any discharged water from the Project Site within 24 hours of discharge event.	Within 24 hours of discharge event	Not Verified	Monthly wet weather discharge monitoring was undertaken at LD002 (EPA point 2) in July 2013, April 2014, August 2014, January 2015, April 2015, August 2015, September 2015 and November 2015. It is considered that this condition was in general compliance, whilst a review of the RCA August 2015 monitoring report (provided post audit) indicated that sampling was conducted during discharge, generally the monitoring reports did not consistently provide evidence that the samples were collected within 24 hours of the commencement of discharge.  In addition, determination of whether discharge sampling occurred during August 2013, September 2013 and November 2014 could not be verified due to the monitoring data not being available on the Coalpac website and limited access to previous mine operators records during the audit. Therefore this condition could not be verified due to lack of records.	AEMRs 2013-2015 Environmental monitoring reports 2013-2015 RCA August 2015 Monitoring Report	Ensure future water quality discharge monitoring reports identify whether sampling was undertaken within 24 hours of the commencement of discharge.	n/a
9.14		Ensure any water discharged from nominated discharge point (No. 2) meets the criteria of EPL 1095, as follows. TSS <50mg/L. pH: 5.5 to 8.5. Oil & grease <10mg/L.	As above	Not Compliant (Low)	Annual Returns were reviewed for the following reporting years: 2012-2013, 2013-2014, 2014-2015 and Feb 2015 to May 2015. Preparation of the annual return for 2015-2016 is currently in progress.  Review of the POEO Public Register for EPL 1095 (7/02/16) showed one non-compliance was recorded by the EPA in the 2014-2015 annual return for a minor exceedance of pH at LDP2. Consultation with the EPA confirmed that LDP2 corresponds with the EPL discharge monitoring location LD002. The EPA stated on the POEO Register that it will monitor future compliance with this condition.  The 2014 AEMR did not report any discharge monitoring being undertaken in 2014. A review of the available monitoring reports indicated that wet weather discharge monitoring was undertaken at LD002 in both April and August 2014. The August 2014 report does not present the results, rather it references a report 24004899-A which was not reviewed as part of this audit. In the absence of other records, is considered likely that the exceedance occurred during this month.  It is noted that the environmental monitoring reports for September 2014 to April 2015, August 2013 and September 2013 are not available on the Coalpac website (former mine operator). A copy of the September 2014 to April 2015 reports was provided by Sedgman. It was reported that earlier records could not be obtained due to pre-dating the current mine operators' records. As such, the Auditor was unable to verify compliance with this condition for some dates.	AEMRs 2013-2015 Annual returns: 202-2013, 2013-2014, 2014-2015, Feb 2015-May 2015 NSW EPA POEO Public Register (7/02/16) for EPL 1095 Monitoring reports 2013-2015	Continue to monitor water quality in accordance with the requirements of the EPL, including identification of trends relating to pH.	Coalpac
9.15	Prevention of hydrocarbon contamination of water on the Project Site.	Securely store all hydrocarbon products.	Ongoing	Not Compliant (Low)	Hydrocarbon products were generally stored securely, in areas that either contained bunding or flammable chemical cupboards, however some drums of product were observed in the workshop without secondary containment. A repair is required to the mechanical workshop drains that lead to the separator.	Site inspection (28/01/16)	Ensure all liquid chemical containers are stored within secondary containment / in bunding that is in good working order.	Castlereagh Coal
9.16		Refuel all but the less mobile mining equipment which would be refuelled within the open cut area, within designated areas.	Ongoing	Compliant	A diesel above ground refuelling station was observed during the site audit. It was reported that all refuelling occurs at this location. Refuelling was not observed at the time of the site inspection.	Site inspection (28/01/16)	n/a	n/a

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9.17		Direct all water from wash-down areas and workshops to oil/water separators and containment systems.	Ongoing	Not Compliant (Medium)	Wash down areas and workshops drain to a catch drain system that leads to an oil/water separator and a 6000L waste oil collection tank. During the site inspection, maintenance and integrity issues were identified as outlined in condition 9.18 below. These issues affect the ability of the system to contain wastewater and are required to be addressed.	Site inspection (28/01/16)	Refer to actions in 9.18 below.	Castlereagh Coal
9.18	Prevention of hydrocarbon contamination of water on the Project Site (continued).	Ensure all storage tanks are either selfbunded tanks or banded with an impermeable surface and have a capacity to contain a minimum 110% of the largest storage tank capacity.	Ongoing	Not Compliant (Medium)	The 2015 AEMR reports two above ground fuel storage tanks on site. One self-banded 75,000L diesel tank is currently used to store a maximum of 35,000L fuel for pumps and light vehicles. A second tank (95,000L) was drained down and secured and is currently not in use.  Waste oil is collected in the workshop area in portable drums for offsite disposal. Waste oil is also transferred to a bulk waste oil tank located in a banded area near the vehicle servicing area. A catch drain adjacent to the waste oil tank is designed to capture any spills in this area. This drain leads to an oil/water separator and a 6,000L waste oil collection tank.  During the site inspection, a number of observations were recorded as follows: 1. The catch drain system was (in sections) filled with oily sediment and debris and as the area is still in use for chemical storage, it requires cleaning and maintenance. 2. A break in the PVC pipes that leads from the catch drains to the oil/waterseparator and waste oil tank was observed. Should any spills within the banded area occur, this would leak onto the soil and vegetation on the embankment. The piping needs repair and the integrity of the system requires testing. 3. The 6000L waste oil collection tank is not banded. 4. Liquid waste containers stored within the workshop are not banded.	AEMR 2013, 2014, 2015 Site inspection (28/01/16)	*Ensure all liquid waste containers are stored within secondary containment / in bunding. *Undertake maintenance and cleaning of the wastewater catch drain system. *Retain all records of maintenance of equipment for a period of 7 years. *Retain records of waste disposal for a period of 7 years. *Install bunding around the waste oil collection tank (if it is to remain operational). *Repair the breakage in the pipe that leads from the wastewater catch drain to the oil/water separator and waste oil collection tank. Investigate whether any soil contamination has resulted from the breakage. * Conduct a maintenance inspection and integrity test of the waste oil collection system tanks and piping.	Castlereagh Coal
9.19		Implement a 3-phase remedial action plan in the event of a major hydrocarbon spill as follows. – Phase 1 – Initial Recovery: Recover as much as possible at the source by pumping free hydrocarbon from the surface and excavating hydrocarbon-contaminated materials. – Phase 2 – Source Control: Begin hydraulic control of the source to prevent spreading of contamination. – Phase 3 – Recovery: If necessary, install boreholes to remove and treat contaminated groundwater.	In the event of a hydrocarbon spill	Not Triggered	A review of the AEMRs relevant to the audit period indicates that there were no major hydrocarbon spills requiring implementation of this condition. Therefore, this has been assessed as not triggered.	AEMR 2013, 2014, 2015 Site interviews (28/01/16)	n/a	n/a
9.20	Manage all ongoing water issues.	Update the Invincible Colliery Site Water Management Plan (SWMP) to include modifications resultant from proposed extension to the open cut mine and increased production.	Within 3 months of project approval	Compliant	The Water Management Plan (June 2009), Section 1.1 references these requirements.	Water Management Plan, June 2009	n/a	n/a
Traffic and Transport								
10.1	All motorists travel safely to and from the Project Site with minimal disruption to traffic on the Castlereagh Highway.	Undertake all transport activities strictly in accordance with the project approval and environment protection licence.	Ongoing	Not Verified	Coal transport activities were undertaken within the audit period from May 2013 to September 2013, after which time no further coal transport was undertaken. It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.2		Restrict maximum hourly truck movements to and from the Project Site to 12.	Ongoing	Not Verified	The 2013 AEMR reports that from May to September 2013, the average laden truck movements per day were 5. This meets the criteria of 12 truck movements per hour. It is not possible to verify if this condition is compliant as the activities were completed prior to the audit and records were not sighted. Note: - Project Approval condition 8, Schedule 2 allows 16 truck movements per hour.	AEMR 2013	n/a	n/a
10.3		Maintain a 5-minute gap, as far as practicable, between the despatch of coal carrying trucks from the Invincible Colliery.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.4		Encourage communication between drivers exiting the Invincible Colliery and Ivanhoe North Rehabilitation Project such that movements to and from these operations are staggered.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.5		Minimise truck movements during periods when buses carrying school children are travelling on the section of road between the Invincible Colliery and Mt Piper or Wallerawang Power Stations.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a

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10.6	All motorists travel safely to and from the Project Site with minimal disruption to traffic on the Castlereagh Highway (continued).	Undertake all deliveries of "oversize" loads in accordance with RTA and Council restrictions on transport hours and safety / warning requirements.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.7		Ensure all trucks transporting coal are well maintained and that driver's act in a courteous manner at all times.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.8		Ensure all trucks transporting coal are well maintained and that driver's act in a courteous manner at all times.	Ongoing	Not Verified	This condition is a repeat of 10.7.	See 10.7	n/a	n/a
10.9		Ensure all truck drivers operate in accordance with a Transport Policy and Code of Conduct.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.10		Obtain an Occupational Health and Safety Management Plan and a "Code of Conduct" for all drivers from each transport contractor.	On grant of contract	Not Triggered	This condition relates to activities undertaken prior to and outside the scope of the audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.11		Enforce a covered load policy to all trucks transporting coal from the Invincible Colliery.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.12		Load each truck to avoid spillage and distribute the load safely within the Road and Traffic Authority's legal maximum weights.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
10.13		Only transport coal to the Wallerawang Power Station to provide emergency supply. The campaigns of traffic between Invincible Colliery and Wallerawang Power Station are not to exceed 2 weeks every 3 months.	Ongoing	Not Verified	It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
Air Quality								
11.1	Site activities are undertaken without exceeding DECCW air quality criteria or goals.	Minimise clearing ahead of construction and operational activities.	Ongoing	Not Triggered	Mining operations ceased in April 2013. Therefore this condition relates to activities undertaken prior to and outside the scope of the audit. Notwithstanding, the 2013, 2014 and 2015 AEMRs state that no vegetation clearance occurred during the audit period. Segman confirmed this during site interviews.	AEMRs 2013, 2014, 2015. Site interviews (28/01/16)	n/a	n/a
11.2		Undertake soil stripping at a time when there is sufficient soil moisture to prevent significant lift-off of dust.	Ongoing	Not Triggered	Mining operations ceased in April 2013. Therefore this condition relates to activities undertaken prior to and outside the scope of the audit.	AEMRs 2013, 2014, 2015.	n/a	n/a
11.3		Avoid stripping soil in periods of high wind.	Ongoing	Not Triggered	Mining operations ceased in April 2013. Therefore this condition relates to activities undertaken prior to and outside the scope of the audit.	AEMRs 2013, 2014, 2015.	n/a	n/a
11.4		Sow a sterile cover crop over soil stockpiles that are to be retained for more than three months.	Ongoing	Not Triggered	No topsoil stockpiles were observed.	Site inspection (28/01/16)	n/a	n/a
11.5		Use water application to increase soil moisture should stripping occur during periods of high wind or low soil moisture.	Ongoing	Not Triggered	Mining operations ceased in April 2013. Therefore this condition relates to activities undertaken prior to and outside the scope of the audit.	AEMRs 2013, 2014, 2015.	n/a	n/a
11.6		Fit drill rigs with dust collectors or alternatively use water injection.	Ongoing	Not Triggered	Mining operations ceased in April 2013. Therefore this condition relates to activities undertaken prior to and outside the scope of the audit.	AEMRs 2013, 2014, 2015.	n/a	n/a
11.7		Undertake surface dampening activities prior to blasting to minimise dust lift-off.	Ongoing	Not Triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.  Note: The 2011 IEA reported this as a non-compliance. GSSE noted that the commitment was not practical and recommended that it be removed, suggesting that the area be listed as an exclusion zone. Coalpac responded in the 2011 AEMR (as at April 2011): 'Deemed impractical due to accessibility of blasting drill pads and not necessary as main dust source is generated by haul truck traffic'. Coalpac further added (as at January 2012): 'No further action required'.	AEMR 2013, 2014, 2015 Site interview (28/01/16) GSEE Independent Environmental Audit (IEA), 2011	n/a	n/a
11.8		Use coarse aggregates for blast hole stemming to prevent venting of explosion gases.	Ongoing	Not Triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
11.9		Dampen stockpiles of ROM coal prior to processing through the crushing and screening plant and product coal if significant dust lift-off is observed.	Ongoing	Not Triggered	The site was placed in care and maintenance in May 2013. The Coal Preparation Plant (CCP) was shut down in January 2013 and mining operations ceased in April 2013. Therefore, coal processing activities fall outside the scope of this audit.	AEMRs 2013, 2014, 2015.	n/a	n/a

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11.10	Site activities are undertaken without exceeding DECCW air quality criteria or goals (continued).	Temporarily cease operation in the event of protracted dry periods, high winds and significant dust generation and dispersal towards the surrounding residences.	Ongoing	Not Verified	No incidents or complaints related to dust were recorded during the audit period. It is not possible to verify if this condition has been satisfied as these activities were completed prior to the site inspection. There were no activities undertaken on site during the site inspection that would be affected by these weather conditions.	AEMR 2013, 2014, 2015 Site inspection/interview (28/01/16)	n/a	n/a
11.11		Cover all trucks carrying product coal from the mine with approved covers and securely fix the tailgates to prevent windblown dust emission or spillages.	Ongoing	Not Verified	Coal transport activities were undertaken within the audit period from May 2013 to September 2013, after which time no further coal transport was undertaken. It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site inspection/interview (28/01/16)	n/a	n/a
11.12		Apply water to internal haul roads at a rate of approximately 2L/m2 per application.	Ongoing	Not Verified	The site is in care and maintenance. Water carts were not observed being used during the audit. Dust was not observed lifting from haul roads during the audit. The 2015 MOP states that regular inspections of the site will be undertaken and control measures to minimise air quality impacts include a water cart on haul roads when undertaking maintenance works. A daily inspection record is maintained and the record for 28/1/16 was sighted. It is not possible to verify if this condition has been satisfied as these activities were completed prior to the site inspection. However, in the Auditors opinion, it is considered that this condition is compliant.	AEMRs 2013, 2014, 2015. Coalpac Inspection Record 28/1/16. Site inspection (28/01/16) MOP 2015	n/a	n/a
11.13		Minimise the drop heights between frontend loader buckets and trucks carrying coal or overburden.	Ongoing	Not Verified	Coal transport activities were undertaken within the audit period from May 2013 to September 2013, after which time no further coal transport was undertaken. It is not possible to verify if this condition has been satisfied as the coal transport activities were completed prior to the site inspection. It is also noted that these activities were undertaken by the previous mine operator (Coalpac) and access to previous records is limited.	AEMR 2013, 2014, 2015 Site inspection (28/01/16)	n/a	n/a
11.14	Minimise the generation of greenhouse gases as a consequence of the project.	Cease any dust-generating activity(ies) in the event of strong winds blowing dust towards residences.	Ongoing	Not Verified	No incidents or complaints related to dust were recorded during the audit period. The 2015 MOP states that regular inspections of the site will be undertaken and control measures to minimise air quality impacts include a water cart on haul roads when undertaking maintenance works. A daily inspection record is maintained and the record for 28/1/16 was sighted. It is not possible to verify if this condition has been satisfied as these activities were completed prior to the site inspection.	AEMRs 2013, 2014, 2015. Coalpac Inspection Record 28/1/16. Site inspection (28/01/16) MOP 2015	n/a	n/a
11.15		Fit all earthmoving equipment on-site with exhaust controls which satisfy NSW DECCW emission requirements.	Ongoing	Not verified	Most mobile plant and equipment has been removed from the site. Small excavators and dozers will be used periodically for short periods for specific tasks such as erosion controls and rehabilitation maintenance. It was not verified during the audit whether the equipment remaining on the site was fitted with exhaust controls which satisfy NSW EPA emission requirements.	Site inspection (28/01/16) AEMR 2015 MOP 2013, 2015	Inspect all mobile plant onsite to ensure it is fitted with exhaust controls which satisfy NSW EPA emission requirements prior to use.	n/a
11.16		Ensure that all equipment is properly maintained to ensure no unacceptable exhaust emissions occur.	Ongoing	Not verified	The 2015 AEMR states that any equipment remaining on site is proposed to be periodically run, where possible with pre-start inspections conducted at each instance. No pre-start inspections were sighted. Maintenance records were not sighted. Sedgman advise that vehicles are serviced off-site as required and no records are kept on site.	Site inspection (28/1/16) AEMR 2015	Ensure all plant and equipment required during care and maintenance is maintained in a proper and efficient manner as per a maintenance schedule or manufacturers instructions.  Retain service records for all plant and equipment installed at the premises or currently used in connection with the licensed activity.	n/a
11.17	Monitor the impacts on local air quality to ensure the nominated DECCW criteria are adhered to.	Undertake an air quality monitoring program to demonstrate compliance with the nominated goals.	Various	Compliant	Refer to Air Quality Monitoring Program (June 2009) and monitoring results summarised in the AEMRs and detailed in monthly environmental monitoring reports. An air quality monitoring program has been implemented and therefore this condition is assessed as compliant.	Air Quality Monitoring Program (June 2009) Dust and HVAS monitoring results 2013 to 2015	n/a	n/a
11.18		Monitor deposited dust at selected residences and strategic locations surrounding the Project Site.	Monthly	Not verified	Dust and HVAS monitoring data was reviewed from January 2013 to December 2015. Monitoring reports for August 2013 and September 2013 were not available and therefore, the Auditor could not verify compliance for these dates with respect to this condition. Given the information provided in the AEMRs, in the Auditors opinion, it is likely that this requirement has been met, however it is noted that this was not verified using monitoring reports.	Site inspection (28/01/16) AEMRs 2011 to 2015 Available monitoring reports 2013 to 2015 Air Quality Management Program, June 2009	n/a	n/a
11.19		Monitor meteorological conditions as they relate to the dispersion of air contaminants.	Continuous	Not verified	A meteorological monitoring station was observed on site during inspection on 28/01/16. The 2011 IEA reported that the weather station was upgraded in May 2009 to rectify data capture reliability issues. No issues were reported following this upgrade. Monthly environmental monitoring reports do not include the results of meteorological conditions with respect to the results of dust monitoring results.	Site Inspection 28/01/16 GSSE, IEA, 2011 Environmental monitoring reports 2013-2015	Environmental monitoring reports should include information about meteorological conditions as they relate to the dispersion of air contaminants (at the time of air quality monitoring).	n/a

Environmental Monitoring								
	Monitor and record environmental impacts on the local environment	Surface Water						
12.1		Monitor water quality from licensed discharge point (No. 2) within 24 hours of commencement of discharge.	As required	Not Verified	Monthly wet weather discharge monitoring was undertaken at LD002 (EPA point 2) in July 2013, April 2014, August 2014, January 2015, April 2015, August 2015, September 2015 and November 2015. It is considered that this condition was in general compliance, whilst a review of the RCA August 2015 monitoring report (provided post audit) indicated that sampling was conducted during discharge, generally the monitoring reports did not consistently provide evidence that the samples were collected within 24 hours of the commencement of discharge.  In addition, determination of whether discharge sampling occurred during August 2013, September 2013 and November 2014 could not be verified due to the monitoring data not being available on the Coalpac website and limited access to previous mine operators records during the audit. Therefore this condition could not be verified due to lack of records.	AEMRs 2013-2015 Environmental monitoring reports 2013-2015 RCA August 2015 Monitoring Report	Ensure future water quality discharge monitoring reports identify whether sampling was undertaken within 24 hours of the commencement of discharge.	n/a
12.2		Monitor water quality within the Main Colliery Dam.	Quarterly	Not Compliant (Low)	The Water Management Plan (June 2009) specifies that water quality monitoring will be undertaken monthly within the Main Colliery Dam. Review of the AEMRs indicates that this monthly monitoring was primarily not undertaken throughout the audit period, with the 2015 AEMR reporting that this monitoring commenced at the site in December 2015. This condition is therefore assessed as not compliant. However the Auditor notes the proposal by the current mine operator to implement monthly monitoring of the dam (regardless of whether discharge is occurring) from this point forward, is an increased frequency to what is required by this condition. A review of previous monitoring reports indicates that clarity around the sampling location nomenclature is required when reporting the monitoring results. It is unclear whether the sampling location (Main Dam) which is proposed to be undertaken monthly, is the same location as LD002 (Discharge point). This should be made clear in the monthly environmental reports published on the website.	AEMRs 2013 to 2015 Environmental monitoring reports 2013 to 2015	Revise the Water Management Plan to clearly identify the sampling locations.  Review the nomenclature used for sampling locations (Main Dam and LD002) to clearly distinguish between the two locations. Ensure monthly environmental monitoring reports provide clear identification of the different sampling locations when reporting the results.	Castlereagh Coal
		Noise						
12.3		Undertake quarterly attended and unattended monitoring at the "Hillview", "Billabong", Cullen Bullen south and Cullen Bullen west residences for the life of the Invincible Colliery.	Quarterly	Not Compliant (Low)	Quarterly attended noise monitoring has been undertaken at the site for the duration of the audit period at three locations: Cullen Bullen South, Cullen Bullen West and Cullen Bullen Centre. As per the 2011 AEMR, Hillview and Billabong properties were acquired in 2010 and were therefore no longer included in the noise monitoring program.  No unattended noise monitoring was carried out. It is noted that the Noise Monitoring Program (2009) states that should the results of unattended monitoring indicate that the Project Noise cannot be delineated between external contributors over two consecutive monitoring periods, unattended noise monitoring will be discontinued. Global Acoustic (Q1, 2015) state that 'Attended monitoring is preferred to the use of noise loggers when determining compliance with prescribed limits; it allows an accurate determination of the contribution, if any, to measured noise levels by the source of interest (in this case Invincible Colliery)'.  Evidence of approval from the DPE to remove the requirement for unattended monitoring was not sighted. This condition requires: - quarterly unattended monitoring.  Most monitoring reports are provided on the Coalpac and Castlereagh Coal websites. The Q3 and 4 2014 and Q1 2015 reports were provided by Sedgman and it is recommended these, be uploaded to the website.	Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015. AEMRs 2011-2015 Noise Monitoring Program, 2009	Consult with DPE to confirm the current noise monitoring requirements of the Project Approval and the application of attended monitoring only.  Upload a copy of available historical environmental monitoring reports to the website.	Coalpac
12.4		Update the Invincible Colliery Noise Monitoring Program to account for the proposed implementation of highwall mining and production increase.	Within 3 months of Approval	Compliant	The Noise Monitoring Program (June 2009) includes sections on Highwall Mining (Section 9) and Production Increases (Section 10).  the Auditor sighted a letter from the DoP (dated 6th July 2009) which approved the Noise Monitoring Program (as per Condition 4 and 6, Schedule 3 of the Project Approval).	Noise Monitoring Program June 2009 Letter from DOP dated 6th July 2009.	n/a	n/a
12.5		Prepare a Noise Management Protocol as described by Commitment 5.18	Within 6 months of receiving project approval	Compliant	The NSW EPA confirms that a Noise Pollution Reduction Program was submitted to the EPA in 2008, as required by Commitment 5.18.	EPA Email (9/02/16)	n/a	n/a
		Blasting						
12.6		Monitor all blasts for air overpressure and ground vibration at the "Billabong" residence and the closest residence in Cullen Bullen.	Every blast	Not Triggered	Blasting activities ceased in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2013, 2014, 2015 Site interview (28/01/16)	n/a	n/a
12.7		Update the Invincible Colliery Blasting Management Plan to account for the proposed implementation of highwall mining and production increase.	Within 3 months of approval.	Not Compliant (Low)	The Blast Monitoring and Management Plan (June 2009) does not include any information on Highwall Mining or Production Increases. Therefore this condition is assessed as not compliant. It is noted that this action relates to former mining operations by the previous mine operator.  The Auditor sighted a letter from the DoP (dated 6th July 2009) which approved the Blast Monitoring Program (as per Condition 4 and 30, Schedule 3 of the Project Approval).	Air Quality Management Program June 2009 Letter from DOP dated 6th July 2009.	Pending approval to extend mining operations, review the Blast Monitoring and Management Plan (June 2009) to include information on high wall mining and production increases as appropriate.	Coalpac

		Air Quality						
12.8	Monitor and record environmental impacts on the local environment (continued)	Monitor wind speed and direction at the Invincible Colliery weather station.	Continuous	Compliant	A meteorological station is installed at the site and conducts monitoring of wind speed and direction which is reported in the AEMRs.	AEMR 2013, 2014, 2015	n/a	n/a
12.9		Monitor deposited dust deposition at locations IDD-1 to IDD-6 surrounding the Invincible Colliery.	Monthly	Not Compliant (Low)	<p>AEMRs from 2007 to 2011 and the Environmental Monitoring Program (December 2009) state that dust deposition sampling occurs at 6 locations IDD1 to IDD6. There are no maps which show IDD6 in any of these documents. However, the NSW EPA provided the Auditor with the plan referenced in P1.1 of the EPL as 'Figure faxed to the EPA on 20/11/06'. This figure shows six dust gauges, #1-5 appearing to be in the locations currently sampled on site, with dust gauge #6 located outside of the boundary of the mining lease within the Ben Bullen State Forest to the north west of the site.</p> <p>The AEMRs for 2012-2015, the Air Quality Monitoring Program (June 2009) and the current EPL state dust deposition sampling occurs at 5 locations, IDD1 to IDD5. AEMRs and monthly reports for the audit period record the results of the deposited dust monitoring at locations IDD1 to IDD5. Monitoring at IDD6 was not undertaken.</p> <p>It is considered that the intent of this condition has been met. However there was no available documentation to demonstrate approval by the DPE to reduce the number of monitoring locations from six to five. Therefore compliance with this condition, as written is assessed as not compliant. It is noted that access to records held by the previous mine operator was limited during the audit.</p>	Site interviews (28/01/16) AEMRs 2007 to 2015 Monthly monitoring reports May 2013 to December 2015 Air Quality Monitoring Program, June 2009 Environmental Monitoring Program, December 2009	Consult with DPE to confirm current dust deposition sampling requirements of the Project Approval, particularly with respect to removal of IDD6 from the monitoring program.	Coalpac
12.10		Monitor PM10 at location HVAS-1 in accordance with DECCW guidelines.	Ongoing (1 day in 6)	Compliant	PM10 is monitored at location HVAS-1 as per EPL requirements.	AEMR 2013 to 2015 Monthly environmental monitoring reports May 2013 to December 2015	n/a	n/a
12.11		Update the Invincible Colliery Air Quality Monitoring Program to account for the proposed implementation of highwall mining and production increase.	Within 3 months of project approval	Compliant	<p>The Air Quality Monitoring Program (June 2009) includes sections on Highwall Mining (Section 15) and Production Increases (Section 16).</p> <p>the Auditor sighted a letter from the DoP (dated 6th July 2009) which approved the Air Quality Monitoring Program (as per Condition 4 and 10, Schedule 3 of the Project Approval).</p>	Air Quality Management Program June 2009 Letter from DOP dated 6th July 2009.	n/a	n/a
		Rehabilitation and Compensatory Conservation Areas						
12.12	Undertake annual monitoring of rehabilitation success.	Annual	Not Compliant (Medium)	Monitoring of Rehabilitation areas seeded prior to 2011 has been undertaken. No areas of 2012 rehabilitation have been formally monitored and there is a lack fixed monitoring plots. The majority of monitoring plots are in and clustered near the older established rehabilitation of 2008.	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)	Fixed monitoring plots should be established in all years of rehabilitation across the site to achieve compliances and enable review of the performance against the completion criteria set out in the LMP.	Castlereagh Coal	
12.13	Undertake annual inspection of compensatory observation areas and report on recommended improvements.	Annual	Compliant	Annual Biodiversity Monitoring has been conducted by Kleinfelder (formerly EcoBiological) during the current audit period.	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015)	n/a	n/a	

## Appendix C

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Compliance Register - Environment Protection Licence

**Invincible Colliery**  
**Independent Environmental Audit**  
**Detailed Findings and Recommendations**  
**Environment Protection Licence No 1095**

The period covered by this audit is May 2013 to January 2016 (care and maintenance period only).

Clause	Requirement	Compliance	Audit Finding	Administrative Conditions	Objective Evidence	Recommendation	Responsibility for Non-Compliance																						
A1.1	<p><b>What the licence authorises and regulates</b></p> <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. 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>	Compliant	The 2013 AEMR identified the cessation of mining activities at the site in April 2013. The site was placed in care and maintenance in May 2013. Coal transport activities were undertaken from May 2013 to September 2013, after which time no further coal transport was undertaken. The 2014 and 2015 AEMRs confirm that no mining activities have been undertaken at the site since this time.	Site inspection (28/01/16) AEMRs 2013, 2014, 2015	n/a	n/a																							
	<table><tr><th>Scheduled Activity</th><th>Fee Based Activity</th><th>Scale</th></tr><tr><td>Coal Works</td><td>Coal works</td><td>0 - 2000000 T handled</td></tr><tr><td>Mining for Coal</td><td>Mining for coal</td><td>&gt; 500000 - 2000000 T produced</td></tr></table>						Scheduled Activity	Fee Based Activity	Scale	Coal Works	Coal works	0 - 2000000 T handled	Mining for Coal	Mining for coal	> 500000 - 2000000 T produced														
Scheduled Activity	Fee Based Activity	Scale																											
Coal Works	Coal works	0 - 2000000 T handled																											
Mining for Coal	Mining for coal	> 500000 - 2000000 T produced																											
A2.1	<p><b>Premises or plant to which the licence applies</b></p> <p>The licence applies to the following premises:</p> <p><b>Premises Details</b> <b>THE INVINCIBLE COLLIERY</b> <b>CASTLEREAGH HIGHWAY</b> <b>CULLEN BULLEN</b> <b>NSW 2790</b> <b>LOT 1 DP 180294, LOT 113 DP 877190</b> <b>PART BEN BULLEN STATE FOREST. INVINCIBLE COLIERY HOLDING</b></p>	Not Compliant (High)	<p>Project Approval 07_0127 is for: Part Ben Bullen State Forest, Lot 1/DP 180294, Lot 113/DP 877190 and Lot 112/DP 877190.</p> <p>The EPL does not cover Lot 112/DP 877190, an area of land partially within Ben Bullen State Forest and partially outside the Forest. Scheduled works have been undertaken across Lot 112/DP 877190 and the area is also established as a Biodiversity Offset Area. As the areas covered by the Project Approval do not align with the areas covered by the EPL, this is assessed as a non-compliance.</p> <p>A map showing the extent of the land covered by the EPL, in particular, the 'Part Ben Bullen State Forest, Invincible Colliery Holding' was not sighted and is not held by the EPA. Therefore it was difficult to determine if this area of the Project approval area called 'Part Ben Bullen State Forest', on which coal works have been undertaken, aligns with the EPL.</p>	<p>EPL 1095</p> <p>Project Approval 07_0127 Appendix 1</p> <p>Project Maps Figures 1 and 4</p> <p>Care and Maintenance Mining Operations Plan (MOP) 201 Plan 1A Project Location (dated 28/09/15)</p> <p>Annual Ecological Monitoring Report, Feb 2015</p> <p>Consultation with EPA (10/02/16)</p>	<p>Review premises details specified in condition A2.1 of the EPL to ensure that it is consistent with the area covered by the Project Approval. Vary the EPL if required.</p>	<p>Castlereagh Coal - the Auditor notes that this non-compliance is a carry over from the EPL that was transferred to Castlereagh Coal.</p>																							
A3.1	<p><b>Information supplied to the EPA</b></p> <p>Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.</p> <p>In this condition the reference to "the licence application" includes a reference to:</p> <p>a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and</p> <p>b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.</p>	Not Verified	A copy of the licence application is required to determine compliance with this condition.	-	<p>Obtain a copy of the EPL application and review current works and activities to determine compliance with EPL condition A3.1.</p> <p>Establish and maintain a compliance register and include the requirements of the EPL application to enable compliance tracking.</p>	n/a																							
Discharge to Air and Water and Applications to Land																													
P1.1	<p><b>Location of monitoring/discharge points and areas</b></p> <p>The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.</p>	Compliant	Monitoring locations are identified in the Air Quality Monitoring Program (AQMP) as locations IDD1 to IDD5. Section 9.2 of the AQMP states that these locations are in accordance with the EPL (identification numbers 3 to 7).	Site inspection (28/01/16) AEMRs 2013, 2014, 2015 Available monitoring reports 2013 to 2015 Air Quality Management Program, June 2009 Environmental Monitoring Program, December 2009 Consultation with EPA by email (10/02/16) Doc 06/55613 - Map titled 'Invincible Colliery Open Cut, Air Quality Management Plan TSP/PM10 Monitoring Site and Standing Dust Gauge Locations', Craven, Ellistone and Hayes (Lithgow) Pty Ltd, dated 08/11/06.	n/a	n/a																							
	<table><tr><th colspan="4">Air</th></tr><tr><th>EPA Identification no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr><tr><td>3</td><td>Dust monitoring</td><td></td><td>Point number 1 of dust monitoring network illustrated on figure faced to EPA on 20/11/06 (20060604013)</td></tr><tr><td>4</td><td>Dust monitoring</td><td></td><td>Point number 2 of dust monitoring network illustrated on figure faced to EPA on 20/11/06</td></tr><tr><td>5</td><td>Dust monitoring</td><td></td><td>Point number 3 of dust monitoring network illustrated on figure faced to EPA on 20/11/06</td></tr><tr><td>6</td><td>Dust monitoring</td><td></td><td>Point number 4 of dust monitoring network illustrated on figure faced to EPA on 20/11/06</td></tr><tr><td>7</td><td>Dust monitoring</td><td></td><td>Point number 5 of dust monitoring network illustrated on figure faced to EPA on 20/11/06</td></tr></table>						Air				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	3	Dust monitoring		Point number 1 of dust monitoring network illustrated on figure faced to EPA on 20/11/06 (20060604013)	4	Dust monitoring		Point number 2 of dust monitoring network illustrated on figure faced to EPA on 20/11/06	5	Dust monitoring		Point number 3 of dust monitoring network illustrated on figure faced to EPA on 20/11/06	6	Dust monitoring	
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7	Dust monitoring		Point number 5 of dust monitoring network illustrated on figure faced to EPA on 20/11/06																										
P1.2	<p><b>Location of monitoring/discharge points and areas</b></p> <p>The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.</p>	Noted	n/a	n/a	n/a	n/a																							
P1.3	<p><b>Location of monitoring/discharge points and areas</b></p> <p>The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.</p>	Compliant	<p>The location of the wet weather discharge monitoring location (LD002) is identified in the Care and Maintenance Mining Operations Plan (MOP), 2013. The location is not shown in the Water Management Plan, 2009.</p> <p>A copy of the plan titled 'Invincible Open Cut Environmental Monitoring Sites dated 29 June 2001' was not readily available for verification. As part of this audit however, the EPA provided the Auditor with the geographical coordinates of the monitoring location as follows: GDA94 MGA56, E.224502.363, N.6309247.644.</p> <p>The wet weather discharge point used during sampling, as identified by mine staff, was inspected during the audit on 28 January 2016. The location sampled is consistent with the coordinates provided by the EPA and this condition is therefore assessed as compliant.</p>	<p>Care and Maintenance Mining Operations Plan, May 2013</p> <p>Water Management Plan, June 2009</p> <p>AEMRs 2013, 2014, 2015</p> <p>Correspondence with EPA by email (10/02/16)</p> <p>Site inspection/interviews (28/01/16)</p>	Update the maps within relevant site Management plans (including the Water Management Plan) to clearly identify the location of the wet weather discharge monitoring point (EPA identification 2).	n/a																							
	<table><tr><th colspan="4">Water and land</th></tr><tr><th>EPA Identification no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr><tr><td>2</td><td>Wet weather discharge Discharge quality monitoring</td><td>Wet weather discharge Discharge quality monitoring</td><td>Overflow point located at water storage dam below washery and labelled as Discharge Point #2 on plan titled 'Invincible Open Cut Environmental Monitoring Sites' dated 29 June 2001</td></tr></table>						Water and land				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	2	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow point located at water storage dam below washery and labelled as Discharge Point #2 on plan titled 'Invincible Open Cut Environmental Monitoring Sites' dated 29 June 2001											
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EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description																										
2	Wet weather discharge Discharge quality monitoring	Wet weather discharge Discharge quality monitoring	Overflow point located at water storage dam below washery and labelled as Discharge Point #2 on plan titled 'Invincible Open Cut Environmental Monitoring Sites' dated 29 June 2001																										

Limit Conditions																														
L1.1	<p><b>Pollution of waters</b></p> <p>Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.</p>	Not Compliant (Low)	<p>The 2013 to 2015 AEMRs state that there have been no reportable incidents relating to water quality.</p> <p>The EPA POEO Public Register Annual Return list shows one non-compliance for the period of 28 February 2014 to 27 February 2015. The non-conformance was for a minor exceedance of pH at 'LDP2', the licenced wet weather discharge point. The value of pH recorded on the Annual Return for 2014-2015 was 6.23.</p> <p><b>Observation:</b> It is noted that the nomenclature for the two sampling locations associated with the Main Dam and the adjacent wet weather discharge point at the Main Dam is not consistent across the monitoring reports, management plans and annual return documents (LDP2/LD002/LD002 (point 2), Main Dam) and requires clarification.</p>	<p>Site inspection (28/01/16) NSW EPA POEO Public Register (7/02/16) for EPL 1095 AEMRs 2013, 2014, 2015 Annual Return 2014-2015</p>	<p>Continue to monitor water quality in accordance with the requirements of the EPL, including identification of trends relating to pH.</p> <p>Clarify the different nomenclature of water quality monitoring locations previously reported at the Main Dam (i.e. LDP2/LD002/ LD002 (point 2), Main Dam). Update relevant management plans (as required) and all future monitoring reports.</p>	Coalpac																								
L2.1	<p><b>Concentration limits</b></p> <p>For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.</p>	Noted	n/a	n/a	n/a	n/a																								
L2.2	<p><b>Concentration limits</b></p> <p>Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.</p>	Noted	Refer to L2.4 below.	n/a	n/a	n/a																								
L2.3	<p><b>Concentration limits</b></p> <p>To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.</p>	Noted	n/a	n/a	n/a	n/a																								
L2.4	<p><b>Concentration limits</b></p> <p>Water and/or Land Concentration Limits</p> <p>POINT 2</p> <table><tr><th>Pollutant</th><th>Units of Measure</th><th>50 percentile concentration limit</th><th>90 percentile concentration limit</th><th>3QDM concentration limit</th><th>100 percentile concentration limit</th></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></td><td></td><td></td><td>6.5-8.5</td></tr><tr><td>Total suspended solids</td><td>milligrams per litre</td><td></td><td></td><td></td><td>30</td></tr></table>	Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3QDM concentration limit	100 percentile concentration limit	Oil and Grease	milligrams per litre				10	pH	pH				6.5-8.5	Total suspended solids	milligrams per litre				30	Not Compliant (Low)	<p>The EPA POEO Public Register Annual Return list shows one non-compliance for the period of 28 February 2014 to 27 February 2015. The non-conformance was for a minor exceedance of pH at 'LDP2'. The value of pH recorded on the Annual Return for 2014-2015 was 6.23. Consultation with the EPA confirmed that LDP2 corresponds with the EPL discharge monitoring location LD002. The EPA stated on the POEO Register that it will monitor future compliance with this condition.</p> <p>The 2014 AEMR did not report any discharge monitoring being undertaken in 2014. A review of the available monitoring reports indicated that wet weather discharge monitoring was undertaken at LD002 in both April and August 2014. The August 2014 report does not present the results, rather it references a report 24004899-A which was not reviewed as part of this audit. In the absence of other records, is considered likely that the exceedance occurred during this month.</p> <p>A review of the AEMRs and available monitoring reports indicated that the monitoring results for all other wet weather discharge sampling events during the audit period met the EPL criteria.</p> <p>The environmental monitoring reports for August 2013, September 2013, and September 2014 to April 2015 are not available on the Coalpac website (former mine operator). A copy of the September 2014 to April 2015 reports were provided by Sedgman. Earlier records could not be obtained due to pre-dating the current mine operators records. As such, the assessment of compliance with this condition for August and September 2013 was based on results provided in the AEMRs.</p>	<p>AEMRs 2013, 2014, 2015 Annual returns: 2012-2013, 2013-2014, 2014-2015, Feb 2015-May 2015 NSW EPA POEO Public Register (7/02/16) for EPL 1095 Monitoring reports 2013, 2014, 2015 Consultation with EPA by email (8/02/16)</p>	<p>Continue to monitor water quality in accordance with the requirements of the EPL, including identification of trends relating to pH.</p>	Coalpac
Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3QDM concentration limit	100 percentile concentration limit																									
Oil and Grease	milligrams per litre				10																									
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Total suspended solids	milligrams per litre				30																									
L3.1	<p><b>Waste</b></p> <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><tr><th>Code</th><th>Waste</th><th>Description</th><th>Activity</th><th>Other Limits</th></tr><tr><td>NA</td><td>General or Specific exempted waste</td><td></td><td></td><td>NA</td></tr><tr><td>NA</td><td>General or Specific exempted waste</td><td></td><td></td><td>NA</td></tr></table>	Code	Waste	Description	Activity	Other Limits	NA	General or Specific exempted waste			NA	NA	General or Specific exempted waste			NA	Compliant	<p>The AEMRs do not report the receipt of any waste at the site during the audit period.</p> <p>Inspection of the site and associated site interviews undertaken on 28/01/16 confirmed that there is currently no waste being recieved on site. Based on current site observations, this condition is assessed as compliant.</p>	<p>AEMRs 2013-2015 Site inspection/interviews (28/01/16)</p>	n/a	n/a									
Code	Waste	Description	Activity	Other Limits																										
NA	General or Specific exempted waste			NA																										
NA	General or Specific exempted waste			NA																										
L4.1	<p><b>Noise limits</b></p> <p>Noise from the premises must not exceed:</p> <p>a) 40 dB(A) LAeq(15 minute) during the day (7 am to 6 pm); and</p> <p>b) 35 dB(A) LAeq(15 minute) at all other times except as expressly provided by this licence; at any residence on privately owned land.</p> <p>Where LAeq means the equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.</p> <p>Note: The licensee may exceed the limits set in L5.1 only if the licensee has a written negotiated noise agreement with the landowner of the premises in question and has provided a copy of this agreement to the EPA.</p>	Compliant	<p>Quarterly noise monitoring has been undertaken at the site for the duration of the audit period at three locations: Cullen Bullen South, Cullen Bullen West and Cullen Bullen Centre. The 2011 AEMR reports that the closest residential properties, Hillview and Billabong were acquired in late 2010 and are therefore no longer included in the noise monitoring program.</p> <p>Global Acoustics quarterly noise monitoring reports for 2013, 2014 and 2015 were sighted. The AEMRs 2013 to 2015 state there was no exceedances of EPL or Project Approval criteria and no reportable incidents relating to noise.</p> <p>Most monitoring reports are provided on the Coalpac and Castlereagh Coal websites. The Q3 and 4 2014 and Q1 2015 reports were provided by Sedgman.</p>	<p>Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015. AEMRs 2011, 2013, 2014, 2015</p>	n/a	n/a																								

L4.2	<b>Noise limits</b> To determine compliance with condition(s) L5.1 noise must be measured at, or computed for, the most affected point or within the residential boundary, or at the most affected point within 30 m of a dwelling (rural situations) where the dwelling is more than 30 m from the boundary. A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the "Environmental Noise Management - NSW Industrial Noise Policy (January 2000)".	Not Verified / Observation	Quarterly noise monitoring reports by Global Acoustic provide assessment of modifying factors for tonal, impulsive or intermittent noise in accordance with the NSW Industrial Noise Policy.  A statement of compliance with the location elements of this condition is not included in the monitoring reports and as the monitoring is attended, compliance with this condition was not able to be verified during the audit. It is recommended that a statement of compliance with this requirement be included in the Monitoring Reports.	Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015.	Quarterly noise monitoring reports to provide a statement of compliance with respect to EPL conditions L4.1 to L4.3.	Castlereagh Coal
L4.3	<b>Noise limits</b> The noise emission limits identified in this licence apply under all meteorological conditions except: a) during rain and wind speeds (at 10m height) greater than 3m/s; and b) under "non-significant weather conditions".  Note: Field meteorological indicators for non-significant weather conditions are described in the NSW Industrial Noise Policy, Chapter 5 and Appendix E in relation to wind and temperature inversions.	Not Compliant (Low)	Quarterly noise monitoring reports by Global Acoustic provide assessment of meteorological conditions to determine where noise emission limits apply. However, the body of the report references the meteorological conditions provided in the notes of Project Approval condition 3-2 only. These are different to the conditions specified in the EPL: <i>Noise emission limits apply the following meteorological conditions:</i> • Wind speeds of up to 3 m/s at 10 meters above ground level; or • Up to 3°C/100m temperature inversion strength plus a 2m/s source-to-receiver component drainage flow wind at 10 meters  As the report does not provide assessment of conditions as specified specifically in the EPL, compliance with this condition could not be verified during the audit. It is recommended that the monitoring report also specify the meteorological conditions specified in the EPL and include a statement in the report to demonstrate compliance with relevant conditions of both the project approval and the EPL.	Global Acoustic Quarterly Noise Monitoring Reports 2013, 2014, 2015. Project Approval 07_0127	Quarterly noise monitoring reports to provide a statement of compliance with respect to EPL conditions L4.1 to L4.3. The monitoring reports are to ensure an assessment against the meteorological conditions in the EPL is undertaken.	Castlereagh Coal - the Auditor notes that this non-compliance is a carry over from the EPL that was transferred to Castreagh Coal.
L5.1	<b>Blasting</b> The airblast overpressure level from blasting operations at the premises must not exceed 120 dB (lin Peak) at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	Not Triggered	Blasting activities were reported to have ceased at Invincible Colliery in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMRs 2013, 2014, 2015 Available monitoring reports 2013, 2014, 2015	n/a	n/a
L5.2	<b>Blasting</b> The airblast overpressure level from blasting operations at the premises must not exceed 115 dB (Lin Peak) at any noise sensitive locations for more than five percent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	Not Triggered	Blasting activities were reported to have ceased at Invincible Colliery in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMRs 2012, 2013, 2014, 2015 Site inspection/interviews (28/01/16)	n/a	n/a
L5.3	<b>Blasting</b> Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10 mm/sec at any time at noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	Not Triggered	Blasting activities were reported to have ceased at Invincible Colliery in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMRs 2012, 2013, 2014, 2015 Site inspection/interviews (28/01/16)	n/a	n/a
L5.4	<b>Blasting</b> Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5 mm/sec at any noise sensitive locations for more than five percent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded. Note: "Noise sensitive locations" includes buildings used as a residence, hospital, school, child care centre, places of public worship and nursing homes. A noise sensitive location includes the land within 30 metres of the building.	Not Triggered	Blasting activities were reported to have ceased at Invincible Colliery in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMRs 2012, 2013, 2014, 2015 Site inspection/interviews (28/01/16)	n/a	n/a
L5.5	<b>Blasting</b> Blasting in or on the premises must only be carried out between 0900 hours and 1700 hours, Monday to Saturday. Blasting in or on the premises must not take place on Sundays or Public Holidays without the prior approval of the EPA.	Not Triggered	Blasting activities were reported to have ceased at Invincible Colliery in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMRs 2012, 2013, 2014, 2015 Site inspection/interviews (28/01/16)	n/a	n/a
Operating Conditions						
O1.1	<b>Activities must be carried out in a competent manner</b> 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.	Not Compliant (Low)	Operations during the site inspection were generally observed to be carried out in a competent manner. The mine is inspected regularly, and records of this inspection are maintained (record for 28/1/16 sighted). A review of the AEMRs and Annual Return summaries on the POEO Public Register indicated that the site is generally compliant with environmental monitoring requirements and there have been no reportable incidents within the audit period.  A number of items requiring attention relating chemical storage, training and record keeping have resulted in this condition being assessed as not compliant.  During the site audit, chemical storage areas were inspected within the workshop and servicing area. Spill kits were available for use as required. Items requiring attention include: some containers of chemicals/liquid waste in the workshop were not stored in secondary containment; chemical register was dated December 2012 and requires updating. MSDS require updating are needs to be readily available; wastewater collection system requires maintenance (as detailed in O2.1 below). Waste storage areas were inspected and were observed to be well managed. Waste streams were observed to be separated. Liquid waste disposal receipts were not available for review.  A site induction competency assessment record was reviewed, dated 11 April 2012. The induction content was not reviewed. Records of induction undertaken within the audit period were not sighted.	Coalpac Inspection Record 28/1/16. NSW EPA POEO Public Register (7/02/16) for EPL 1095 Induction Record 11/4/12	Review chemical storage areas and implement corrective actions to ensure that all chemicals are stored within secondary containment; the chemical register and MSDS are current and readily available; the waste collection system is inspected, maintained and repaired (as required).  Maintain all records of waste disposal and retain on site.  Ensure that the care and maintenance period site induction for staff and contractors, 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.  Ensure that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site.	Castlereagh Coal

O2.1 (a)	<b>Maintenance of plant and equipment</b> 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	Not Compliant (Medium)	<p>The 2015 AEMR reports that most mobile plant and equipment has been removed from the site. Remaining equipment (such as excavators and dozers used for erosion control and rehabilitation maintenance and a mobile water pump) is periodically run, where possible, with pre-start inspections conducted at each instance. Sedgman advise that light vehicles are serviced off-site as required and no records are kept on site. Maintenance/pre-start inspection records for mobile equipment were not verified. It is noted that the mobile water pump is new and has not required servicing.</p> <p>Stationary plant and equipment that is currently used on site during the care and maintenance period, as observed during the site inspection, includes (but is not limited to): a 75,000L diesel AST and a wastewater collection system. This system comprises a bulk waste oil tank and liquid waste storage facility that is banded and contained by a catch drain network that leads to an oil/water separator and a 6,000L waste oil collection tank. An underground fuel storage tank is also reported to be located on the site. The fuel tank has not been used during the audit period and has not been decommissioned. Maintenance/servicing/integrity inspection records for this infrastructure were not sighted.</p> <p>During the site inspection, a number of observations were recorded as follows:</p> <ol style="list-style-type: none"> <li>1. The catch drain system contained (in sections) oily sediment and debris.</li> <li>2. A break in the PVC pipes that leads from the catch drains to the oil/water separator and waste oil collection tank. Should any spills within the banded area occur, this would leak onto the soil and vegetation on the embankment.</li> <li>3. The 6000L waste oil collection tank is not banded.</li> </ol> <p>The wastewater collection system is designed to capture any spills from the current diesel AST refuelling area, the banded waste oil tank and the liquid waste storage area. The 2015 AEMR reports that minor servicing may be undertaken on site using this infrastructure. As such it is required to be maintained in proper and efficient working condition during the care and maintenance period. The UST should be decommissioned in accordance with WorkSafe NSW and NSW EPA requirements.</p>	Site inspection (28/1/16) AEMR 2015 Induction Record 11/4/12	<p>Undertake maintenance and cleaning of the wastewater catch drain system.</p> <p>Conduct a maintenance inspection and integrity test of the wastewater collection system including bunding, tanks and piping.</p> <p>Repair the breakage in the piping that leads from the wastewater catch drain to the oil/water separator and waste oil collection tank. Investigate whether any soil contamination has resulted from the breakage.</p> <p>Install bunding around the waste oil collection tank (if it is to remain operational).</p> <p>Ensure all plant and equipment required during care and maintenance is maintained in a proper and efficient manner as per a maintenance schedule or manufacturers instructions.</p> <p>Retain maintenance and servicing records for all plant and equipment used at the site.</p> <p>Investigate the status of UST (which has not been used for 3 years). Undertake integrity testing and report results in the AEMRs. If no longer required, decommission the UST in accordance with WorkSafe NSW and NSW EPA requirements. If the tank is proposed to be used in the future, it is recommended that CC arrange for the tank and associated piping be tested prior to recommissioning.</p>	Castlereagh Coal
O2.1 (b)	<b>Maintenance of plant and equipment</b> All plant and equipment installed at the premises or used in connection with the licensed activity; b) must be operated in a proper and efficient manner.	Compliant	<p>During the site inspection, the only plant and equipment observed to be in operation was a water pump. The Mine Manager was sighted checking the pump and turning it off when no longer required demonstrating proper and efficient use of current equipment. Based on the observation of plant and equipment being used on site at the time of the audit, this condition is assessed as compliant.</p>	Site inspection (28/1/16)	<p>Ensure that the site induction includes efficient operation of plant and equipment and that training records are kept to demonstrate current staff and contractors have been inducted into procedures relevant to their work at the site.</p>	n/a
O4.1	<b>Other operating conditions</b> From the 1 January 2011, a truck wheel wash with sprays must be maintained and operated at the premises to minimise the tracking of dirt and coal fines from the premises. The licensee may only decommission the truck wheel wash where an alternate mitigation measures to address the tracking of dirt and coal fines is approved by the Director General, NSW Department of Planning and Infrastructure.	Compliant	<p>The wheel wash was observed in full operation at the site.</p>	Site inspection (28/01/16)	n/a	n/a
Monitoring and Recording Conditions						
M1.1	<b>Monitoring records</b> 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.	Administrative Non-compliance	<p>Monitoring required by the EPL includes: dust, wet weather discharge, noise and airstail overpressure levels.</p> <p>AEMRs 2013 to 2015 were reviewed which summarise all monitoring data. Monthly environmental monitoring reports are retained on the Coalpac website (prior to May 2015) and the Castlereagh Coal website (post May 2015).</p> <p>Environmental monitoring reports for August 2013, September 2013, and September 2014 to April 2015 are not available on the Coalpac website (former mine operator). A copy of the September 2014 to April 2015 reports was provided by Sedgman. It was reported that earlier records (2013) could not be obtained due to pre-dating the current mine operators records. The August 2014 water quality monitoring report does not present the results, rather it references a report 24004899-A.</p>	AEMRs 2013, 2014, 2015 Available monitoring reports 2013-2015	<p>Ensure environmental monitoring data for the last 4 years is readily available on site in accordance with the EPA Advisory Letter dated 6 January 2016 (including raw data).</p>	Coalpac
M1.2	<b>Monitoring records</b> The following records must be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Administrative Non-compliance	<p>a) All environmental monitoring records reviewed during the audit were in a legible form.</p> <p>b) The 4 year period relevant to this audit is January 2012 to January 2016. Environmental monitoring reports that pre-date the records held by the current mine operator and are not available on the Coalpac website include: April 2012, November 2012, August 2013 and September 2013.</p> <p>c) An advisory letter has been issued to Shoalhaven Coal Pty Ltd as a result of an audit of EPL administrative requirements conducted on 4th January 2016. The audit recorded EPL condition M1.2 as partially compliant stating that on the day of the visit, monitoring records were not able to be produced to the EPA with the EPA being advised that the monitoring records are kept in Sedgman's (contracted mine manager) corporate office. The EPA acknowledged that monitoring is being undertaken with monitoring records being kept as they are published online, however requested that all monitoring records, including any raw data, must be available to an EPA Officer on request. This must be rectified (i.e. internal server/intranet/etc) as soon as possible and by no later than 5pm on 29 January 2016. At the time of the site inspection on 28/01/06, Sedgman were in the process of establishing the records on the internal server.</p>	AEMRs 2012-2015 Available monitoring reports 2012-2015 EPA Advisory Letter dated 5 January 2016	<p>Ensure environmental monitoring data for the last 4 years is readily available on site in accordance with the EPA Advisory Letter dated 6 January 2016 (including raw data).</p>	Castlereagh Coal
M1.3	<b>Monitoring records</b> 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.	Administrative Non-compliance	<p>Monitoring required by the EPL includes: dust, wet weather discharge, noise and airstail overpressure levels. A sample of monitoring records reviewed comprised a combination of laboratory reports (raw data) and monthly summary reports. The review indicated that the required records were not consistently kept over the reporting period including time of sampling, name of sampler and at times, sampling location. Review of a sample report by the current environmental monitoring contractor, RCA dated August 2015 (provided post audit) indicated that this data is kept within the original monitoring reports, kept on file.</p> <p>Analytical or other supporting raw data (besides the 2014 ALS reports) was not reviewed.</p>	May 2015 monthly report Quarter 2, 2015, Global Acoustics noise monitoring report RCA, August 2015 Monitoring Report	<p>Ensure all future environmental monitoring reports captures all details required to be reported by EPL condition M1.3. This includes date, time and location of sampling, and name of person collecting the sample.</p>	Coalpac

M2.1	<b>Requirement to monitor concentration of pollutants discharged</b> For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Noted	n/a	n/a	n/a	n/a																							
M2.2	<b>Requirement to monitor concentration of pollutants discharged</b> Air Monitoring Requirements  POINT 3 <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Particulate matter</td><td>micrograms per cubic metre</td><td>Weekly</td><td>AS/NZS 3580.9.3:2003</td></tr><tr><td>Particulates - Deposition Matter</td><td>grams per square metre per month</td><td>Once a month (min. of 4 weeks)</td><td>Australian Standard 3580.10.1:2003</td></tr><tr><td>PM10</td><td>micrograms per cubic metre</td><td>Weekly</td><td>AS/NZS 3580.9.6:2003</td></tr></table>  POINT 4,5,6,7 <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Particulates - Deposition Matter</td><td>grams per square metre per month</td><td>Once a month (min. of 4 weeks)</td><td>Australian Standard 3580.10.1:2003</td></tr></table>	Pollutant	Units of measure	Frequency	Sampling Method	Particulate matter	micrograms per cubic metre	Weekly	AS/NZS 3580.9.3:2003	Particulates - Deposition Matter	grams per square metre per month	Once a month (min. of 4 weeks)	Australian Standard 3580.10.1:2003	PM10	micrograms per cubic metre	Weekly	AS/NZS 3580.9.6:2003	Pollutant	Units of measure	Frequency	Sampling Method	Particulates - Deposition Matter	grams per square metre per month	Once a month (min. of 4 weeks)	Australian Standard 3580.10.1:2003	Not Compliant (Low)	Dust and HVAS monitoring data was reviewed from May 2013 to December 2015. PM10 PM10 was monitored weekly and is reported as ug/m3. The ALS 2014 monthly dust monitoring reports specified that the HVAS monitoring was carried out in conformance with AS/NZS 3850.9.6:2003. The Castlereagh Coal monthly monitoring reports provide a summary of results only and do not specify sampling methodology (not verified). Deposited Matter Dust gauges are monitored monthly and reported as g/m2/month. Weekly estimations of particulate matter are made as outlined below. The ALS 2014 monthly dust monitoring reports specified that the dust monitoring was carried out in conformance with AS/NZS 3580.10.1:2003. The Castlereagh Coal monthly monitoring reports provide a summary of results only and do not specify sampling methodology (not verified). Particulate Matter (TSP) The EPL requires monitoring of particulate matter at IDD1 (EPA point 3) weekly in accordance with AS/NZS 3580:2003 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method. The Project Approval specifies the impact assessment criteria for (TSP) monitoring. Review of the Air Quality Monitoring Program (2009) indicates that 'a determination was made to estimate TSP from PM10 data' that is collected using the high volume air sampler (HVAS) at this location. Correspondence from the EPA accepting this change in methodology has not been sighted and given that it remains a condition of the EPL, this variation in sampling methodology is considered a non-compliance.  Monitoring reports for August 2013 and September 2013 were not available and therefore, the Auditor could not verify compliance for these dates with respect to this condition.	Air Quality Monitoring Program (June 2009) Dust and HVAS monitoring results 2011 to 2015  Consult with the EPA and DPE regarding the sampling method for measurement of particulate matter (TSP) at IDD1 (EPA point 3). Retain copies of correspondence.  If the change in sampling method for TSP is accepted by the relevant agencies, document the methodology for estimation of TSP from PM10 data and ensure this is recorded within the monthly air quality monitoring reports.  Monthly monitoring reports to specify sampling methods to demonstrate compliance with EPL sampling method requirements.	Castlereagh Coal - the auditor notes that the method of TSP sampling was also undertaken by Coalpac.
Pollutant	Units of measure	Frequency	Sampling Method																										
Particulate matter	micrograms per cubic metre	Weekly	AS/NZS 3580.9.3:2003																										
Particulates - Deposition Matter	grams per square metre per month	Once a month (min. of 4 weeks)	Australian Standard 3580.10.1:2003																										
PM10	micrograms per cubic metre	Weekly	AS/NZS 3580.9.6:2003																										
Pollutant	Units of measure	Frequency	Sampling Method																										
Particulates - Deposition Matter	grams per square metre per month	Once a month (min. of 4 weeks)	Australian Standard 3580.10.1:2003																										
M2.3	<b>Requirement to monitor concentration of pollutants discharged</b> Water and/ or Land Monitoring Requirements  POINT 2 <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Oil and Grease</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr><tr><td>pH</td><td>pH</td><td>Monthly during discharge</td><td>In situ</td></tr><tr><td>Total suspended solids</td><td>milligrams per litre</td><td>Monthly during discharge</td><td>Grab sample</td></tr></table>	Pollutant	Units of measure	Frequency	Sampling Method	Oil and Grease	milligrams per litre	Monthly during discharge	Grab sample	pH	pH	Monthly during discharge	In situ	Total suspended solids	milligrams per litre	Monthly during discharge	Grab sample	Not Verified	Monthly wet weather discharge monitoring was undertaken at LD002 (EPA point 2) in July 2013, April 2014, August 2014, January 2015, April 2015, August 2015, September 2015 and November 2015. Monitoring reports reviewed generally met the frequency and units of measure requirements established by M2.3. Sampling methodology was not specified in all monitoring reports. Determination of whether discharge sampling occurred August 2013, September 2013 and November 2014 could not be verified due to data not being available on the Coalpac website. One minor exceedance of pH at LPD2 was recorded on the EPA POEO Public Register for the annual return period of 28 February 2014 to 27 February 2015. The 2014 AEMR stated that there were no discharges in 2014.	AEMRs 2013-2015 Annual returns: 2012-2013, 2013-2014, 2014-2015, Feb 2015-May 2015 NSW EPA POEO Public Register (7/02/16) for EPL 1095 Monitoring reports 2011-2015	Monthly monitoring reports to specify sampling methods to demonstrate compliance with EPL sampling method requirements.	n/a							
Pollutant	Units of measure	Frequency	Sampling Method																										
Oil and Grease	milligrams per litre	Monthly during discharge	Grab sample																										
pH	pH	Monthly during discharge	In situ																										
Total suspended solids	milligrams per litre	Monthly during discharge	Grab sample																										
M3.1	<b>Testing methods - concentration limits</b> Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place. Note: The Protection of the Environment Operations (Clean Air) Regulation 2010 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".	Not Compliant (Low)	Refer to M2.2.  A full assessment of the requirements under the Protection of the Environment Operations (Clean Air) Regulation 2010 has not been undertaken.	Refer to M2.2	Refer to M2.2.  Monthly monitoring reports to specify testing methods to demonstrate compliance with EPL testing method requirements.	Castlereagh Coal																							
M3.2	<b>Testing methods - concentration limits</b> 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.	Not Verified	Compliance cannot be verified as the monitoring reports do not provide information on sampling methods for water discharge sampling.	Monitoring reports 2013-2015	Monthly monitoring reports to specify testing methods to demonstrate compliance with EPL testing method requirements.	n/a																							
M4.1	<b>Recording of pollution complaints</b> 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.	Compliant	The Complaints Registers in the relevant AEMRs and Complaints Recording Forms (2013) reviewed, record the following complaint volumes: 3 in 2013, 0 in 2014 and 0 in 2015. The records are legible.	AEMRs 2011-2015 Complaints Recording Forms (1/5/13, 20/5/13, 14/6/13)	n/a	n/a																							
M4.2	<b>Recording of pollution complaints</b> The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	Compliant	The Complaints Recording Forms for three complaints in 2013. The records included all details required by condition M4.2.	AEMRs 2013-2015 Complaints Recording Forms (1/5/13, 20/5/13, 14/6/13)	n/a	n/a																							
M4.3	<b>Recording of pollution complaints</b> The record of a complaint must be kept for at least 4 years after the complaint was made.	Compliant	AEMRs and complaints records (2013) indicate complaints data is retained for 4 years.	AEMRs 2012-2015 Complaints Recording Forms (1/5/13, 20/5/13, 14/6/13)	n/a	n/a																							
M4.4	<b>Recording of pollution complaints</b> The record must be produced to any authorised officer of the EPA who asks to see them.	Compliant	An advisory letter issued by the EPA to Shoalhaven Coal Pty Ltd as a result of an audit of EPL administrative requirements conducted on 4th January 2016 details compliance with condition M4.4.	EPA Advisory Letter dated 5 January 2016.	n/a	n/a																							

M5.1	<b>Telephone Complaints Line</b> 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.	Compliant	The complaints telephone number is listed on the Castlereagh Coal website as follows:  If you have a concern or complaint regarding the Cullen Valley Mine or Invincible Colliery, please contact us on the Complaints Hotline.  Castlereagh Coal Complaints Hotline  Phone: 02 6359 0600	Castlereagh Coal Website, Complaints page.	n/a	n/a
M5.2	<b>Telephone Complaints Line</b> 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.	Compliant	An advisory letter issued by the EPA to Shoalhaven Coal Pty Ltd as a result of an audit of EPL administrative requirements conducted on 4th January 2016 details partial-compliance with condition M5.1. The EPA stated that the Shoalhaven's general mine telephone number is understood to be used for the purpose of receiving complaints regarding the Invincible Colliery. Condition M5.2 of the licence states that this number must be notified for this purpose, which it technically was not. The EPA requested specific wording and acknowledged that this has now been resolved. A review of the website confirmed that this is now compliant.	EPA Advisory Letter dated 5 January 2016.	n/a	n/a
M5.3	<b>Telephone Complaints Line</b> The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.	Noted	n/a	n/a	n/a	n/a
M6.1	<b>Blasting</b> To determine compliance with condition(s) L6.1 to L6.4: a) Airblast overpressure and ground vibration levels experienced at the following noise sensitive locations must be measured and recorded for all blasts carried out on the premises; i) "Erin Park" - 30 Farley Street, Cullen Bullen; and ii) Lot 25 King Street, Cullen Bullen b) Instrumentation used to measure and record the airblast overpressure and ground vibration levels must meet the requirements of Australian Standard AS 2187.2-2006.	Not Triggered	Blasting activities were reported to have ceased at Invincible Colliery in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2011 and 2012	n/a	n/a
M6.2	<b>Blasting</b> A breach of the licence will still occur where airblast overpressure or ground vibration levels from the blasting operations at the premises exceeds the limit specified in conditions L6.1 to L6.4 at any "noise sensitive locations" other than the locations identified in the above condition. The airblast overpressure and ground vibration levels in conditions L6.1 to L6.4 do not apply at noise sensitive locations that are owned by the licensee or subject to a private agreement, relating to airblast overpressure and ground vibration levels, between the licensee and land owner.	Noted	n/a	n/a	n/a	n/a
<b>Reporting Conditions</b>						
R1.1	<b>Annual Return Documents</b> The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: a) a Statement of Compliance; and b) a Monitoring and Complaints Summary. 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.	Compliant	Review of the POEO Public Search Register shows submission of annual returns for each anniversary year of the audit period. The last EPL submitted was for the period 28 February 2015 to 13 May 2015 when the site changed ownership. The EPL for 14 May 2015 to 27 February 2016 is due to be submitted by April 2016.	NSW EPA POEO Public Register (7/02/16) for EPL 1095	n/a	n/a
R1.2	<b>Annual Return Documents</b> An Annual Return must be prepared in respect of each reporting period, except as provided below.	Compliant	Review of the POEO Public Search Register shows submission of annual returns for each anniversary year of the audit period. The last EPL submitted was for the period 28 February 2015 to 13 May 2015 when the site changed ownership. The EPL for 14 May 2015 to 27 February 2016 is due to be submitted by April 2016.	NSW EPA POEO Public Register (7/02/16) for EPL 1095	n/a	n/a
R1.3	<b>Annual Return Documents</b> 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.	Compliant	Review of the POEO Public Search Register shows an application for licence transfer was submitted to the EPA on 17 April 2015. The licence was transferred from Coalpac Pty Ltd to Shoalhaven Coal Pty Ltd. Coalpac Pty Ltd submitted an Annual Return for the Period 28 February 2015 to 13 May 2015 (assumed to be the date that the application for the transfer of the licence to the new licensee was granted).  Sedgman advised that they are currently preparing the Annual return for the period commencing 14 May 2015 to 27 February 2016.	Site interview (28/01/16)  NSW EPA POEO Public Register (7/02/16) for EPL 1095	n/a	n/a
R1.4	<b>Annual Return Documents</b> 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.	Noted	n/a	n/a	n/a	n/a
R1.5	<b>Annual Return Documents</b> The Annual Return for the reporting period must be supplied to the EPA 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').	Compliant	The anniversary date for the EPL is 28 February. The annual return is due to be supplied to the EPA annually by 27/8 April. EPL submission dates as noted on the register (and calculated due dates) are: - 22 April 2013 (28 April 2013); - 28 April 2014 (28 April 2014); - 13 April 2015 (28 April 2015); - 26 June 2015 (12 July 2015). All annual returns have been submitted within the required timeframe.	NSW EPA POEO Public Register (7/02/16) for EPL 1095	n/a	n/a
R1.6	<b>Annual Return Documents</b> 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.	Compliant	All Annual Returns for the audit period were provided for review during the audit.	NSW EPA POEO Public Register (7/02/16) for EPL 1095 Annual returns: 2012-2013, 2013-2014, 2014-2015, Feb 2015-May 2015	n/a	n/a
R1.7	<b>Annual Return Documents</b> Within the Annual Return, the Statement 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.	Compliant	Signed annual returns were provided for review during the audit.	NSW EPA POEO Public Register (7/02/16) for EPL 1095 Annual returns: 2012-2013, 2013-2014, 2014-2015, Feb 2015-May 2015	n/a	n/a

R1.8	<b>Annual Return Documents</b> The licensee must report any exceedance of the licence blasting limits to the regional office of the EPA as soon as practicable after the exceedance becomes known to the licensee or to one of the licensee's employees or agents.  Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.  Note: An application to transfer a licence must be made in the approved form for this purpose.	Not Triggered	Blasting activities were reported to have ceased at Invincible Colliery in December 2012. Therefore blasting activities fall outside the scope of this audit.	AEMR 2012, 2013 Site interviews (28/01/16)	n/a	n/a
R2.1	<b>Notification of environmental harm</b> Notifications must be made by telephoning the Environment Line service on 131 555.	Noted	n/a	n/a	n/a	n/a
R2.2	<b>Notification of environmental harm</b> 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.	Not Triggered	Review of the annual return register on the POEO Register indicated there have been one non-compliances reported during the audit period as follows: - Minor exceedance of pH at LD002 in 2014/2015  This exceedance was not deemed to fall into the definition of material harm and therefore notification in accordance with this condition R2.2 was not required.	NSW EPA POEO Public Register (7/02/16) for EPL 1095 Consultation with EPA by email and phone (8/02/16)	n/a	n/a
R3.1	<b>Written Report</b> 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.	Noted	No requests for a written report were made by the EPA during the audit period.	Consultation with EPA by email and phone (8/02/16)	n/a	n/a
R3.2	<b>Written Report</b> 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.	Noted	No requests for a written report were made by the EPA during the audit period.	Consultation with EPA by email and phone (8/02/16)	n/a	n/a
R3.3	<b>Written Report</b> 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.	Noted	No requests for a written report were made by the EPA during the audit period.	Consultation with EPA by email and phone (8/02/16)	n/a	n/a
R3.4	<b>Written Report</b> The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	Noted	No requests for a written report were made by the EPA during the audit period.	Consultation with EPA by email and phone (8/02/16)	n/a	n/a
<b>General Conditions</b>						
G1.1	<b>Copy of licence kept at the premises or plant</b> A copy of this licence must be kept at the premises to which the licence applies.	Compliant	An advisory letter issued by the EPA to Shoalhaven Coal Pty Ltd as a result of an audit of EPL administrative requirements conducted on 4th January 2016 details partial-compliance with conditions G1.1 to G1.3. The EPA stated that multiple outdated versions of the EPL were held onsite but current copies were able to be accessed via electronic means. The EPA requested all outdated version of the licence should be archived and a current version be held on site as soon as possible and by no later than 5pm on January 2016. The current EPL was sighted on site at the time of the audit and the site is now compliant with this condition and no further action is required.	Site inspection (28/01/16) EPA Advisory Letter dated 5 January 2016.	n/a	n/a
G1.2	<b>Copy of licence kept at the premises or plant</b> The licence must be produced to any authorised officer of the EPA who asks to see it.	Noted	An advisory letter issued by the EPA to Shoalhaven Coal Pty Ltd as a result of an audit of EPL administrative requirements conducted on 4th January 2016 details partial-compliance with conditions G1.1 to G1.3. The EPA stated that multiple outdated versions of the EPL were held onsite but current copies were able to be accessed via electronic means. The EPA requested all outdated version of the licence should be archived and a current version be held on site as soon as possible and by no later than 5pm on January 2016. The current EPL was sighted on site at the time of the audit.	EPA Advisory Letter dated 5 January 2016.	n/a	n/a
G1.3	<b>Copy of licence kept at the premises or plant</b> The licence must be available for inspection by any employee or agent of the licensee working at the premises.	Compliant	The current EPL was sighted on site at the time of the audit and is kept in a folder in the office, clearly labelled.	Site inspection (28/01/16)	n/a	n/a

## Appendix D

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Compliance Register - Mining Leases 1635 and 1638

**Invincible Colliery**

**Independent Environmental Audit**

**Detailed Findings and Recommendations**

**Mining Lease #1635**

NOTE: The scope of the audit is May 2013 to January 2016 (care and maintenance Period only). The Mining Lease was transferred to Shoalhaven Coal Pty Ltd in February 2015. With the transfer, the Schedule of Mining Lease Conditions (Coal) 2013 Version June 2014, herein numbered 1-9 (inclusive) replaced the old conditions. A copy of the Mining Lease conditions prior to the lease transfer were not reviewed during this audit. Therefore compliance with the mining lease conditions that were in place between May 2013 and February 2015 was not able to be verified. The following review relates to the June 2014 Mining Lease conditions only.

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation	Responsibility for Non-Compliance
<b>Notice to Landholders</b>						
1	<b>Notice to Landholders</b> (a) Within a period of three months from the date of grant/renewal of this mining lease, the lease holder must serve on each landholder a notice in writing indicating that this mining lease has been granted/renewed and whether the lease includes the surface. A plan identifying each landholder and individual land parcel subject to the lease area, and a description of the lease area must accompany the notice.	Not Triggered	Review of mapping within the Mining Operations Plan indicates that ML 1635 is located on land owned by a single entity, Castlereagh Coal (Shoalhaven Coal Pty Ltd), and therefore this condition is not triggered.	Mining Lease 1635 Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (in draft)	n/a	n/a
1	<b>Notice to Landholders</b> (b) If there are ten or more landholders, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this mining lease has been granted/renewed; state whether the lease includes the surface and must contain a plan and description of the lease area. If a notice is made under condition 1(b), compliance with condition 1(a) is not required.	Not Triggered	Review of mapping within the Mining Operations Plan indicates that ML 1635 is located on land owned by a single entity, Castlereagh Coal (Shoalhaven Coal Pty Ltd), and therefore this condition is not triggered.	Mining Lease 1635 Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (in draft)	n/a	n/a
<b>Rehabilitation</b>						
2	<b>Rehabilitation</b> Any disturbance resulting from the activities carried out under this mining lease must be rehabilitated to the satisfaction of the Minister.	Not Compliant (Medium)	Rehabilitation strategies are detailed in the Care and Maintenance Mining Operations Plan (2013) which is approved by the NSW Department of Trade and Investment, Regional Infrastructure and Services, Division of Resources and Energy (DRE). Consultation with the DRE (who regulate the conditions of this Mining Lease) indicate that implementation of the rehabilitation strategy in a manner that is consistent with what is outlined in the MOP is what is required to satisfy the Minister with respect to this condition. Rehabilitation progress has been reported annually to the DRE using the Annual Environmental Management Report (AEMR). The DRE advised the Auditor that weed management is an issue. Sedgman provided the Auditor with records to demonstrate that weed management contractors have been engaged to address these issues. It is also noted that poor performing rehabilitation in ML1635 have been identified by the Department of Planning and Environment (DPE) during a recent site inspection.	Consultation with DRE (phone call 8/02/16)  Email (8/10/15) detailing acceptance of Kleinfelders proposal to manage weeds  Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (in draft)  AEMR 2011, 2012, 2013, 2014, 2015	Address rehabilitation performance within ML1635 area and report remedial action in 2016 AEMR.	Castlereagh Coal
<b>Mining Operations Plan and Annual Rehabilitation Report</b>						
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (a) The lease holder must comply with an approved Mining Operations Plan (MOP) in carrying out any significant surface disturbing activities, including mining operations, mining purposes and prospecting. The lease holder must apply to the Minister for approval of a MOP. An approved MOP must be in place prior to commencing any significant surface disturbing activities, including mining operations, mining purposes and prospecting.	Not Triggered	The current MOP is dated May 2013 and is for the Care and Maintenance Period. It is reported that no significant surface disturbing activities, including mining operations, mining purposes and prospecting have been carried out at the site since April 2013. Therefore these activities fall outside of the audit scope and assessment of compliance with this condition is not triggered.	Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (draft) Site interviews (28/01/16)	n/a	n/a
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (b) The MOP must identify the post mining land use and set out a detailed rehabilitation strategy which: (i) identifies areas that will be disturbed; (ii) details the staging of specific mining operations, mining purposes and prospecting; (iii) identifies how the mine will be managed and rehabilitated to achieve the post mining land use; (iv) identifies how mining operations, mining purposes and prospecting will be carried out in order to prevent and or minimise harm to the environment; and (v) reflects the conditions of approval under: • the 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 mining lease.	Compliant	Adequately addressed in the MOP (2013).	Care and Maintenance Mining Operations Plan, 2013, as addressed in: (i) Section 3 (ii) Section 4 (iii) Section 4 (iv) Section 1.2.2	n/a	n/a

3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (c) The MOP must be prepared in accordance with the ESG3: Mining Operations Plan (MOP) Guidelines September 2013 published on the Department's website at <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a>	Compliant	The 2013 MOP states that it was prepared in accordance with the <i>Guidelines to the Mining, Rehabilitation and Environmental Management Process prepared by the NSW Department of Mineral Resources</i> , dated January 2006. The draft 2015 MOP states that it has been prepared in accordance with the <i>ESG3: Mining Operations Plan (MOP) Guidelines prepared by the NSW Department of Trade and Investment</i> , dated September 2013. A detailed review of each MOP against the relevant guidelines was not undertaken as part of this audit. Based on approval of the plan, this condition is assessed as compliant.	Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (draft) Site interviews (28/01/16)	n/a	n/a
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (d) The lease holder may apply to the Minister to amend an approved MOP at any time.	Compliant	A 2015 Care and Maintenance MOP dated 11 December 2015 has been drafted and was submitted to the DRE for approval in December 2015. The DRE advised the Auditor that they are currently reviewing the plan and the 2013 MOP has been extended until such time as the 2015 Plan is approved.	Consultation with DRE (phone call 8/02/16) Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (in draft)	n/a	n/a
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (e) It is not a breach of this condition if: (i) the operations which, but for this condition 3(e) would be a breach of condition 3(a), were necessary to comply with a lawful order or direction given under the Environmental Planning and Assessment Act 1979, the Protection of the Environment Operations Act 1997, the Mine Health and Safety Act 2004 / Coal Mine Health and Safety Act 2002 and Mine Health and Safety Regulation 2007 / Coal Mine Health and Safety Regulation 2006 or the Work Health and Safety Act 2011; and (ii) the Minister had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out.	Noted	n/a	n/a	n/a	n/a
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (f) The lease holder must prepare a Rehabilitation Report to the satisfaction of the Minister. The report must: (i) provide a detailed review of the progress of rehabilitation against the performance measures and criteria established in the approved MOP; (ii) be submitted annually on the grant anniversary date (or at such other times as agreed by the Minister); and (iii) be prepared in accordance with any relevant annual reporting guidelines published on the Department's website at <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a> .  Note: The Rehabilitation Report replaces the Annual Environmental Management Report.	Not Verified	(i) Sedgman advise that for 2015, an AEMR was submitted which covers rehabilitation information that is sourced from the annual Flora and Fauna rehabilitation monitoring reports. The DRE has advised that the submission of a Rehabilitation Report (to replace an AEMR) is a new requirement and this reporting system is still under development. AEMRs confirm that there has been no active rehabilitation activities undertaken at the site during the care and maintenance period. As the AEMR covers the requirements of a Rehabilitation Report as per this condition, this aspect is compliant.  (ii) The anniversary date is 10th September. DRE advised the Auditor that the reports should cover the previous financial year. The Annual Environmental Monitoring Reports (AMERs, which report for the calendar year) are provided to the DRE and are published on the mine operators' websites. Records of submission of the AEMR by the required date were not sighted and therefore this condition is assessed as not verified, but is considered likely to be compliant.  (iii) A new reporting requirement was established by the June 2014 version of Mining Lease Conditions (Coal) 2013 which came into effect with the lease transfer in February 2015. AEMRs are prepared in reference to the Division of Resources and Energy (DRE) Guidelines for the Preparation of Annual Environmental Management Reports, 1998 and DRE Guidelines to the Mining, Rehabilitation and Environmental Management Process (EDG03).	Consultation with DRE (phone call 8/02/16) Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (in draft) Castlereagh Coal Website Coalpac Website Site interviews (28/01/16) Flora and Fauna and Rehabilitation Monitoring (EcoBiological 2012, Kleinfelder 2013, 2014, 2015).	Confirm annual reporting requirements with the DRE with respect to submission due dates for reports and the reporting period (i.e. financial year vs calendar year).	n/a
<b>Compliance Report</b>						
4	<b>Compliance Report</b> (a) The lease holder must submit a Compliance Report to the satisfaction of the Minister. The report must be prepared in accordance with any relevant guidelines or requirements published by the Minister for compliance reporting.	Not Compliant (Low)	An Annual Compliance Report (as per Condition 4 of the Mining Lease) is required to be submitted to the DRE by the lease anniversary date. A compliance report (the Auditor was not provided with a copy of this report) was submitted to DRE on 10 February 2016 which is not in line with the mine lease anniversary date.	AEMRs 2013-2015 Site interviews (28/01/16) Consultation with DRE (phone call 8/02/16) Email from DRE dated 10/02/16	Ensure that subsequent Annual Compliance Reports are prepared and issued to DRE by the relevant lease anniversary to DRE in accordance with relevant guidelines.  Establish a compliance register (that includes Mine Lease conditions) to enable compliance tracking and reporting.	Castlereagh Coal
4	<b>Compliance Report</b> (b) The Compliance Report must include: (i) the extent to which the conditions of this mining lease or any provisions of the Act or the regulations applicable to activities under this mining lease, have or have not been complied with; (ii) particulars of any non-compliance with any such conditions or provisions, (iii) the reasons for any such non-compliance; (iv) any action taken, or to be taken, to prevent any recurrence, or to mitigate the effects, of that non-compliance.	Not Verified	The Compliance Report submitted on 10 February 2016 was not reviewed as part of this audit, therefore compliance with this condition could not be verified.	See response to 4(a) above	See response to 4(a) above	n/a
4	<b>Compliance Report</b> (c) The Compliance Report must be lodged with the Department annually on the grant anniversary date for the life of this mining lease.	Not Compliant (Low)	See response to 4(a) above.	See response to 4(a) above	See response to 4(a) above	Castlereagh Coal

4	<b>Compliance Report</b> (d) In addition to annual lodgement under condition 4(c) above, a Compliance Report: (i) must accompany any application to renew this mining lease under the Act; (ii) must accompany any application to transfer this mining lease under the Act; and (iii) must accompany any application to cancel, or to partially cancel, this mining lease under the Act.	Not verified	Shoalhaven Coal's legal Counsel has advised that they have a copy of the mining lease transfer applications for the 2015 transfer. Annual reports were provided for the reporting year 2013-2014. These annual reports do not appear to include the content prescribed in Condition 4(b). A full review of the mining lease transfer application was not undertaken and therefore this condition could not be verified.	Email from Ash Street, Annabelle Aspinall dated 5/2/17	Retain evidence of submission of a Compliance Report to the DRE with the ML1638 mining licence transfer application. Establish a compliance register and include the conditions of the Mine Lease to enable compliance tracking.	n/a
4	<b>Compliance Report</b> (e) Despite the submission of any Compliance Report under (c) or (d) above, the titleholder must lodge a Compliance Report with the Department at any date or dates otherwise required by the Minister.	Noted	n/a	n/a	n/a	n/a
4	<b>Compliance Report</b> (f) A Compliance Report must be submitted one month prior to the expiry of this mining lease, where the licence holder is not seeking to renew or cancel this mining lease.	Not Triggered	The mining lease expires on 10th September 2030. Compliance with this requirement is not triggered.	Mining Lease 1635	n/a	n/a
<b>Environmental Incident Report</b>						
5	<b>Environmental Incident Report</b> (a) The lease holder must notify the Department of all: (i) breaches of the conditions of this mining lease or breaches of the Act causing or threatening material harm to the environment; and (ii) breaches of environmental protection legislation causing or threatening material harm to the environment (as defined in the Protection of the Environment Operations Act 1997), arising in connection with significant surface disturbing activities, including mining operations, mining purposes and prospecting operations, under this mining lease. The notification must be given immediately after the lease holder becomes aware of the breach. Note. Refer to <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a> for notification contact details.	Not Triggered	It is understood that there have been no incidents that trigger this condition.	Site interviews (28/01/16)	n/a	n/a
5	<b>Environmental Incident Report</b> (b) The lease holder must submit an Environmental Incident Report to the Department within seven (7) days of all breaches referred to in condition 5(a)(i) and (ii). The Environmental Incident Report must include: (i) the details of the mining lease; (ii) contact details for the lease holder; (iii) a map identifying the location of the incident and where material harm to the environment has or is likely to occur; (iv) a description of the nature of the incident or breach, likely causes and consequences; (v) a timetable showing actions taken or planned to address the incident and to prevent future incidents or breaches referred to in 5(a). (vi) a summary of all previous incidents or breaches which have occurred in the previous 12 months relating to significant surface disturbing activities, including mining operations, mining purposes and prospecting operations under this mining lease.  Note. The lease holder should have regard to any relevant Director General's guidelines in the preparation of an Environmental Incident Report. Refer to <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a> for further details.	Not Triggered	It is understood that there have been no incidents that trigger this condition.	Site interviews (28/01/16)	n/a	n/a
5	<b>Environmental Incident Report</b> (c) In addition to the requirements set out in conditions 5(a) and (b), the lease holder must immediately advise the Department of any notification made under section 148 of the Protection of the Environment Operations Act 1997 arising in connection with significant surface disturbing activities including mining operations, mining purposes and prospecting operations, under this mining lease.	Not Triggered	It is understood that there have been no incidents that trigger this condition.	Site interviews (28/01/16)	n/a	n/a
<b>Extraction Plan</b>						
6	<b>Extraction Plan</b> (a) In this condition: (i) <b>approved Extraction Plan</b> means a plan, being: A. an extraction plan or subsidence management plan approved in accordance with the conditions of a relevant development consent and provided to the Secretary; or B. a subsidence management plan relating to the mining operations subject to this lease: I. submitted to the Secretary on or before 31 December 2014; and II. approved by the Secretary. (ii) <b>relevant development consent</b> means a development consent or project approval issued under the Environmental Planning & Assessment Act 1979 relating to the mining operations subject to this lease.	Noted	n/a	n/a	n/a	n/a
6	<b>Extraction Plan</b> (b) The lease holder must not undertake any underground mining operations that may cause subsidence except in accordance with an approved Extraction Plan.	Compliant	The 2013, 2014 and 2015 AEMRs state that there was no underground mining operations undertaken during the audit period.	AEMRs 2013-2015 Site interviews (28/01/16)	n/a	n/a

6	<b>Extraction Plan</b> (c) The lease holder must ensure that the approved Extraction Plan provides for the effective management of risks associated with any subsidence resulting from mining operations carried out under this lease.	<b>Not Triggered</b>	The 2013, 2014 and 2015 AEMRs state that there was no underground mining operations undertaken during the audit period. Consultation with the DRE confirmed that there is no Extraction Plan currently in place (relevant to the audit period) and that this is not required as there has been no underground mining at the site during this time.	AEMRs 2013-2015 Site interviews (28/01/16)	n/a	n/a
6	<b>Extraction Plan</b> (d) The lease holder must notify the Secretary within 48 hours of any: (i) incident caused by subsidence which has a potential to expose any person to health and safety risks; (ii) significant deviation from the predicted nature, magnitude, distribution, timing and duration of subsidence effects, and of the potential impacts and consequences of those deviations on built features and the health and safety of any person; or (iii) significant failure or malfunction of a monitoring device or risk control measure set out in the approved Extraction Plan addressing: A. built features; B. public safety; or C. subsidence monitoring.	<b>Not Triggered</b>	The 2013, 2014 and 2015 AEMRs state that there was no underground mining operations undertaken during the audit period.	AEMRs 2013-2015 Site interviews (28/01/16)	n/a	n/a
<b>Resource Recovery</b>						
7	<b>Resource Recovery</b> The lease holder must optimise recovery of the minerals that are the subject of this mining lease to the extent economically feasible.	<b>Noted</b>	n/a	n/a	n/a	n/a
<b>Group Security</b>						
8	<b>Group Security</b> The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations of all or any kind under the mining lease, including obligations of all or any kind under the mining lease that may arise in the future.  The amount of the security deposit to be provided as a group security has been assessed by the Minister at <b>\$2,937,000</b> . The leases covered by the group security include: <b>Consolidated Coal Lease 702 (Act 1973), Mining Purposes Lease 266 (Act 1973), Mining Lease 1635 (Act 1992) and Mining Lease 1638 (Act 1992).</b>	<b>Not Verified</b>	Records providing evidence of submission of the group security were not sighted during the audit. Therefore compliance with this condition could not be verified.	AEMRs 2013-2015 Site interviews (28/01/16)	Retain evidence of submission of the group security required by Mining Lease 1635.	n/a
<b>Cooperation Agreement</b>						
9	<b>Cooperation Agreement</b> The lease holder must make every reasonable attempt, and be able to demonstrate its attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as: • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts; and • rehabilitation issues.	<b>Not Triggered</b>	Shoalhaven Coal advised that they are not aware of any overlapping titles or cooperation agreements.	Site interviews (28/01/16) and email (8/02/16)	n/a	n/a
<b>Exploration Reporting</b>						
	Note: <u>Exploration Reports (Geological and Geophysical)</u> The lease holder must lodge reports to the satisfaction of the Minister in accordance with section 163C of the Mining Act 1992 and in accordance with clause 57 of the Mining Regulation 2010. Reports must be prepared in accordance with <u>Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales</u> (Department of Trade and Investment; Regional Infrastructure and Services 2010).	<b>Noted</b>	n/a	n/a	n/a	n/a
<b>SPECIAL CONDITIONS</b>						
	Note: The standard conditions apply to all mining leases. The Division of Resources & Energy (DRE) reserves the right to impose special conditions, based on individual circumstances, where appropriate.	<b>Noted</b>	n/a	n/a	n/a	n/a

**Invincible Colliery**  
**Independent Environmental Audit**  
**Detailed Findings and Recommendations**  
**Mining Lease #1638**

NOTE: The scope of the audit is May 2013 to January 2016 (care and maintenance Period only). The Mining Lease was transferred to Shoalhaven Coal Pty Ltd in February 2015. With the transfer, the Schedule of Mining Lease Conditions (Coal) 2013 Version June 2014, herein numbered 1-9 (inclusive) replaced the old conditions. A copy of the Mining Lease conditions prior to the lease transfer were not reviewed during this audit. Therefore compliance with the mining lease conditions that were in place between May 2013 and February 2015 was not able to be verified. The following review relates to the June 2014 Mining Lease conditions only.

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation	Responsibility for Non-Compliance
<b>Notice to Landholders</b>						
1	<b>Notice to Landholders</b> (a) Within a period of three months from the date of grant/renewal of this mining lease, the lease holder must serve on each landholder a notice in writing indicating that this mining lease has been granted/renewed and whether the lease includes the surface. A plan identifying each landholder and individual land parcel subject to the lease area, and a description of the lease area must accompany the notice.	<b>Not Verified</b>	ML 1638 was granted on 6th November 2009 and expires on 6th November 2030. This requirement was to be fulfilled by 6th February 2010. In accordance with the Care and Maintenance Mining Operations Plan (2013), there are two landholders within the lease area, Castlereagh Coal (Shoalhaven Coal Pty Ltd) and Forest NSW.  The lease was transferred to Shoalhaven Coal Pty Ltd on 25th February 2015. The previous mine operator, Coalpac Pty Ltd went into liquidation in 2013. The mine was placed and remains in care and maintenance since May 2013.  Compliance with this condition could not be verified as this pre-dates the current mine operators records and is outside of the audit period.	Mining Lease 1638 Care and Maintenance Mining Operations Plan, 2013	Establish a compliance register and include the conditions of the Mine Lease to enable compliance tracking.	n/a
1	<b>Notice to Landholders</b> (b) If there are ten or more landholders, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this mining lease has been granted/renewed; state whether the lease includes the surface and must contain a plan and description of the lease area. If a notice is made under condition 1(b), compliance with condition 1(a) is not required.	<b>Not Triggered</b>	Review of mapping within the Mining Operations Plan indicates that ML 1638 is located on land owned by the mine operator, Castlereagh Coal (Shoalhaven Coal Pty Ltd) and Forest NSW and therefore this condition is not applicable.	ML 1638 Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (draft)	n/a	n/a
<b>Rehabilitation</b>						
2	<b>Rehabilitation</b> Any disturbance resulting from the activities carried out under this mining lease must be rehabilitated to the satisfaction of the Minister.	<b>Not Compliant (Medium)</b>	Rehabilitation strategies are detailed in the Care and Maintenance Mining Operations Plan (2013) which is approved by the NSW Department of Trade and Investment, Regional Infrastructure and Services, Division of Resources and Energy (DRE). Consultation with the DRE (who regulate the conditions of this Mining Lease) indicate that implementation of the rehabilitation strategy in a manner that is consistent with what is outlined in the MOP is what is required to satisfy the Minister with respect to this condition. Rehabilitation progress has been reported annually to the DRE using the Annual Environmental Management Report (AEMR). The DRE advised the Auditor that weed management is an issue that is being addressed at the moment. Sedgman provided the Auditor with records to demonstrate that weed management contractors have been engaged to address these issues. It is also noted that poor performing rehabilitation in ML1638 have been identified by the Department of Planning and Environment (DPE) during a recent site inspection. This indicates that not all rehabilitation has been completed in accordance with the MOP.	Consultation with DRE (phone call 8/02/16)  Email (8/10/15) detailing acceptance of Kleinfelders proposal to manage weeds  Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (in draft)  AEMR 2011, 2012, 2013, 2014, 2015	Address rehabilitation performance within ML 1638 area and report remedial action in 2016 AEMR.	Castlereagh Coal
<b>Mining Operations Plan and Annual Rehabilitation Report</b>						
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (a) The lease holder must comply with an approved Mining Operations Plan (MOP) in carrying out any significant surface disturbing activities, including mining operations, mining purposes and prospecting. The lease holder must apply to the Minister for approval of a MOP. An approved MOP must be in place prior to commencing any significant surface disturbing activities, including mining operations, mining purposes and prospecting.	<b>Not Triggered</b>	The current MOP is dated May 2013 and is for the Care and Maintenance Period. It is reported that no significant surface disturbing activities, including mining operations, mining purposes and prospecting have been carried out at the site since April 2013. Therefore these activities fall outside of the audit scope and assessment of compliance with this condition is not triggered.	Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (draft) Site interviews (28/01/16)	n/a	n/a
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (b) The MOP must identify the post mining land use and set out a detailed rehabilitation strategy which: (i) identifies areas that will be disturbed; (ii) details the staging of specific mining operations, mining purposes and prospecting; (iii) identifies how the mine will be managed and rehabilitated to achieve the post mining land use; (iv) identifies how mining operations, mining purposes and prospecting will be carried out in order to prevent and or minimise harm to the environment; and (v) reflects the conditions of approval under: • the 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 mining lease.	<b>Compliant</b>	Adequately addressed in the MOP (2013).	Care and Maintenance Mining Operations Plan, 2013, as addressed in: (i) Section 3 (ii) Section 4 (iii) Section 4 (iv) Section 1.2.2	n/a	n/a

3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (c) The MOP must be prepared in accordance with the ESG3: Mining Operations Plan (MOP) Guidelines September 2013 published on the Department's website at <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a>	<b>Compliant</b>	The 2013 MOP states that it was prepared in accordance with the <i>Guidelines to the Mining, Rehabilitation and Environmental Management Process prepared by the NSW Department of Mineral Resources</i> , dated January 2006. The draft 2015 MOP states that it has been prepared in accordance with the <i>ESG3: Mining Operations Plan (MOP) Guidelines prepared by the NSW Department of Trade and Investment</i> , dated September 2013. A detailed review of each MOP against the relevant guidelines was not undertaken as part of this audit. Based on approval of the plan, this condition is assessed as compliant.	Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (draft) Site interviews (28/01/16)	n/a	n/a
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (d) The lease holder may apply to the Minister to amend an approved MOP at any time.	<b>Compliant</b>	A 2015 Care and Maintenance MOP dated 11 December 2015 has been drafted and was submitted to the DRE for approval in December 2015. The DRE advised the Auditor that they are currently reviewing the plan and the 2013 MOP has been extended until such time as the 2015 Plan is approved.	Consultation with DRE (phone call 8/02/16) Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining	n/a	n/a
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (e) It is not a breach of this condition if: (i) the operations which, but for this condition 3(e) would be a breach of condition 3(a), were necessary to comply with a lawful order or direction given under the Environmental Planning and Assessment Act 1979, the Protection of the Environment Operations Act 1997, the Mine Health and Safety Act 2004 / Coal Mine Health and Safety Act 2002 and Mine Health and Safety Regulation 2007 / Coal Mine Health and Safety Regulation 2006 or the Work Health and Safety Act 2011; and (ii) the Minister had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out.	<b>Noted</b>	n/a	n/a	n/a	n/a
3	<b>Mining Operations Plan and Annual Rehabilitation Report</b> (f) The lease holder must prepare a Rehabilitation Report to the satisfaction of the Minister. The report must: (i) provide a detailed review of the progress of rehabilitation against the performance measures and criteria established in the approved MOP; (ii) be submitted annually on the grant anniversary date (or at such other times as agreed by the Minister); and (iii) be prepared in accordance with any relevant annual reporting guidelines published on the Department's website at <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a> .  Note: The Rehabilitation Report replaces the Annual Environmental Management Report.	<b>Not Verified</b>	(i) Sedgman advise that for 2015, an AEMR was submitted which covers rehabilitation information that is sourced from the annual Flora and Fauna rehabilitation monitoring reports. The DRE has advised that the submission of a Rehabilitation Report (to replace an AEMR) is a new requirement and this reporting system is still under development. AEMRs confirm that there has been no active rehabilitation activities undertaken at the site during the care and maintenance period. As the AEMR covers the requirements of a Rehabilitation Report as per this condition, this aspect is compliant.  (ii) The anniversary date is 6th November. DRE advised the Auditor that the reports should cover the previous financial year. The Annual Environmental Monitoring Reports (AMERs, which report for the calendar year) are provided to the DRE and are published on the mine operators' websites. Records of submission of the AEMR by the required date were not sighted and therefore this condition is assessed as not verified.  (iii) A new reporting requirement was established by the June 2014 version of Mining Lease Conditions (Coal) 2013 which came into effect with the lease transfer in February 2015. AEMRs are prepared in reference to the Division of Resources and Energy (DRE) Guidelines for the Preparation of Annual Environmental Management Reports, 1998 and DRE Guidelines to the Mining, Rehabilitation and Environmental Management Process (EDG03)	Consultation with DRE (phone call 8/02/16) Care and Maintenance Mining Operations Plan, 2013 Care and Maintenance Mining Operations Plan, 2015 (in draft) Castlereagh Coal Website Coalpac Website Site interviews (28/01/16) Flora and Fauna and Rehabilitation Monitoring (EcoBiological 2012, Kleinfelder 2013, 2014, 2015).	Confirm annual reporting requirements with the DRE with respect to submission due dates for reports and the reporting period (i.e. financial year vs calendar year).	n/a
<b>Compliance Report</b>						
4	<b>Compliance Report</b> (a) The lease holder must submit a Compliance Report to the satisfaction of the Minister. The report must be prepared in accordance with any relevant guidelines or requirements published by the Minister for compliance reporting.	<b>Not Compliant (Low)</b>	An Annual Compliance Report (as per Condition 4 of the Mining Lease) is required to be submitted to the DRE by the lease anniversary date. A compliance report (the Auditor was not provided with a copy of this report) was submitted to DRE on 10 February 2016 which is not in line with the mine lease anniversary date.	AEMRs 2013-2015 Site interviews (28/01/16) Consultation with DRE (phone call 8/02/16) Email from DRE dated 10/02/16	Ensure that subsequent Annual Compliance Reports are prepared and issued to DRE by the relevant lease anniversary to DRE in accordance with relevant guidelines.  Establish a compliance register (that includes Mine Lease conditions) to enable compliance tracking and reporting.	Castlereagh Coal
4	<b>Compliance Report</b> (b) The Compliance Report must include: (i) the extent to which the conditions of this mining lease or any provisions of the Act or the regulations applicable to activities under this mining lease, have or have not been complied with; (ii) particulars of any non-compliance with any such conditions or provisions, (iii) the reasons for any such non-compliance; (iv) any action taken, or to be taken, to prevent any recurrence, or to mitigate the effects, of that non-compliance.	<b>Not verified</b>	The Compliance Report submitted on 10 February 2016 was not reviewed as part of this audit, therefore compliance with this condition could not be verified.	See response to 4(a) above	See response to 4(a) above	n/a
4	<b>Compliance Report</b> (c) The Compliance Report must be lodged with the Department annually on the grant anniversary date for the life of this mining lease.	<b>Not Compliant (Low)</b>	See response to 4(a) above.	See response to 4(a) above	See response to 4(a) above	Castlereagh Coal

4	<b>Compliance Report</b> (d) In addition to annual lodgement under condition 4(c) above, a Compliance Report: (i) must accompany any application to renew this mining lease under the Act; (ii) must accompany any application to transfer this mining lease under the Act; and (iii) must accompany any application to cancel, or to partially cancel, this mining lease under the Act.	Not verified	Shoalhaven Coal's legal Counsel has advised that they have a copy of the mining lease transfer applications for the 2015 transfer. Annual reports were provided for the reporting year 2013-2014. These annual reports do not appear to include the content prescribed in Condition 4(b). A full review of the mining lease transfer application was not undertaken and therefore this condition could not be verified.	Email from Ash Street, Annabelle Aspinall dated 5/2/17	Retain evidence of submission of a Compliance Report to the DRE with the ML1638 mining licence transfer application. Establish a compliance register and include the conditions of the Mine Lease to enable compliance tracking.	n/a
4	<b>Compliance Report</b> (e) Despite the submission of any Compliance Report under (c) or (d) above, the titleholder must lodge a Compliance Report with the Department at any date or dates otherwise required by the Minister.	Noted	n/a	n/a	n/a	n/a
4	<b>Compliance Report</b> (f) A Compliance Report must be submitted one month prior to the expiry of this mining lease, where the licence holder is not seeking to renew or cancel this mining lease.	Not Triggered	The mining lease expires on 6th November 2030. Compliance with this requirement is not triggered.	Mining Lease 1638	n/a	n/a
<b>Environmental Incident Report</b>						
5	<b>Environmental Incident Report</b> (a) The lease holder must notify the Department of all: (i) breaches of the conditions of this mining lease or breaches of the Act causing or threatening material harm to the environment; and (ii) breaches of environmental protection legislation causing or threatening material harm to the environment (as defined in the Protection of the Environment Operations Act 1997), arising in connection with significant surface disturbing activities, including mining operations, mining purposes and prospecting operations, under this mining lease. The notification must be given immediately after the lease holder becomes aware of the breach. Note. Refer to <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a> for notification contact details.	Not Triggered	It is understood that there have been no incidents that trigger this condition.	Site interviews (28/01/16)	n/a	n/a
5	<b>Environmental Incident Report</b> (b) The lease holder must submit an Environmental Incident Report to the Department within seven (7) days of all breaches referred to in condition 5(a)(i) and (ii). The Environmental Incident Report must include: (i) the details of the mining lease; (ii) contact details for the lease holder; (iii) a map identifying the location of the incident and where material harm to the environment has or is likely to occur; (iv) a description of the nature of the incident or breach, likely causes and consequences; (v) a timetable showing actions taken or planned to address the incident and to prevent future incidents or breaches referred to in 5(a). (vi) a summary of all previous incidents or breaches which have occurred in the previous 12 months relating to significant surface disturbing activities, including mining operations, mining purposes and prospecting operations under this mining lease. Note. The lease holder should have regard to any relevant Director General's guidelines in the preparation of an Environmental Incident Report. Refer to <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a> for further details.	Not Triggered	It is understood that there have been no incidents that trigger this condition.	Site interviews (28/01/16)	n/a	n/a
5	<b>Environmental Incident Report</b> (c) In addition to the requirements set out in conditions 5(a) and (b), the lease holder must immediately advise the Department of any notification made under section 148 of the <i>Protection of the Environment Operations Act 1997</i> arising in connection with significant surface disturbing activities including mining operations, mining purposes and prospecting operations, under this mining lease.	Not Triggered	It is understood that there have been no incidents that trigger this condition.	Site interviews (28/01/16)	n/a	n/a
<b>Extraction Plan</b>						
6	<b>Extraction Plan</b> (a) In this condition: (i) <b>approved Extraction Plan</b> means a plan, being: A. an extraction plan or subsidence management plan approved in accordance with the conditions of a relevant development consent and provided to the Secretary; or B. a subsidence management plan relating to the mining operations subject to this lease: I. submitted to the Secretary on or before 31 December 2014; and II. approved by the Secretary. (ii) <b>relevant development consent</b> means a development consent or project approval issued under the Environmental Planning & Assessment Act 1979 relating to the mining operations subject to this lease.	Noted	n/a	n/a	n/a	n/a
6	<b>Extraction Plan</b> (b) The lease holder must not undertake any underground mining operations that may cause subsidence except in accordance with an approved Extraction Plan.	Compliant	The 2013, 2014 and 2015 AEMRs state that there was no underground mining operations undertaken during the audit period.	AEMRs 2013-2015 Site interviews (28/01/16)	n/a	n/a

6	<b>Extraction Plan</b> (c) The lease holder must ensure that the approved Extraction Plan provides for the effective management of risks associated with any subsidence resulting from mining operations carried out under this lease.	Not Triggered	The 2013, 2014 and 2015 AEMRs state that there was no underground mining operations undertaken during the audit period. Consultation with the DRE confirmed that there is no Extraction Plan currently in place (relevant to the audit period) and that this is not required as there has been no underground mining at the site during this time.	AEMRs 2013-2015 Site interviews (28/01/16)	n/a	n/a
6	<b>Extraction Plan</b> (d) The lease holder must notify the Secretary within 48 hours of any: (i) incident caused by subsidence which has a potential to expose any person to health and safety risks; (ii) significant deviation from the predicted nature, magnitude, distribution, timing and duration of subsidence effects, and of the potential impacts and consequences of those deviations on built features and the health and safety of any person; or (iii) significant failure or malfunction of a monitoring device or risk control measure set out in the approved Extraction Plan addressing: A. built features; B. public safety; or C. subsidence monitoring.	Not Triggered	The 2013, 2014 and 2015 AEMRs state that there was no underground mining operations undertaken during the audit period.	AEMRs 2013-2015 Site interviews (28/01/16)	n/a	n/a
<b>Resource Recovery</b>						
7	<b>Resource Recovery</b> The lease holder must optimise recovery of the minerals that are the subject of this mining lease to the extent economically feasible.	Noted	n/a	n/a	n/a	n/a
<b>Group Security</b>						
8	<b>Group Security</b> The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations of all or any kind under the mining lease, including obligations of all or any kind under the mining lease that may arise in the future. The amount of the security deposit to be provided as a group security has been assessed by the Minister at <b>\$2,937,000</b> . The leases covered by the group security include: <b>Consolidated Coal Lease 702 (Act 1973), Mining Purposes Lease 266 (Act 1973), Mining Lease 1635 (Act 1992) and Mining Lease 1638 (Act 1992).</b>	Not Verified	Records providing evidence of submission of the group security were not sighted during the audit. Therefore compliance with this condition could not be verified.	AEMRs 2013-2015 Site interviews (28/01/16)	Retain evidence of submission of the group security required by Mining Lease 1638.	n/a
<b>Cooperation Agreement</b>						
9	<b>Cooperation Agreement</b> The lease holder must make every reasonable attempt, and be able to demonstrate its attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as: • access arrangements • operational interaction procedures • dispute resolution • information exchange • well location • timing of drilling • potential resource extraction conflicts; and • rehabilitation issues.	Not Triggered	Shoalhaven Coal advised that they are not aware of any overlapping titles or cooperation agreements.	Site interviews (28/01/16) and email (8/02/16)	n/a	n/a
<b>Exploration Reporting</b>						
	Note: <b>Exploration Reports (Geological and Geophysical)</b> The lease holder must lodge reports to the satisfaction of the Minister in accordance with section 163C of the Mining Act 1992 and in accordance with clause 57 of the Mining Regulation 2010. Reports must be prepared in accordance with Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales (Department of Trade and Investment; Regional Infrastructure and Services 2010).	Noted	n/a	n/a	n/a	n/a
<b>SPECIAL CONDITIONS</b>						
	Note: The standard conditions apply to all mining leases. The Division of Resources & Energy (DRE) reserves the right to impose special conditions, based on individual circumstances, where appropriate.	Noted	n/a	n/a	n/a	n/a

## Appendix E

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Site Photographs




Photo Ref	Photo	Comments
A		Underground Fuel Storage Tank bowser
B		High Volume Air Sampler and Dust Gauge IDD1
C		Main Dam at the overflow point




Photo Ref	Photo	Comments
D		<p>Licensed Discharge Point LDP02 downstream of the Main Dam</p>
E		<p>Pump in operation at roadside drainage swale</p>
F		<p>Sediment dam at near capacity</p>




Photo Ref	Photo	Comments
G		<p>Open cut void (north-west)</p>
H		<p>Open cut void (north-east)</p>
I		<p>Looking south toward workshop buildings</p>


Photo Ref	Photo	Comments
J		Internal roads showing erosion
K		Failed rehabilitation of steep slopes in north-west



Photo Ref	Photo	Comments
L		Looking up from lower contour in 2012 rehab area
M		Internal roads showing erosion



Photo Ref	Photo	Comments
N		<p>Unstabilised permanent stockpile – showing erosion and no sediment controls</p>
O		<p>Coal Processing Plant</p>



Photo Ref	Photo	Comments
P		<p>Workshop/Servicing/Refuelling Area – showing wastewater collection drains, waste collection tank (centre of frame) and diesel storage tank (right of frame)</p>
Q		<p>Aboveground Diesel Storage Tank (in use)</p>



Photo Ref	Photo	Comments
R		<p>Mine Grease storage (protected, covered and on hardstand)</p>
S		<p>Waste oil storage tank, engine oil storage tank, hydraulic oil storage tank and adjacent undercover chemical storage area (spill kit visible).</p> <p>Wastewater collection drains filled with sediment and require maintenance. Downgradient piping in need of repair (see photo T).</p>



Photo Ref	Photo	Comments
T		<p>Wastewater collection system pipe (between collection drains and separator/collection tank) in need of repair.</p>
U		<p>Separator and waste oil collection tank (without secondary containment)</p>




Photo Ref	Photo	Comments
V		Chemical storage in the workshop
W		Chemical storage in the workshop

Photo Ref	Photo	Comments
X		Truck wheel wash (observed to be operating)

## Appendix F

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Ecology Assessment

13 April 2016

Ken Holmes  
Director  
KMH Environmental Consulting  
Via Email: Ken@kmh.com.au

**INVINCIBLE COLLIERY INDEPENDANT ENVIRONMENTAL AUDIT -  
FINDINGS OF ECOLOGICAL ASSESSMENT**

Dear Ken,

Cumberland Ecology  
PO Box 2474  
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Telephone (02) 9868 1933  
Mobile 0425 333 466  
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Web: [www.cumberlandecology.com.au](http://www.cumberlandecology.com.au)

Cumberland Ecology has completed an ecological assessment of the Invincible Colliery, as part of an Independent Environmental Audit, which is being conducted by KMH on behalf of Sedgman for Castlereagh Coal. This has involved the following tasks:

- Desktop review of relevant management plans and documentation;
- Site inspection, conducted by ecologist Vanessa Orsborn on 28/1/2016; and
- Reporting, as per the Department of Planning Independent Audit Guidelines.

The following appendices are provided:

- **Appendix A** contains a summary of our ecological assessment findings;
- **Appendix B** contains the main compliance tables for assessment of the Project Approval, Commitments and Mining Leases; and
- **Appendix C** provides an assessment of the completion criteria and monitoring requirements set out in the Landscape Management Plan.

If you wish to discuss the findings of our ecological assessment as part of the EIA, please don't hesitate to contact myself, or David Robertson on 98681933.

Yours sincerely



Vanessa Orsborn  
Project Manager / Ecologist  
[vanessa.orsborn@cumberlandecology.com.au](mailto:vanessa.orsborn@cumberlandecology.com.au)

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*Appendix A*

Review of Performance of Ecological  
Management Plans

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## A.1 Audit findings

The Independent Environmental Audit has been conducted, and includes the following components relevant to ecology, which are discussed further below:

- Checklists for the relevant approval conditions appended to the report identifying each condition, assessing compliance status, documenting verified evidence and providing recommendations for any non-compliance – Provided in **Appendix B**;
- A summary of the compliance assessment against the relevant approvals in the main audit report followed by specific discussion of any non-compliances, in the order of the condition number;
- Discussion of compliance with any management plan requirements, including a summary of overall compliance and specific discussion of any non-compliances and improvement opportunities;
- Discussion of compliance with commitments and key project features from the environmental assessment documentation referred to in the consent (e.g. Environmental Impact Statement (EIS), Environmental Approval (EA), Response to Submissions etc.); and
- Identification of any continual improvement opportunities identified as part of the audit – continual improvement opportunities are to be recommended by the auditor based on the auditor's experience and in consultation with relevant regulatory representatives and the operator.

### A.1.1 Summary of Compliance Assessment

A summary of the assessment of compliance is provided in **Tables 1, 2 and 3** in **Appendix B**. The following section discusses each area of non-compliance, in order of the Approval Conditions and Commitments:

#### *i. Project Approval - 07\_0127*

##### **a. S3.31 and S3.32 – Implementation of the Biodiversity Offset Strategy: **Non-compliant / Not Verified****

Compliance with the implementation requirements of the Biodiversity Offset Strategy has not been demonstrated. Evidence of the provision of appropriate long-term security for the Biodiversity Offset Strategy was not provided by Sedgman or Castlereagh Coal. The Department of Environment and Planning (DPE) have not investigated this for compliance. To achieve compliance, it is recommended that the leaseholder provide appropriate security for the Biodiversity Offset Strategy such as the rezoning of Lot 112 DP877190, Lot 113 DP 877190 and Lot 1 DP 180294 for conservation (zoning is RU1 - Primary Production) or the application of a protective covenant (Such as a Section 88B Covenant) on title.

b. S3.33 – Progressive Rehabilitation Consistent with the Final Landform: **Non-compliant**

Progressive rehabilitation of the site has generally been consistent with the final landform set out in the EA. Although the maximum slope has been exceeded in some areas of rehab, particularly the 2012 seeded areas. This has resulted in top soil loss and erosion, in parts, and the failed establishment of native vegetation, seeded as part of rehabilitation measures (aerial seeding in particular) in the north-western portion of the site, as shown in **Photograph 1**. Re-evaluation of the establishment of failed rehabilitation areas on steep slopes is required.



**Photograph 1** Eroded slope within the 2012 rehabilitation area

c. S3.34 – Prepare and Implement a Landscape Management Plan: **Non-Compliant**

The Landscape Management Plan (Coalpac, 2009) (LMP) has been prepared in accordance with Project Approval S3.34, and was approved by the Minister. However, the implementation of the LMP has not been as per the criteria set out in the plan, in particular with regard to planting in the Biodiversity Offset Areas, successful establishment of progressive rehabilitation areas, and the annual monitoring of each new area of rehabilitation. These non-compliance issues are discussed further in Section A.1.1ii against each relevant Project Statement of Commitments, and in more detail in Section A.1.2 below.

d. S3.37 – Biodiversity Offset Strategy Implementation Bond: **Non-compliant**

Evidence of the Biodiversity Offset Strategy Implementation Bond was not provided by Sedgman or Castlereagh Coal. The DPE have not investigated this for compliance. To achieve

compliance, consultation with DPE is required, and lodgement of the adjusted bond with the Department, in order to secure the Biodiversity Offset Strategy.

ii. *Statement of Commitments - Appendix 2 of the Project Approval*

e. Commitments 4.2 and 4.4: Rehabilitation: **Non-compliant**

Generally, rehabilitation has been in accordance with the Statement of Commitments, however, the main areas of non-compliance relate to the areas of rehabilitation in the north of site, seeded during 2012, have not been successfully stabilised, as shown in **Photograph 1** and **Photograph 2**. This was clearly evident from site inspection and reports from the DPE inspection correspond to this finding. This has been categorised as a high risk, as further erosion is likely, and failure of the rehabilitation to establish a native vegetation community, as evident in **Photograph 2**. Re-evaluation of the establishment of failed rehabilitation areas on steep slopes is required. Soil re-profiling, or adapted seeding and tubestock planting methods are required as remedial action.

The other area of non-compliance is the rehabilitation seed mix, which includes inappropriate species that are not components of the vegetation types present prior to mining. This is particularly the case with grass species used on slopes adjoining areas of retained native vegetation, and Ben Bullen State Forest. Remedial action is required for all future areas of rehabilitation, including the application of a modified seed mix, as per the landscape Management Plan, and recommendations in the 2015 Annual Biodiversity Monitoring report (Kleinfelder, 2015a).



**Photograph 2**      **Poor condition rehabilitation in the north of the site**

f. Commitments 7.12 - Flora and Fauna: **Non-compliant**

Commitments relating to flora and fauna management are compliant, with the exception of the implementation of a vertebrate pest control programme. The LMP contains details of the proposed feral pest control plan, developed in response to site assessments carried out by the Environmental Officer. No evidence of the inspections, or development of a feral pest control plan has been supplied.

g. Commitments 12.12 – Environmental Monitoring, Rehabilitation and Compensatory Conservation Areas: **Non-compliant**

Although annual monitoring of rehabilitation and Biodiversity Offset Areas (BOA) has been conducted, non-compliance for this commitment results from the lack of monitoring areas established within the 2012 rehabilitation and parts of the 2011 rehabilitation. No areas of 2012 rehabilitation have been formally monitored and lack fixed monitoring plots. The majority of monitoring plots are in or clustered near the older established rehabilitation of 2008. This has been deemed a medium risk to the environmental performance of the project. Fixed monitoring plots should be established in all years of rehabilitation, across the site, to achieve compliance, and enable review of the performance against the performance criteria set out in the LMP.

ii. *Mining Lease# 1635 and Mining Lease# 1638*

a. Clause 2 – Rehabilitation Conducted to the Satisfaction of the Minister: **Non-compliant**

Non-compliance results from poor performance of rehabilitation in ML1635 has been identified by DPE during a recent site inspection, as described above.

### **A.1.2 Discussion of Compliance with Management Plans**

i. *Landscape Management Plan*

The Landscape Management Plan includes a list of performance and completion criteria. Compliance with each of these has been assessed in **Table 4** in **Appendix C**.

Although the Landscape Management Plan has been implemented there is non-compliance with the performance criteria set out within Section 7, and the monitoring requirements in Section 8. The most significant area of non-compliance, results from the observed poor performance of the rehabilitation from 2011 (in part) and 2012, as noted during the site inspection by KMH and Cumberland Ecology on 28 January and in correspondence from the DPE. There is also a lack of monitoring plots within these poor condition rehabilitation blocks (2011 and 2012) (Kleinfelder, 2015a) to allow of analysis of the vegetation condition data over time, and inform adaptive management and remedial actions. This represents an area of compliance for the BOA, as the annual monitoring of the BOA includes adequate fixed monitoring plots and the site characteristics recorded within each plot has allowed for assessment against the performance criteria in Section 7.2 of the LMP.

Another non-compliance results from the lack of tubestock planting (Coalpac, 2013a; Coalpac, 2014; Sedgman, 2015) within the BOA during the current audit period, as specified in Section 5.3 of the LMP. This is discussed further in Section A.1.2 i (a).

ii. *Flora and Fauna and Rehabilitation Monitoring 2013-2016*

a. Performance of Monitoring

Flora, fauna and rehabilitation monitoring has occurred annually during the audit period, however, there is a lack of monitoring plots across all areas of rehabilitation, with a lack of representation in parts of the 2011 and all of the 2012 rehabilitation (Kleinfelder, 2015a). This has resulted in a lack of sufficient data to allow analysis of the vegetation condition over time, and inform adaptive management and remedial actions. Furthermore, the data collected within rehabilitation areas is insufficient to assess performance criteria, due to the lack of fixed monitoring plots, stem counts and other numeric data, as required in the LMP.

Annual monitoring of the BOA includes adequate fixed monitoring plots and the site characteristics recorded within each plot has allowed for assessment against the performance criteria in Section 7.2 of the LMP. The monitoring plot locations and frequency appear adequate. Additional statistical data analysis could be performed to gain a greater understanding of the changes in species composition over time in the BOA, and this would strengthen the monitoring reports.

b. Compliance with recommendations resulting from monitoring

The highest risk from non-compliance with the recommendations resulting from the annual monitoring is the areas of erosion in the rehabilitation areas, the lack of established vegetation in some areas, and an inappropriate seed mix, with over-representation of acacia species which dominate the shrub and small tree layer. During the site inspection by Cumberland Ecology on 28/1/16, it was also noted that the 2012 rehabilitation was in very poor condition. Exotic species were found to dominate the understorey with native eucalypt and acacia species germination found to be limited. No tubestock planting was observed in this area. It is therefore recommended that slope stabilisation, seeding, and subsequent tubestock planting (after the slope is stabilised) be undertaken in this area of rehabilitation.

During each year of monitoring (2013-2015), there has been a recommendation for tubestock planting of dominant eucalypt and acacia species in the BOA. As the groundcover is naturally regenerating over time, grassland species planting has not been recommended (Kleinfelder, 2015a). This is consistent with the findings of the site inspection by Cumberland Ecology on 28/1/16, where eucalypt regeneration was observed in areas of good and moderate condition vegetation, as shown in **Photograph 3**. However, the low condition grasslands were not observed to be regenerating, as shown in **Photograph 4**, and adaptive management should be reviewed.

Actions such as deep-ripping have not been employed at the edges of the moderate quality woodland and native dominated grasslands, which would be likely to improve natural regeneration. Bush regeneration techniques to promote natural regeneration, and then

supplementing with tubestock planting and seeding, as part of an adaptive and ongoing approach (Buchanan, 1989) would be suitable, and should be reviewed.

A low intensity ecological burn within the BOA has been recommended in each monitoring report. This recommendation has not been followed, and is supporting by the findings of the site inspection by Cumberland Ecology. Controlled ecological burns are very useful for promoting natural regeneration, and are suitable for all the vegetation types present in the BOA.



**Photograph 3      Naturally regenerating grasslands within the BOA**



**Photograph 4**      **Low condition grasslands in the BOA that require assisted regeneration**

### ***A.1.3 Discussion of Compliance with Commitments and Key Project Features***

A discussion of the compliance with commitments is provided in **Section A.1.1ii** above, and **Table 2** in **Appendix B**. Relevant key project features include the implementation of the Biodiversity Offset Strategy and the progressive rehabilitation of the areas disturbed by mining, as stated in the EA. Generally, these key project features have been complied with, and are discussed within the relevant sections of the Statement of Commitments.

### ***A.1.4 Identification of Continuing Improvement Opportunities***

Recommendations for achieving compliance for all project conditions are provided in **Tables 1 – 3** in **Appendix B**. More specific ecological adaptive management recommendations have been made by Kleinfelder (2015a), as part of the annual monitoring report, and supported by observations and recommendations resulting for the site inspection by Cumberland Ecology. It is identified that the key area for continuing improvement of flora, fauna and rehabilitation management is the remedial action within failed and poor quality rehabilitation areas, particularly the 2012 blocks. Monitoring plots should also be established consistently across the project boundary.

## **A.2 References**

The following documents were reviewed as part of the Independent Environmental Audit Ecological Assessment:

Buchanan, R. A. (1989) Bush regeneration: Recovering Australian Landscapes. TAFE Student Learning Publications, Sydney

Coalpac (2009) Landscape Management Plan

Coalpac (2014) Invincible Colliery Annual Environmental Management Report 2014

Coalpac (2013a) Invincible Colliery Annual Environmental Management Report 2013

Coalpac (2013b) Care and Maintenance Mining Operations Plan

Ecobiological (2011) Existing Rehabilitation Assessment: Cullen Valley Mine and Invincible Colliery, Vegetation Rehabilitation Blocks 2002, 2003, 2004 and 2008

Ecobiological (2012) 2011 Annual Flora and Fauna and Rehabilitation Monitoring, Invincible Colliery and Cullen Valley Mine, Castlereagh Highway

Kleinfelder (2012) 2012 Annual Flora, Fauna and Rehabilitation Monitoring, Invincible Colliery and Cullen Valley Mine, Castlereagh Highway

Kleinfelder (2015a) 2015 Annual Flora, Fauna and Rehabilitation Monitoring, Invincible Colliery and Cullen Valley Mine, Castlereagh Highway

Kleinfelder (2015b) Services Agreement; Weed Management at the Invincible Colliery and Cullen Valley Mine

Manildra Group (2016) Purchase Order for weed spraying at Coal Mine (from Manildra Group and Kleinfelder, dated 28/1/16)

RW Corkery & Co (2008) Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension

RW Corkery & Co (2008) Lot 112, DP 877190 Biodiversity Offset Area, Prepared as Supplementary Information to the Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension

Sedgman (2015a) Invincible Colliery Annual Environmental Management Report 2015

Sedgman (2015b) Care and Maintenance Mining Operations Plan

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*Appendix B*

Audit Compliance Tables

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**Table 1 Project Approval – 07\_0127: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Landscape</b>					
S3.31	<p>Biodiversity Offsets</p> <p>The Proponent shall implement the Biodiversity Offset Strategy summarised in Table 12 and described in:</p> <p>(a) the document titled Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension, prepared by RW Corkery &amp; Co Pty Ltd and dated May 2008;</p> <p>(b) the document titled Lot 112, DP 877190 Biodiversity Offset Area, Prepared as Supplementary Information to the Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension, prepared by RW Corkery &amp; Co Pty Ltd and dated July 2008; and</p> <p>(c) section 5.7.2 of the EA titled Proposed Extension of Invincible Open Cut Mine and Rehabilitation Activities, prepared by Craven, Elliston &amp; Hayes (Lithgow) Pty Ltd and dated March 2006.</p> <p>to the satisfaction of the Director-General.</p>	Compliant	<p>The Biodiversity Offset Strategy has been implemented and includes:</p> <ul style="list-style-type: none"> <li>- Lot 112 DP 877190</li> <li>- Lot 1 DP 180294</li> <li>- Lot 113 DP 877190</li> </ul> <p>This provides for a total offset area of 120.5 ha</p>	<ul style="list-style-type: none"> <li>- Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension, prepared by RW Corkery &amp; Co Pty Ltd and dated May 2008;</li> <li>- Lot 112, DP 877190 Biodiversity Offset Area, Prepared as Supplementary Information to the Augmented Biodiversity Offset Strategy for the Invincible Colliery Open Cut Mine Extension, prepared by RW Corkery &amp; Co Pty Ltd and dated July 2008;</li> </ul>	NA

**Table 1 Project Approval – 07\_0127: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Landscape</b>					
	Note: Where there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency.				
S3.32	<p>Biodiversity Offsets</p> <p>Within 2 years of the date of this approval, the Proponent shall provide appropriate long term security for the biodiversity offset strategy, to the satisfaction of the Director-General.</p> <p>Note: The long-term security of the offset can be achieved through one, or a combination, of the following: Deed of Agreement with the Minister, rezoning the land under the Lithgow Local Environment Plan, caveats on the title under the Conveyancing Act 1919, etc.</p>	Non Compliant	Evidence of the provision of appropriate long-term security for the Biodiversity Offset Strategy was not provided by Sedgman or Castlereagh Coal. The DPE have not investigated this for compliance.	<ul style="list-style-type: none"> <li>- Interview with Liz Clough of Sedgman on 28/1/16</li> <li>- Email correspondence between Kelly Thomas of KMH and Liz Clough dated 4/2/16</li> <li>- Minutes from interview with Christopher Schultz of DPE dated 4/2/16</li> <li>- 2011 AEMR Appendix A. Summarises previous IEA non-conformances, with a response from Coalpac (former mine operator) for each of the items. The offset bond and long term security strategy items were recorded as a non-conformance in the last audit, showing it was not in place at that time.</li> </ul>	Provide appropriate security for the Biodiversity Offset Strategy
S3.33	The Proponent shall progressively rehabilitate	Non-compliant	Progressive rehabilitation of the	- Consolidated Project Approval	Review Rehabilitation

**Table 1 Project Approval – 07\_0127: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Landscape</b>					
	the site in a manner that is generally consistent with the final landform set out in the EA (shown conceptually in Figure 5 of Appendix 1) to the satisfaction of the Director-General and I&I NSW.		site has generally been consistent with the final landform set out in the EA. Although the maximum slope has been exceeded in some areas of rehab, particularly the 2012 seeded areas.	- Invincible Colliery Annual Environmental Management Report 2015 (Sedgman, 2015)	progress and performance. - Update Rehabilitation programme, as per the findings of an assessment, and as per the recommendations of the Annual monitoring. - Report in AEMR
S3.34	Landscape Management Plan The Proponent shall prepare and implement a detailed Landscape Management Plan for the site to the satisfaction of the Director-General and I&I NSW. This plan must: (a) be prepared in consultation with Lithgow City Council and NOW by suitably qualified expert/s whose appointment/s have been approved by the Director-General; (b) be submitted to the Director-General for approval by 30 May 2009; (c) include a: • Rehabilitation and Offset Management Plan; and • Mine Closure Plan.	Non-compliant	- LMP was not implemented according with all performance criteria set out in the plan. - LMP is assumed to have been submitted prior to 30/05/09, as the signature page is dated 25/05/09. The LMP was approved by the Director-General on 7/6/09, as per S3.34(b). - The LMP includes the Rehabilitation and Offset Management Plan - Mine Closure Plan not prepared. Evidence of alternative timetable	- Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015) - Landscape Management Plan for the Invincible Open Cut Coal Mine Extension (Coalpac, 2009) Section 1.2 and Review History table on second title page and Table 1. - Interview on 28.1.16 and KMH email correspondence with Liz Clough (dated 29.1.16) - www.planningportal.nsw.gov.au/fin-a-property ; searched for	- Implement the LMP in terms of achieving performance criteria for rehabilitation, and following recommendations from Annual Flora, Fauna and Rehabilitation Monitoring - Provide Mine Closure Plan or evidence of alternative timetable approved by Director-General

**Table 1 Project Approval – 07\_0127: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Landscape</b>					
	Note: The Department accepts that the initial Landscape Management Plan may not include the detailed Mine Closure Plan. However, if this occurs, the Proponent will be required to seek approval from the Director-General for an alternative timetable for the completion and approval of the Mine Closure Plan.		for the completion and approval of the Mine Closure Plan not provided.	zoning of each BOA	
S3.35 a	Rehabilitation and Offset Management Plan The Rehabilitation and Offset Management Plan must include: (a) the objectives for rehabilitation of the site and biodiversity offset areas;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 4	Landscape Management Plan (Coalpac, 2009) Section 4.1	NA
S3.35 b	Rehabilitation and Offset Management Plan The Rehabilitation and Offset Management Plan must include: (b) strategic description of how the rehabilitation of the site and biodiversity offset areas would be integrated with surrounding land use;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 5	Landscape Management Plan (Coalpac, 2009) Section 5	NA
S3.35 c	Rehabilitation and Offset Management Plan The Rehabilitation and Offset Management Plan must include: (c) details of the vegetation species and communities to be established in the biodiversity offset areas;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 6	- Landscape Management Plan (Coalpac, 2009) Section 6.	NA

**Table 1 Project Approval – 07\_0127: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Landscape</b>					
S3.35 d	Rehabilitation and Offset Management Plan The Rehabilitation and Offset Management Plan must include: (d) detailed performance and completion criteria for the rehabilitation of the site and the implementation of the biodiversity offsets;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 7	Landscape Management Plan (Coalpac, 2009) Section 7	NA
S3.35 e	Rehabilitation and Offset Management Plan (e) a detailed description of how the performance of the rehabilitation works and the biodiversity offset areas would be monitored over time to achieve the stated objectives;	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 8	Landscape Management Plan (Coalpac, 2009) Section 8	NA
S3.35 f	Rehabilitation and Offset Management Plan (f) a detailed description of the short, medium and long-term measures that would be implemented to: <ul style="list-style-type: none"> <li>• rehabilitate the site;</li> <li>• implement the biodiversity offsets;</li> <li>• manage the remnant vegetation and habitat on the site and in the biodiversity offset areas;</li> <li>• maximise effective vegetative linkages for the biodiversity offset areas to the Ben Bullen State Forest;</li> <li>• minimise impacts on fauna;</li> </ul>	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009), as follows: Section 9 <ul style="list-style-type: none"> <li>- S9.1</li> <li>- S9.2</li> <li>- S9.3 and 9.4</li> <li>- S9.5</li> <li>- S9.6</li> <li>- S9.7</li> <li>- S9.8</li> <li>- S9.9, 9.10 and 9.11</li> </ul>	Landscape Management Plan (Coalpac, 2009); Section 9	NA

**Table 1 Project Approval – 07\_0127: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Landscape</b>					
	<ul style="list-style-type: none"> <li>• minimise visual impacts;</li> <li>• conserve and reuse topsoil;</li> <li>• control weeds, feral pests and access;</li> <li>• manage bushfires; and</li> <li>• manage any potential conflicts between the rehabilitation works and/or biodiversity offsets and Aboriginal cultural heritage;</li> </ul>		<ul style="list-style-type: none"> <li>- S9.12</li> <li>- S9.13</li> </ul>		
S3.35 g	Rehabilitation and Offset Management Plan (g) a description of the potential risks to successful rehabilitation and/or revegetation and a description of the contingency measures that would be implemented to mitigate these risks; and	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 10	Landscape Management Plan (Coalpac, 2009); Section 10	NA
S3.35 h	Rehabilitation and Offset Management Plan (h) details of who is responsible for monitoring, reviewing and implementing the plan.	Compliant	Adequately outlined in Landscape Management Plan (Coalpac, 2009); Section 11	Landscape Management Plan (Coalpac, 2009); Section 11	NA
S3.37	Biodiversity Offset Strategy Implementation Bond Within 3 months of the approval of the Landscape Management Plan, the Proponent shall lodge a Biodiversity Offset Strategy implementation bond with either the I&I NSW or the Department to ensure that the Biodiversity	Non-compliant	Evidence of the Biodiversity Offset Strategy Implementation Bond was not provided by Sedgman or Castlereagh Coal. The DPE have not investigated this for compliance.	<ul style="list-style-type: none"> <li>- Interview with Liz Clough of Sedgman on 28/1/16</li> <li>- Email correspondence between Kelly Thomas of KMH and Liz Clough dated 4/2/16</li> <li>- Minutes from interview with Christopher Schultz of DPE dated</li> </ul>	<p>Consult with DPE to rectify this non compliance.</p> <p>Provide evidence of Biodiversity Offset Strategy Implementation Bond, or evidence of DG sign-off on the implementation of the</p>

**Table 1 Project Approval – 07\_0127: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Landscape</b>					
	<p>Offset Strategy is implemented in accordance with the performance and completion criteria of the Landscape Management Plan. The sum of the bond shall reflect the full cost of implementing the Biodiversity Offset Strategy and be determined by employing a suitably qualified rehabilitation expert or quantity surveyor.</p> <p>Notes: • If the Biodiversity Offset Strategy is implemented to the satisfaction of the Director-General and I&amp;I NSW, then the bond holder will release the implementation bond.</p> <p>• If the Biodiversity Offset Strategy is not implemented to the satisfaction of the Director-General and I&amp;I NSW, then all or part of the bond may be used to ensure the satisfactory completion of the relevant works.</p> <p>• The bond may be incorporated into rehabilitation bonding arrangements under the Mining Act 1992.</p>			<p>4/2/16</p> <p>- 2011 AEMR Appendix A. Summarises previous IEA non-conformances, with a response from Coalpac (former mine operator) for each of the items. The offset bond and long term security strategy items were recorded as a non-conformance in the last audit, showing it was not in place at that time.</p>	Biodiversity Offset Strategy

**Table 2 Statement of Commitments - Appendix 2 of the Project Approval: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>							
4.1	The creation of a stable final landform, available for the proposed future use(s) of agriculture and/or nature conservation.	Adopt a progressive approach to rehabilitation to ensure that completed areas are quickly shaped and vegetated to provide a stable landform.	Ongoing	Compliant	Progressive rehabilitation was completed each year of operations until between 2010 and 2012, until operations ceased in 2013.	- Invincible Colliery Annual Environmental Management Report 2015 (Castlereagh Coal, 2015)	NA
4.2		Stabilise earthworks, drainage lines and disturbed areas no longer required for mine related activities.	As areas become available	Non-compliant	Areas of rehabilitation in the north of site, seeded during 2012, have not been successfully stabilised, as evident from site inspection. Reports from DPE inspection correspond to this finding.	- Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal; - Minutes from interview with Christopher Schultz of DPE dated 4/2/16	Stabilise rehabilitation areas to the satisfaction of DPE. Provide update in 2016 AEMR
4.3		Blend the created landforms with the surrounding land fabric.	Ongoing during rehabilitation activities	Compliant	Seeding has occurred on all created landforms, which attempts to replicate the natural woodland and forest environment. Some areas of rehabilitation have failed, but are planned for re-seeding.	- Invincible Colliery Annual Environmental Management Report 2015 (Castlereagh Coal, 2015) - Site inspection on 28/1/16 with Graham Goodwin of	NA

**Table 2 Statement of Commitments - Appendix 2 of the Project Approval: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>							
						Castlereagh Coal;	
4.4		Utilise native tree, shrub and grass species and / or pasture species comparable with either the existing vegetation communities or those which occurred in the area prior to mining and agriculture-related disturbance.	Ongoing during rehabilitation activities	Non-compliant	Rehabilitation seed mix includes inappropriate species that are not components of the vegetation types present prior to mining. This is particularly the case with grass species used on slopes adjoining areas of retained native vegetation, and Ben Bullen State Forest.	- Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal; - Invincible Colliery Annual Environmental Management Report 2015 (Castlereagh Coal, 2015)	Modify seed mix for all future rehabilitation, as per the landscape Management Plan, and recommendations in the 2015 Annual Biodiversity Monitoring report (Kleinfelder, 2015)
4.5		Collect, sow and replant tube stock of Eucalyptus cannonii and E. viminalis over the final landform.	Ongoing during rehabilitation activities	Compliant; and Observation	Seed collection has not been documented. Planting of Eucalyptus viminalis has occurred. The 2013 AEMR describes the planting of E. cannonii (Section 3.8.1), although this species does not appear on the Rehabilitation Seed Species List in Table 17	Invincible Colliery Annual Environmental Management Reports 2010 - 2015 (Coalpac 2010, 2011, 2012, 2013, 2014)(Castlereagh Coal, 2015)	Provide consistency between relevant sections of the AEMR, or provide supplementary information on the planting of Eucalyptus cannonii.
4.6		Remove tree hollows and	Prior to	Compliant	Incorporation of hollows within	- Site inspection on	NA

**Table 2 Statement of Commitments - Appendix 2 of the Project Approval: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>							
		relocate these to areas within the biodiversity offset areas which will not be disturbed by the project.	disturbance		the final landform has occurred and was observed during site inspection.	28/1/16 with Graham Goodwin of Castlereagh Coal; - Invincible Colliery Annual Environmental Management Report 2013 (Coalpac, 2013)	
4.7		Retain cleared trees and branches for use in stabilising slopes identified for rehabilitation with native woodland communities.	Ongoing during rehabilitation activities	Compliant	Incorporation of logs within the final landform has occurred and was observed during site inspection.	- Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal; - Invincible Colliery Annual Environmental Management Report 2013 (Coalpac, 2013)	NA
4.8		Include the rehabilitation of disturbance associated with the abandoned Cullen Main East open cut to the south of the proposed open cut extension and in the final	Ongoing during rehabilitation activities	Compliant	Rehabilitation of the abandoned Cullen Main East open cut commenced in 2012.	- Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal; - Invincible Colliery Annual Environmental Management Report	NA

**Table 2 Statement of Commitments - Appendix 2 of the Project Approval: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>							
		landform.				2013 (Coalpac, 2013)	
4.9	Incorporate rehabilitation activities associated with the proposed modification	Update the approved Rehabilitation Management Plan to include the open cut mine extension area.	Prior to disturbance of the previously rehabilitated area	Compliant	The Approved Care and Maintenance Mining Operations Plan (Coalpac, 2013) includes the updated Rehabilitation Management Plan to include the open cut mine extension area	The Approved Care and Maintenance Mining Operations Plan (Coalpac, 2013) Sections 4 and 5	NA
4.10	with existing rehabilitation and landscape management of the site.	Commission an annual inspection of rehabilitation success against objectives such as ground cover, biodiversity, weed invasion, erosion and sedimentation, and general condition.	Annual	Compliant	Annual Biodiversity Monitoring has been conducted by Kleinfelder (formerly EcoBiological) during the current audit period	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015)	NA
<b>Flora and Fauna</b>							
7.5	Minimisation of long term impact on flora and fauna on and around the Project Site.	Manage noxious weeds on the Invincible Colliery Site.	Ongoing	Compliant	Noxious species identified during monitoring have been controlled across the mining lease and BOA, including; St John's Wort and Blackberry.	- Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological,	Review target noxious weed species in subsequent control programmes

**Table 2 Statement of Commitments - Appendix 2 of the Project Approval: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>							
					Additional noxious species were identified during the site inspection, including Scotch Thistle ( <i>Onopordum acanthium</i> ) that were not known to be targeted during control spraying	2012)(Kleinfelder, 2012)(Kleinfelder, 2015); - Services Agreement; Weed Management at the Invincible Colliery and Cullen Valley Mine (Kleinfelder, 2015); - Purchase Order for weed spraying at Coal Mine (from Manildra Group and Kleinfelder, dated 28/1/16)	
7.9		Relocate any nesting and roosting hollows, as well as nests, used by listed threatened species to appropriate locations nearby.	Ongoing	Compliant	Incorporation of hollows within the final landform has occurred and was observed during site inspection.	- Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal; - Invincible Colliery Annual Environmental Management Report 2013 (Coalpac, 2013)	NA

**Table 2 Statement of Commitments - Appendix 2 of the Project Approval: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>							
7.1		Place all branches and tree trunks <300mm in diameter or containing hollows over the areas of the final landform designated for the reestablishment of native vegetation.	Ongoing	Compliant	Incorporation of logs within the final landform has occurred and was observed during site inspection.	- Site inspection on 28/1/16 with Graham Goodwin of Castlereagh Coal; - Invincible Colliery Annual Environmental Management Report 2013 (Coalpac, 2013)	NA
7.11		Rehabilitate the final landform using tube stock of the species <i>Eucalyptus cannonii</i> and <i>E. viminalis</i> .	Ongoing	Compliant and Observation	Seed collection has not been documented. Planting of <i>Eucalyptus viminalis</i> and <i>E. cannonii</i> tubestock is described in the 2013 AEMR. The 2013 AEMR describes the planting of <i>E. cannonii</i> (Section 3.8.1), although this species does not appear on the Rehabilitation Seed Species List in Table 17	Invincible Colliery Annual Environmental Management Reports 2013 - 2015 (Coalpac 2013, 2014)(Sedgman, 2015)	Provide consistency between relevant sections of the AEMR, or provide supplementary information on the planting of <i>Eucalyptus cannonii</i> .
7.12		Include a vertebrate pest control program as part of the mining operation.	Within 12 months of commencement	Non-compliant	Feral Pest Control methods are described in the Landscape Management Plan (S9.10).	- Landscape Management Plan (Coalpac, 2009)	Undertake assessment of the need for vertebrate

**Table 2 Statement of Commitments - Appendix 2 of the Project Approval: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>							
			of mining		Biodiversity Monitoring Reports and AEMR's for the current audit period have not documented any vertebrate pest control activities.	Section 9.10; - Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015); - Invincible Colliery Annual Environmental Management Reports 2013-2015 (Coalpac 2013, 2014) (Sedgman, 2015)	pest control, as described in the LMP and Biodiversity Monitoring reports. Undertake control activities, as advised.
7.13		Design drainage line crossings to ensure that natural creek flows are not interfered with.	Prior to commencement of the project.				
<b>Environmental Monitoring</b>							
	<b>Rehabilitation and Compensatory Conservation Areas</b>						
12.12	Monitor and record	Undertake annual	Annual	Non-compliant	Monitoring of Rehabilitation	Annual Flora and	Undertake monitoring

**Table 2 Statement of Commitments - Appendix 2 of the Project Approval: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>							
	environmental impacts on the local environment	monitoring of rehabilitation success.			areas seeded prior to 2011 have been monitored. No areas of 2012 rehabilitation have been formally monitored and lack fixed monitoring plots. The majority of monitoring plots in and clustered near the older established rehabilitation of 2008	Fauna and Rehabilitation Monitoring (Ecobiological, 2012)	in all representative years of rehabilitation
12.13		Undertake annual inspection of compensatory observation areas and report on recommended improvements.	Annual	Compliant	Annual Biodiversity Monitoring has been conducted by Kleinfelder (formerly EcoBiological) during the current audit period	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015)	NA

**Table 3 Mining Lease #1635 and Mining Lease #1638: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>					
2	Rehabilitation Any disturbance resulting from the activities carried out under this mining lease must be rehabilitated to the satisfaction of the Minister.	Non-compliant	Castlereagh Coal (and Coalpac, previous to 2015) have reported rehabilitation activities each year of mining operations within the AEMR. Poor performing rehabilitation in ML1635 have been identified by DPE during a recent site inspection. This indicates that not all rehabilitation has been conducted to the satisfaction of the Minister.	- AEMR 2011, 2012, 2013, 2014 (Coalpac) AEMR 2015 (Sedgman, 2015) - Minutes from interview with Christopher Schultz of DPE dated 4/2/16	Address rehabilitation performance concerns of DPE. Report remedial action in 2016 AEMR
<b>Mining Operations Plan and Annual Rehabilitation Report</b>					
3	Mining Operations Plan and Annual Rehabilitation Report (b) The MOP must identify the post mining land use and set out a detailed rehabilitation strategy which: (i) identifies areas that will be disturbed; (ii) details the staging of specific mining operations, mining purposes and prospecting; (iii) identifies how the mine will be managed and rehabilitated to achieve	Compliant	Adequately addressed in the MOP (Coalpac, 2013)	The Approved MOP (Coalpac, 2013), as addressed in: (i) Section 3 (ii) Section 4 (iii) Section 4 (iv) Section 1.2.2	NA

**Table 3 Mining Lease #1635 and Mining Lease #1638: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>					
	the post mining land use; (iv) identifies how mining operations, mining purposes and prospecting will be carried out in order to prevent and or minimise harm to the environment; and (v) reflects the conditions of approval under: • the 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 mining lease.				
3	Mining Operations Plan and Annual Rehabilitation Report (f) The lease holder must prepare a Rehabilitation Report to the satisfaction of the Minister. The report must: (i) provide a detailed review of the	Compliant	(i) Performance criteria specified in the MOP have been met (ii) AEMR and the Flora and Fauna and Rehabilitation Monitoring reports, which includes the Rehabilitation Report, have been submitted annually	- The Approved Care and Maintenance Mining Operations Plan (Coalpac, 2013) - AEMR 2011, 2012, 2013, 2014 (Coalpac) AEMR 2015 (Sedgman, 2015) - Flora and Fauna and	NA

**Table 3 Mining Lease #1635 and Mining Lease #1638: Detailed Findings and Recommendations for the Ecological Assessment**

Clause	Requirement	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>Rehabilitation</b>					
	<p>progress of rehabilitation against the performance measures and criteria established in the approved MOP;</p> <p>(ii) be submitted annually on the grant anniversary date (or at such other times as agreed by the Minister); and</p> <p>(iii) be prepared in accordance with any relevant annual reporting guidelines published on the Department's website at <a href="http://www.resources.nsw.gov.au/environment">www.resources.nsw.gov.au/environment</a>.</p> <p>Note: The Rehabilitation Report replaces the Annual Environmental Management Report.</p>		<p>(iii) AEMR (Coalpac, 2012) prepared in reference to the Division of Resources and Energy (DRE) Guidelines for the Preparation of Annual Environmental Management Reports, 1998 and DRE Guidelines to the Mining, Rehabilitation and Environmental Management Process (EDG03).</p>	<p>Rehabilitation Monitoring (EcoBiological 2012)(Kleinfelder 2013, 2014, 2015)</p>	

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*Appendix C*

Compliance with Landscape Management  
Plan Criteria

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**Table 4 Landscape Management Plan (Coalpac, 2009): Assessment of Compliance with Performance and Completion Criteria and Monitoring Requirements**

Section	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
<b>7</b>	<b>Performance and Completion Criteria</b>						
S7.1	Site Rehabilitation						
S7.1.1	The minimum revegetation criteria include the following:	(a) Species Diversity. The presence of at least four overstorey and four understorey species in 20m x 10m plot per 10ha	After 2 years of seeding /planting	Not verified	Annual flora and fauna and rehabilitation monitoring has not recorded these parameters during the audit period. Not reported in the AEMR's. No observed fixed monitoring plots within rehabilitation post 2011	- Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015); - Invincible Colliery Annual Environmental Management Reports 2013 - 2015 (Coalpac 2013, 2014)(Sedgman, 2015) - Site inspection 28/1/16	Conduct a review of rehabilitation performance against the stated criteria
		(b) Stem densities. Minimum total tree/shrub densities for sown areas are: (i) Year 2 - 3,000 stems/ha (ii) Year 5 - 2,000 stems/ha (iii) Year 7 - 600 stems/ha	2 - 7 years post seeding/planting	Not verified	Annual flora and fauna and rehabilitation monitoring has not recorded these parameters during the audit period. Not reported in the AEMR's. No observed fixed monitoring plots within rehabilitation post 2011	- Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015); - Invincible Colliery Annual Environmental Management Reports 2013 - 2015 (Coalpac 2013, 2014)(Sedgman, 2015) - Site inspection 28/1/16	Conduct a review of rehabilitation performance against the stated criteria
		(c.) Natural regeneration.	after year 7	Not triggered	Outside of timescale of	NA	NA

**Table 4 Landscape Management Plan (Coalpac, 2009): Assessment of Compliance with Performance and Completion Criteria and Monitoring Requirements**

Section	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
		Evidence of natural regeneration in year 7 and onwards for at least four species.			rehabilitation for the project		
7.2	Implementation of the Biodiversity Offset Areas						
		(a) Site boundaries surveyed, marked and recorded	Progressively	Compliant	Surveyed boundaries assumed due to electronic files available for the locations of each BOA	Digital boundary files provided by Sedgman	NA
		(b) Site boundaries will be fenced and sign posted, allowing for native fauna access	Progressively	Compliant	Fencing and signage observed during site inspection on 28/1/16.	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015);	NA
		(c.) Weed spraying and/or inspections will occur prior to further work	Progressively	Compliant	Noxious species identified during monitoring have been controlled across the mining lease and BOA, including; St John's Wort and Blackberry . Additional noxious species were identified during the site inspection, including Scotch	- Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015); - Services Agreement; Weed Management at the Invincible Colliery and Cullen Valley Mine	Review target noxious weed species in subsequent control programmes

**Table 4 Landscape Management Plan (Coalpac, 2009): Assessment of Compliance with Performance and Completion Criteria and Monitoring Requirements**

Section	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
					Thistle ( <i>Onopordum acanthium</i> ) that were not known to be targeted during control spraying	(Kleinfelder, 2015); - Purchase Order for weed spraying at Coal Mine (from Manildra Group and Kleinfelder, dated 28/1/16)	
		(d) The nature and extent of natural regeneration will be identified. These areas will be encouraged and protected from further disturbance	Progressively	Compliant	Natural regeneration documented in Annual Monitoring reports, and observed during site inspection on 28/1/16	- Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015); - Site inspection on 28/1/16	NA
		(e.) Areas not vegetated with established/remnant native trees and shrubs will be deep ripped in preparation for planting or seeding	Progressively	Non-compliant	No evidence that deep ripping has occurred within the BOA grassland areas, as identified during the site inspection	site inspection on 28/1/16	Review the need for this requirement in the next monitoring session, and report within the AEMR. Undertake deep ripping, if deemed appropriate.
		(f) Seeds will be sown in areas not designated for tubestock planting	Progressively	Non-compliant	No seeding or tubestock planting reported in AEMR	Invincible Colliery Annual Environmental Management Reports 2013 - 2015 (Coalpac 2013, 2014)(Sedgman, 2015)	Review the need for this requirement following the next monitoring session, and report within the AEMR. Undertake seeding in appropriate areas, as

**Table 4 Landscape Management Plan (Coalpac, 2009): Assessment of Compliance with Performance and Completion Criteria and Monitoring Requirements**

Section	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
							recommended.
		(g) Tubestock planting will occur in areas which contain already established native grasses	Progressively	Non-compliant	No seeding or tubestock planting reported in AEMR	Invincible Colliery Annual Environmental Management Reports 2013 - 2015 (Coalpac 2013, 2014)(Sedgman, 2015)	Review the need for this requirement following the next monitoring session, and report within the AEMR. Undertake planting in appropriate areas, as recommended.
		(h) Fertiliser will be added during the sowing and tubestock planting process	Progressively	Non-compliant	No fertiliser application in BOA reported in AEMR	Invincible Colliery Annual Environmental Management Reports 2013 - 2015 (Coalpac 2013, 2014)(Sedgman, 2015)	Review the need for this requirement following the next monitoring session, and report within the AEMR. Undertake in appropriate areas, as recommended.
		(i) Ongoing monitoring and weed control within Biodiversity Offset Areas will occur and will be reported within each relevant AEMR	Progressively	Compliant	Weeds have been monitored as part of the Annual Flora, fauna and rehabilitation monitoring. Weed control for significant species has occurred.	<ul style="list-style-type: none"> <li>- Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015);</li> <li>- Services Agreement; Weed Management at the Invincible Colliery and Cullen Valley Mine</li> </ul>	Review target weed species in subsequent control programmes

**Table 4 Landscape Management Plan (Coalpac, 2009): Assessment of Compliance with Performance and Completion Criteria and Monitoring Requirements**

Section	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
						(Kleinfelder, 2015); - Purchase Order for weed spraying at Coal Mine (from Manildra Group and Kleinfelder, dated 28/1/16)	
<b>8</b>	<b>Monitoring of Performance</b>						
8.1	Site Rehabilitation						
		(a) Complete post establishment checklist at the completion of works for each discrete site	Progressive	Not triggered	No new rehabilitation completed during the current audit period	Invincible Colliery Annual Environmental Management Report (Coalpac 2013, 2014) (Castlereagh Coal, 2015)	NA
		(b) Regular walk-through site assessment (minimum once a year)	Annually	Compliant and Note	Walk-through site assessments have been conducted as part of the annual monitoring	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015);	NOTE: it is unclear if all areas of rehabilitation have been inspected annually. This should be clarified/updated as part of future monitoring
		(c.) Formal long-term monitoring using fixed monitoring plots	Annually	Non-compliant	Long-term fixed monitoring plots have been established in older rehabilitation areas (centred within and around the 2008 block). However, monitoring plots are absent	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015);	Establish fixed monitoring plots within all blocks of rehabilitation, including the 2012 rehabilitation areas. Monitoring should occur from the next season

**Table 4 Landscape Management Plan (Coalpac, 2009): Assessment of Compliance with Performance and Completion Criteria and Monitoring Requirements**

Section	Outcome	Requirement	Timing	Compliance	Audit Finding	Objective Evidence	Recommendation
					from 2012 and part of 2011 rehabilitation areas		
		(d) Sign-off assessment and Conformance with DPI signoff procedures	Progressive / post completion	Not Triggered	DPI sign-off required as rehabilitation is ongoing	Invincible Colliery Annual Environmental Management Report (Coalpac 2013, 2014) (Castlereagh Coal, 2015)	NA
8.2	Biodiversity Offset Areas						
		(a) Site Assessment	Annually	Compliant	All parameters listed for the recording of site characteristics have been filled.	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015);	NA
		(b) Long-term monitoring	Annually	Compliant	All parameters listed for the recording of site characteristics have been filled.	Annual Flora and Fauna and Rehabilitation Monitoring (Ecobiological, 2012)(Kleinfelder, 2012)(Kleinfelder, 2015);	NA
		(c.) Sign-off Assessment	Not required	Not triggered	Sign-off is not required, as the BOA establishment is ongoing.	Landscape Management Plan (Coalpac, 2009) Section 8.2.3	NA