



Ashton Coal Operations

Independent Environmental Compliance Audit of Ashton Coal Development Consent 309-11-2001

20 December 2013



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Distribution

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Acronyms

ACHMP	Aboriginal Cultural Heritage Management Plan
ACOL	Ashton Coal Operations Pty Ltd
ACP	Ashton Coal Project
AEMR	Annual Environmental Management Report
AHIP	Aboriginal Heritage Impact Permit
Auditee	Ashton Coal Operations Pty Ltd
Auditor	Parsons Brinckerhoff
C	Compliant
CCC	Community Consultative Committee
CHPP	Coal Handling and Preparation Plant
DA	Development Consent 309-11-2001-i
DP&I	NSW Department of Planning and Infrastructure
DRE	NSW Division of Resources and Energy
DTIRIS	NSW Department of Trade and Investment, Regional Infrastructure and Services
DSC	Dam Safety Committee
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EL	Exploration Licence
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ESCP	Erosion and Sediment Control Plan
FFMP	Flora and Fauna Management Plan
GDEs	Groundwater Dependent Ecosystems
kV	Kilovolt

LW	Longwall
MOP	Mining Operations Plan
MSB	Mine Subsidence Board
MSEC	Mine Subsidence Engineering Consultants
N/A	Not Applicable
N/C	Non-Compliant
NEOC	North East Open Cut
NOW	NSW Office of Water
OEH	NSW Office of Environment and Heritage
OGM	Organic Growth Medium
RMS	NSW Roads and Maritime Services
ROM	Run of Mine
RTA	NSW Roads and Traffic Authority (now RMS)
SEOC	South East Open Cut
SSC	Singleton Shire Council
TEOP	Tailings Emplacement Operational Plan
TMP	Traffic Management Plan
TSP	Total Suspended Particulate
VCA	Voluntary Conservation Area
WMP	Water Management Plan

Audit certificate

This is to certify:

- Parsons Brinckerhoff Australia Pty Limited (the Auditor) has prepared the accompanying 'Independent Environmental Compliance Audit – Ashton Coal Operations – Development Consent 309-11-2001-i Audit Report, November 2013 (the Report) from certain information provided by Ashton Coal Operations Pty Limited (the Auditee) and observed during site inspections undertaken in October 2013, at the request of and exclusively for the use and benefit of the Auditee. A draft report was supplied to the Auditee on 25 November 2013.
- This report has been prepared in accordance with the scope of work/services set out in a contract, or as otherwise agreed, between the Auditor and the Auditee. In preparing this report, the Auditor has relied upon data, surveys, analyses, designs, plans and other information provided by the Auditee and other individuals and organisations, most of which are referred to in the report (the data). Except as otherwise stated in the report, the Auditor has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in this report (conclusions) are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. The Auditor will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to the Auditor.
- This report has been prepared for the exclusive benefit of the Auditee and no other party. The Auditor assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with in this report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in this report (including without limitation matters arising from any negligent act or omission of the Auditor or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in this report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own inquiries and obtain independent advice in relation to such matters.
- The Audit has examined the Auditee's compliance with Development Consent 309-11-2001-i (as modified) for the period from the 1 August 2010 to 10 October 2013. The Auditor has relied on information provided by the Auditee. The Auditor expresses no opinion as to the accuracy, truth, sufficiency or legality of the information provided by the Auditee in respect of the Auditee's compliance standards.
- This Report has been prepared in accordance with generally accepted practices (including the standards set out in *ISO AS/NZS 19011:2003 Guidelines for quality and/or environmental management systems auditing* using standards of care and diligence normally practiced by recognised consulting firms performing services of a similar nature.
- The Audit Lead (Steven Crick) is a certified Lead Auditor in the Environmental Scheme by RABQSA International (Certificate No: 12453). The Peer Reviewer (Hugh Madden) is a certified Principal Auditor in the Environmental Scheme by RABQSA International (Certificate No: 14761).
- To the best of the Auditor's knowledge, the facts and matters described in this report reasonably represent the conditions at the time of printing of the report. However, the passage of time, the manifestation of latent conditions or the impact of future events (including a change in applicable law) may result in a variation to the conditions. The Auditor will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of the report.
- This Report is issued with the understanding that it is the responsibility of the Auditee to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where

required by law. Additionally, it is the sole responsibility of the Auditee to properly rectify any findings from the audit that indicate that relevant laws or regulations have been or may be breached.

- Neither the Auditor nor any member associate or employee of the Auditor undertakes any responsibility for any injury, loss or damage claimed by the Auditee arising out of a claim by any third party against the Auditee in connection with this Report.

1. Introduction

Ashton Coal Operations Pty Limited (ACOL) commissioned Parsons Brinckerhoff Australia Pty Limited to conduct an independent environmental compliance audit of Ashton Coal Project (ACP).

The audit was conducted as required and under the direction of the NSW Department of Planning and Infrastructure (DP&I) in accordance with the current development consent for the ACP (DA 309-11-2001-i), herein referred to as 'the development consent'.

1.1 Ashton Coal Project

The ACP is located 14 km north west of Singleton in the Hunter Valley region of New South Wales, near Camberwell Village. A Development Application (DA 309-11-2001-i) was lodged by White Mining Limited for the ACP in November 2001. The ACP was designated an integrated, State Significant Development and received development consent by the Minister for Planning on 11 October 2002 pursuant to the provisions of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). This approval was subsequently modified in 2003, 2005, 2007, twice in 2010, 2011 and three times in 2012.

A separate project approval (PA 08_0182) was then granted by the DP&I on 4 October 2012 for ACOL to develop a new open cut pit known as the South East Open Cut (SEOC) mine. An appeal against this approval was subsequently lodged by a community group and is currently under review. The SEOC project approval therefore was not active at the time of the audit and did not form part of the audit.

At the time of the audit, the ACP consisted of a former open cut coal mine (North East Open Cut (NEOC)), an underground coal mine, a Coal Handling and Preparation Plant (CHPP) and a rail loading facility. Approvals allow for the extraction of coal at a rate of up to 5.45 Mtpa of Run of Mine (ROM) coal with a 21 year project life to 2023. The ACP produces a high quality semi-soft coking coal, which is predominantly sold to international markets for steelmaking.

The NEOC ceased operations in September 2011. The underground mine has an extraction rate of up to 3.2 Mtpa of ROM coal and is to be mined over a period of about 18 years, operating 24 hours a day, 7 days a week.

ACOL is an unincorporated Joint-Venture between Yancoal Australia Ltd (90%) and Itochu Corporation of Japan (10%). Yancoal Australia Ltd acquired the interest in the Ashton Open-Cut and Underground Coal Mines effective from December 2009 through its purchase of Felix Resources Pty Ltd. Yancoal Australia Ltd is the operator of these mines and manages the Joint-Venture.

1.1.1 Development consent 309-11-2001-i

Conditions 8.8 to 8.10, Schedule 2 of the consent requires an independent environmental audit of ACOL to be undertaken one year after commencement of construction and every three years thereafter until five years after completion of mining in the DA area (or as otherwise directed by the Director-General).

Specifically, Conditions 8.8 to 8.10, Schedule 2 requires the audit to:

- 8.8** *One year after commencement of construction and every three years thereafter until five years after completion of mining in the DA area, or as otherwise directed by the Director-General, the Applicant shall conduct an environmental audit of the mining and infrastructure areas of the development in accordance with ISO 14010 – Guidelines and General Principles for Environmental Auditing, and ISO 14011 – Procedures for Environmental Auditing (or the current versions), and in accordance with*

any specifications required by the Director-General. Copies of the report shall be submitted by the Applicant to the Director-General, SSC, OEH, EPA, NoW, DRE, RMS, MSB and the CCC within two weeks of the report's completion for comment.

8.9 *The independent environmental audit shall:*

- (a) assess compliance with the requirements of this consent, licences, and approvals;*
- b) assess the development against the predictions made in the EIS and the predictions and commitments made in the documents listed in condition 1.2;*
- c) (Deleted);*
- d) review the effectiveness of the environmental management of the mine, including any mitigation works;*
- e) be carried out at the Applicant's expense; and*
- f) be conducted by a duly qualified independent person or team approved by the Director-General in consultation with SSC and other relevant agencies.*

8.10 *The Director-General may, after considering any submission made by the relevant government agencies, SSC and the CCC on the report, notify the Applicant of any requirements with regard to any recommendations in the report. The Applicant shall comply with those reasonable requirements within such time as the Director-General may require.*

The DP&I was consulted by ACOL prior to the audit and specified that the following key issues should be investigated as part of the audit:

- groundwater
- mine rehabilitation
- mine subsidence.

A summary of the audit findings in relation to the key issues specified by DP&I is provided in Section 4 of this report and these are addressed in detail throughout the report.

1.2 Structure of this audit report

This report contains the following sections:

- *Section 1: Introduction* – An overview of the ACP and the background to this audit.
- *Section 2: Audit process* – A detailed description of the audit process and scope.
- *Section 3: Audit findings* – An overview of the findings of the audit against DA 309-11-2001-i and the investigation of other compliance information, including EPL 11879, environmental assessments, mining leases and exploration licences, environmental reports and management plans.
- *Section 4: Investigation of key issues* – A discussion of observations made regarding the key issues highlighted by the Department of Planning and Infrastructure (DP&I) for the audit (being groundwater, mine subsidence and mine rehabilitation).
- *Section 5: Summary of audit findings* – A summary of all non-compliances and opportunities for improvement with their associated recommendations for improvement.
- *Appendix A: Audit documents* – a list of documents used by the auditors for assessing compliance.
- *Appendix B: DA 309-11-2001-i checklist* – A detailed checklist of DA 309-11-2001-i which reviews each compliance condition applicable to the audit period.
- *Appendix C: EPL 11879 checklist* – A detailed checklist of EPL 11879 which reviews each compliance condition applicable to the audit period.
- *Appendix D: Audit photographs* – Photographs taken during the audit showing key aspects of the site that relate to the audit findings.

2. Audit process

2.1 Audit scope and methodology

The audit was generally undertaken in accordance with the principals of *ISO AS/NZS 19011:2003 Guidelines for quality and/or environmental management systems auditing* (which supersedes ISO 14010:1996) in order to meet the requirements outlined in Conditions 8.8 to 8.10, Schedule 2 of the development consent (refer to Section 1.1.1) and the additional requirements provided by DP&I.

The audit covered the period 1 August 2010 to 31 August 2013. The site component of the audit was undertaken between 8 and 10 October 2013. The offsite component of the audit was completed on 25 November 2013.

2.2 Audit team

The audit was undertaken by the following Parsons Brinckerhoff staff:

- Lead Auditor – Steven Crick, Senior Environment Scientist (Certified RABQSA Lead Environmental Auditor No. 12453). Steve managed the audit and prepared the audit report.
- Auditor – Hugh Madden, Principal Environment Scientist (Certified RABQSA Principal Environmental Auditor No. 14761). Hugh assisted with the site component of the audit and peer reviewed the audit report.
- Water Resources Specialist – Shane Trott, Senior Hydrogeologist. Shane assisted with the site component of the audit and provided expertise in the field of groundwater.
- Subsidence Specialist – James Barbato, Associate Director (Mine Subsidence Engineering Consultants (MSEC)). James assisted with the site component of the audit and provided expertise in the field of subsidence.
- Rehabilitation Specialist – Michael Frankcombe, Principal Environmental Scientist (Landloch). Michael assisted with the site component of the audit and provided expertise in the field of mine site rehabilitation and erosion and sediment control.

The following sections provide an overview of the main elements of the audit process.

2.3 Site interviews and inspections

The on-site component of the audit was undertaken by the lead auditor and auditor between 8 and 10 October 2013. The groundwater and rehabilitation specialists attended the site on 9 October and the subsidence specialist attended the site on 10 October 2013.

2.3.1 Opening meeting

An opening meeting was held at Ashton Coal Mine administration facilities, commencing at 9.00 am on 8 October 2013. The attendees of the opening meeting are listed in Table 2.1.

Table 2.1 Opening meeting attendees

Staff	Organisation	Title
Steven Crick	Parsons Brinckerhoff	Lead Environmental Auditor
Hugh Madden	Parsons Brinckerhoff	Principal Environmental Auditor
Brian Wesley	ACOL	General Manager
Peter Grey	ACOL	Acting CHPP Manager
Julie McNaughton	ACOL	Acting Environment and Community Relations Manager
James Barben	ACOL	Approvals Coordinator
Scotney Moore	ACOL	Environmental and Community Relations Coordinator
Alan Tight	ACOL	Environmental and Community Relations Coordinator
Dave Gibson	ACOL	Underground Mine Manager
Mark Cook	ACOL	Safety and Training Manager

The purpose of the opening meeting was to introduce the audit team, discuss the scope of the audit and the audit process. The methods to be used by the team to conduct the audit were explained. It was stated that the audit team would be interviewing personnel, evaluating environmental reporting, examining records and conducting a site inspection in order to address specific compliance requirements.

2.3.2 Audit interviews

Audit interviews were conducted by the audit team during the on-site component on each day of the site component of the audit. Table 2.2 identifies staff who were interviewed for the audit.

Table 2.2 Audit interviews

Staff	Organisation	Title
Brian Wesley	ACOL	General Manager
Julie McNaughton	ACOL	Acting Environment and Community Relations Manager
James Barben	ACOL	Approvals Coordinator
Scotney Moore	ACOL	Environment and Community Relations Coordinator
Alan Tight	ACOL	Environment and Community Relations Coordinator
Peter Grey	ACOL	Acting CHPP Manager
Mark Cook	ACOL	Safety and Training Manager
James Hand	Hunter Drilling Services	Senior Driller
Hugh Drummond	ACOL	Project Manager
John Cullen	ACOL	Business Improvement Manager
Aaron McGuigan	ACOL	Technical Services Manager

2.3.3 Data collection and verification

Publicly available documents were reviewed by the audit team prior to the on-site component of the audit. A number of documents were provided to the audit team during the on-site component of the audit. At the end of the on-site component of the audit, the auditors provided ACOL with a list of outstanding information to be provided in order to complete the audit. ACOL finalised its response to this information request on 22 October 2013. The offsite component of the audit was completed on 25 November 2013. A list of all documents viewed by the auditors during the audit is provided in Appendix A.

The auditors used detailed checklists to examine the compliance of ACOL's operations during the audit period against DA 309-11-2001-i and EPL 11879. These checklists, including a detailed assessment of compliance against each condition, are provided as Appendix B (development consent) and C (EPL).

All responses provided to audit questions during the audit were verified where possible. For example, statements made by on-site staff were verified by reviewing relevant documentation and/or visual observations made during the site inspection.

Any instances where suitable verification could not be ascertained have been outlined in the detailed audit findings (refer to Sections 3 and 4).

2.3.4 Site inspections

Site inspections were conducted for the audit as follows:

- 8 October 2013. A site inspection was undertaken by the core audit team (Steve Crick and Hugh Madden), who were accompanied by Julie McNaughton (Acting Environment and Community Relations Manager) and Scotney Moore (Environment and Community Relations Coordinator). The site inspection generally focused on areas impacted by mining, such as areas above underground mining areas, the Bowmans Creek diversion, eastern open cut emplacement area, gas drainage and ventilation structures, active drilling operations and tailings storage facility. A brief inspection of the CHPP and voluntary conservation area was also undertaken.
- 9 October 2013. A site inspection was undertaken by Steve Crick (Lead auditor) and Shane Trott (Groundwater specialist), who were accompanied by Alan Tight (Environment and Community Coordinator), Julie McNaughton (Acting Environment and Community Manager) and Peter Grey (Acting CHPP Manager – who lead the inspection of the CHPP facility). This inspection focused on areas associated with water resources, such as Bowmans Creek and the tailings storage facility. A detailed inspection of the CHPP was also undertaken.
- 9 October 2013. A site inspection was undertaken by Michael Frankcombe (Rehabilitation Specialist), who was accompanied by Scotney Moore (Environment and Community Coordinator). This inspection focused on rehabilitated areas, such as the Bowmans Creek diversion and eastern emplacement area.
- 10 October 2013. A site inspection was undertaken by Steve Crick (Lead auditor) and James Barbato (Mine Subsidence Specialist) who were accompanied by Alan Tight (Environment and Community Coordinator). This site inspection focused on areas affected by underground mining, in particular areas where active mining had recently caused impacts such as minor cracking on Lemington Road. Areas with key surface infrastructure such as powerlines were also inspected.

Appendix D provides photographs taken during the site inspection.

2.3.5 Closing meeting

A closing meeting was held at the ACOL administration facilities, commencing approximately 4.00pm on 10 October 2013. During the closing meeting, a brief overview of key audit findings was given followed by a discussion of outstanding items. The attendees of the closing meeting are outlined in Table 2.3.

Table 2.3 Closing meeting attendees

Staff	Organisation	Title
Steven Crick	Parsons Brinckerhoff	Lead Environmental Auditor
Hugh Madden	Parsons Brinckerhoff	Principal Environmental Auditor
Brian Wesley	ACOL	General Manager
Peter Grey	ACOL	Acting CHPP Manager
Julie McNaughton	ACOL	Acting Environment and Community Relations Manager
James Barben	ACOL	Approvals Coordinator
Scotney Moore	ACOL	Environment and Community Relations Coordinator
Alan Tight	ACOL	Environment and Community Coordinator
David Gibson	ACOL	Underground Mine Manager

ACOL provided the auditors with documents relating to information requested by the auditors that was not sighted during the on-site component of the audit via emails between 21 and 22 October 2013. A list of all documents sighted by the auditors during the audit is provided in Appendix A.

2.4 Reporting

Following the off-site review of documents provided following the site component of the audit, the DA 309-11-2001-i and EPL 11879 compliance checklists were completed (refer to Appendix B and C).

This report was prepared to provide an overview of any compliance issues identified through the audit and other observations made by the auditors regarding environmental performance issues. This report has been prepared on an exception basis, highlighting any areas where action or improvements are required or recommended.

A draft version of this report was provided to ACOL on 25 November 2013. Following consideration of comments from ACOL, the report was finalised and provided to ACOL to disseminate to relevant stakeholders.

2.5 Definitions

The categorisation of results from the audit was based on the following definitions:

- **Compliant (C)** – The intent and all specific requirements of the condition have been met.
- **Non-compliant (N/C)** – The intent or one or more specific requirements of the condition have not been met.
- **Not Applicable (N/A)** – A condition or requirement has an activation or timing requirement that had not been sufficiently triggered at the time of the audit, therefore a determination of compliance could not be made.

3. Audit findings

3.1 DA 309-11-2001-i

Appendix B provides a detailed checklist of compliance against each condition of the development consent. Overall, the audit identified 22 non-compliances against specific conditions of DA 309-11-2001-i. A summary of these non-compliances is provided in Section 5.

Non-compliances associated with the development consent were associated with the following issues:

- Condition 1.2 – Failure to implement or undertake commitments provided within environmental assessments for the project (refer to Section 3.3).
- Condition 1.21 – Failure to review strategies, management plans and programs required under the development consent within three months of an independent audit, approval of a modification or completion of an AEMR (refer to Section 3.5).
- Conditions 2.4, 3.31, 3.57, 3.62 – Failure to provide reports to regulators within required timeframes, failure to obtain approval for reports or failure to provide reports to stakeholders as required.
- Conditions 2.5C, 3.36, 3.46, 3.55, 3.56, 3.58, 4.7, 6.10B, 6.48, 8.2 – Inadequate detail in operational plans to satisfy requirements for specific procedures or inclusions.
- Conditions 2.8 and 6.41 – Undertaking work outside approved operational hours.
- Conditions 6.1, 6.22 – Exceedance of allowable limits for blast overpressure and dust levels.
- Condition 8.12 – Failure to record sigma-theta as part of meteorological monitoring.

The auditors noted that ACOL has recently prepared a compliance tracking spreadsheet and are currently in the process of implementing CMO, a compliance tracking database, to assist with maintaining compliance with specific conditions of DA 309-11-2001-i. ACOL used this spreadsheet during the audit to assist with providing the auditors with evidence of compliance.

3.2 EPL 11879

Appendix C provides a detailed checklist of compliance against each requirement of Environment Protection Licence 11879 (the EPL). The audit determined that most requirements of the EPL were being complied with, however five non-conformances were identified which relate to the following issues:

- M2.2 – Total Suspended Solids was not analysed for water quality samples during October 2012 due to a laboratory error.
- U1.2 – The Particulate Matter Best Management Practice Pollution Reduction Program developed during the audit period does not contain a timeframe or target date for implementing its recommendations.
- U1.4 – The Particulate Matter Best Management Practice Pollution Reduction Program was submitted to the required agency 5 calendar days after the required deadline.
- L2.6 - Undertaking work outside approved operational hours.
- L3.2 – Allowable limits for blast overpressure exceeded the 5% overall limit of 115-120 dBL at St Clements Church and Camberwell Village.

3.3 Environmental impact assessments

Environmental impact assessments and other supporting documents relevant to the ACP are listed under Condition 1.2 of DA 309-11-2001-i. The audit identified six key environmental impact assessments relevant to activities being undertaken during the audit period. These documents were:

- Environmental Impact Statement Ashton Coal Project November 2001.
- Bowmans Creek Diversion Environmental Assessment December 2009 (MOD 6).
- Ashton Coal Project Environmental Assessment for the Modification of DA 309-11-2001-i (MOD 7) comprising underground mine interim gas drainage open cut Hebden seam recovery condition 3.14 (Schedule 2) amendment February 2011.
- Letter of support for the Modification of DA 309-11-2001-i December 2012 (MOD 8).
- Ashton Coal Project Environmental Assessment for the Modification of DA 309-11-2001-i (MOD 9) comprising Upcast Ventilation Shaft, Fans and Mine Service Infrastructure February 2012.
- Ashton Coal Project Environmental Assessment for the Modification of DA 309-11-2001-i (MOD 10) comprising Central Gas Drainage Plant and Associated Surface Infrastructure August 2012.

Table 3.1 provides a review of key commitments or predications made in these documents against the findings of the audit.

Table 3.1 Comparison of audit findings against key commitments or predictions made in environmental impact assessments

EIA commitment/prediction ⁽¹⁾	Audit finding
Environmental Impact Statement Ashton Coal Project November 2001	
<i>Maximum predicted subsidence over any extraction panel is 1.7m.</i>	<ul style="list-style-type: none"> ■ Subsidence impacts have been as predicted, or less than predicted to date (up to two seams have been mined out of four approved).
<i>Subsidence is predicted to be managed. The subsidence area will be continually monitored as part of a subsidence management plan.</i>	<ul style="list-style-type: none"> ■ ACOL has implemented a comprehensive subsidence monitoring program and has management plans for each longwall panel.
<i>The project could be operated with operational controls and achieve particulate matter concentrations, TSP and dust deposition limits at residential areas within Camberwell Village.</i>	<ul style="list-style-type: none"> ■ Non-compliance. Long-term exceedances of deposited dust and TSP limits occurred during the audit period (refer to Section 3.1 and Condition 6.1 of Appendix B). ■ Exceedances of dust criteria have continued to occur since open cut mining ceased and rehabilitation of emplacement areas was completed. Regional dust studies have found that dust exceedances within the Upper Hunter Valley are likely to be a cumulative issue associated with the simultaneous operation of a number of mines in relatively close proximity to one another.
<i>Predicted changes in recharge of groundwater to the alluvium are not predicted to have adverse impacts on the quality groundwater.</i>	<ul style="list-style-type: none"> ■ Water quality impacts to groundwater aquifers have not been identified.
<i>The excised section of Bowmans Creek will be rehabilitated to provide compensatory habitat.</i>	<ul style="list-style-type: none"> ■ Underground mining beneath Bowmans Creek did not occur as proposed in the 2001 EIS. Approval was received under the 'Bowmans Creek Diversion Environmental Assessment December 2009' to divert two sections of Bowmans Creek to enable longwall mining beneath part of the creek.

EIA commitment/prediction ⁽¹⁾	Audit finding
<i>No adverse impact on surface water quality is anticipated as any discharge will occur under limitations imposed by the relevant bodies.</i>	<ul style="list-style-type: none"> ■ No surface water discharges have occurred from the ACP to date.
<i>Visual impacts will be minimised with a combination of bunding and screen planting.</i>	<ul style="list-style-type: none"> ■ Visual bunding and screening planting was undertaken for relevant areas as committed to in the EIS. ■ Screening was not undertaken for areas where proposed mining did not occur, such as on the western side of the New England Highway.
<i>No exceedances of the noise criteria have been predicted for the operation or construction of the mine under neutral conditions. Some exceedances may be experienced with inversions or windy conditions.</i>	<ul style="list-style-type: none"> ■ Exceedance of operational noise criteria did not occur during the audit period. ■ Construction activities specified in the EIS occurred prior to the audit period.
<i>Ground vibration of no more than 2mm/s is predicted to be experienced at the nearest residents.</i>	<ul style="list-style-type: none"> ■ No exceedances of ground vibration criteria occurred during the audit period. ■ Open cut mining ceased in 2011.
Bowmans Creek Diversion Environmental Assessment December 2009	
<i>ACOL will review and modify mine plans in response to actual subsidence and geotechnical behaviour associated with mining in the deeper seams based on monitoring experience, expert interpretation, and other advice.</i>	<ul style="list-style-type: none"> ■ ACOL has implemented a comprehensive subsidence monitoring program. Planning for longwall mining is undertaken by ACOLs technical services team based on subsidence monitoring results. Approval is received from DP&I and DRE for individual extraction plans for each longwall panel prior to mining. An end of panel report is also submitted to the same agencies following completion of each longwall panel.
<i>Filling of subsidence troughs and reshaping of the subsided landform will be undertaken as necessary to create a free-draining landform and to obviate the potential for pooling of water on the surface. This approach is expected to reduce the potential for surface pooling and inflow into the mine.</i>	<ul style="list-style-type: none"> ■ The audit found that it is site practice to fill in depressions caused by subsidence. ■ It was recommended by the audit team's mine rehabilitation specialist to review this practice (refer to Section 4.3.3).
<i>A geosynthetic clay liner will be place under the low flow section of the diversion channels to minimise loss of base flow from the diversion sections of the creek.</i>	<ul style="list-style-type: none"> ■ It was found that a geosynthetic clay liner was placed under the new diversion channels created for the Bowmans Creek diversion.
<i>All workers involved in the construction of the diversions channels and block banks will receive a site specific induction that includes requirements for good environmental management including minimisation of noise and dust, erosion and sediment control, Aboriginal heritage, avoidance of fuel spills and waste management requirements.</i>	<ul style="list-style-type: none"> ■ The 'ACOL Construction MOP, Bowmans Creek Diversion Version A' contains requirements for site inductions to cover 'no-go' Aboriginal areas ■ The 'Ashton Coal Site Specific Induction TRA_010_v5 Ashton Coal – Bowmans Creek Site Induction' was found to include detailed information regarding the minimisation of environmental impacts and impacts to Aboriginal heritage sites. Records were sighted showing that this induction was given to all staff, subcontractors and other stakeholders such as Registered Aboriginal Parties, who worked on the Bowmans Creek Diversion project.
<i>The Southern limits of LW5, LW6 and LW7 will be offset at least 200m from the Hunter River alluvium.</i>	<ul style="list-style-type: none"> ■ All longwall panels were found to be offset at least 200m from the Hunter River alluvium.

EIA commitment/prediction ⁽¹⁾	Audit finding
<p>Three additional nested groundwater monitoring points will be installed in the alluvium and Pikes Gully overburden at the following locations:</p> <ul style="list-style-type: none"> ■ Southwest of LW6A; ■ On the eastern side of LW6B near the downstream end of the Eastern Diversion; and ■ On the eastern side of LW6B near the upstream end of the Eastern Diversion. <p>These monitoring points will be monitored monthly as part of the routine monitoring and weekly at the time that mining occurs in the Pikes Gully seam immediately below in order to detect any drainage of the alluvium.</p>	<ul style="list-style-type: none"> ■ The required bores were found to have been installed during the audit period and have been added to the groundwater monitoring program.
<p>Weed control will be regularly undertaken within the rehabilitation areas in accordance with ACOL's Weed Management Plan with particular attention during the first 12 to 18 months after initial vegetation establishment, so as to facilitate the colonising of the great majority of available niches by native species.</p>	<ul style="list-style-type: none"> ■ Rehabilitated areas were found to have no noticeable weed issues. ■ ACOL employs an independent contractor to prepare an annual weed action plan, which was found to be adhered to. ■ ACOL have recently undertaken a Willow removal program and it was observed that Willows had been removed from the length of excised section Bowmans Creek under ACOLs control.
<p>Stock proof fencing will be installed and maintained along the boundaries of the rehabilitation works on the diversion channels. Stock proof fencing will also be installed along both banks of the existing creek (at least 5 m from the alignment of any riparian trees) for the full length of the existing creek between the New England Highway and the Hunter River.</p>	<ul style="list-style-type: none"> ■ Stock proof fencing has generally not been installed along the boundaries of rehabilitated areas. Although it was found that stock are managed effectively so they do not enter these areas. Broad rehabilitation areas are fenced and stock are excluded through the use of cattle grids etc.
<p>Where required, stock watering troughs will be installed at strategic locations on pasture areas adjacent to the creek.</p>	<ul style="list-style-type: none"> ■ Stock watering troughs have not been installed as stock is excluded from the Bowmans Creek area.
<p>Fish passage will be maintained in the diverted creek sections under at least moderate flow conditions.</p>	<ul style="list-style-type: none"> ■ The Bowmans Creek diversion was found to have been constructed as described in the Bowmans Creek EA. No impediments to fish passage were observed along the active sections of the creek.
<p>Resting pools will be included within the diverted creek sections.</p>	<ul style="list-style-type: none"> ■ The diverted sections of Bowmans Creek were constructed to provide riffle areas and resting pools.
<p>Large woody debris will be used to restore aquatic habitat.</p>	<ul style="list-style-type: none"> ■ The diverted sections of Bowmans Creek include large woody debris and other habitat features.
Environmental Assessments for Modifications 7, 8, 9 and 10	
<p>Noise monitoring will be conducted at the boundary of Property 130 during gas bore construction in proximity to the property boundary.</p>	<ul style="list-style-type: none"> ■ Attended noise monitoring is undertaken at the boundary of Property 130 on a routine basis.
<p>A temporary noise barrier will be used to minimise drill noise while ever gas bore construction activities are in close proximity to Property 130.</p>	<ul style="list-style-type: none"> ■ Drilling has not occurred in close proximity to Property 130 to date. ULD 2m Fan Shaft is located within 100 of the boundary of this property, but construction of this site occurred prior to approval of this modification.
<p>Vehicle speeds on unsealed access tracks will be restricted to a level that minimises dust generation.</p> <p>Vehicle movements (such as delivery and removal of materials) will be coordinated to avoid unnecessary trips on unsealed access tracks.</p>	<ul style="list-style-type: none"> ■ A Traffic Management Plan (TMP) was developed for works associated with this modification. The TMP specified site speed limits and traffic rules such as which routes are to be travelled on.

EIA commitment/prediction ⁽¹⁾	Audit finding
<i>Monitoring for methane and odours will be undertaken during free-venting within 100m of the Property 130 boundary.</i>	<ul style="list-style-type: none"> ■ No methane monitoring has been undertaken adjacent to Property 130 as no bores have been located within 100 metres of this property. ULD 2m Fan Shaft is located within 100 metres of this property and has its own methane monitor.
<i>Monitoring for methane will be undertaken during free-venting in close proximity to Macquarie Generation work areas (including the Void 5 ash dam).</i>	<ul style="list-style-type: none"> ■ Methane monitoring has not occurred for gas drainage sites located on Macquarie Generation land as no free venting has occurred. There is one well located on Macquarie Generation land although this is sealed and has never been used. ■ During the audit, no evidence was observed that defined Macquarie Generation ‘work areas’.
<p><i>Aboriginal heritage sites will be avoided as far as practically possible.</i></p> <p><i>Where Aboriginal heritage sites cannot be avoided, potentially impacted objects will either be salvaged or relocated in accordance with an approved AHIP, ACOL’s ACHMP and in consultation with Aboriginal community stakeholders.</i></p>	<ul style="list-style-type: none"> ■ No evidence was found to show impacts to Aboriginal heritage have occurred as part of the approved works.
<i>The “Dairy Lane” property access intersection will be used as a ‘right in’ intersection for south bound vehicles accessing the site when other approved ACP development is occurring with approved traffic controls. In the event these traffic controls do not exist, the ‘dairy lane’ intersection will be operated as a ‘left in left out’ only.</i>	<ul style="list-style-type: none"> ■ A TMP was developed for works associated with this modification. The TMP specified site speed limits and traffic rules such as which access routes should be used.
<i>Heavy vehicle use of the “Dairy Lane” intersection during school bus pick-up / drop-off and milk tanker access times will be minimised as far as practically possible.</i>	<ul style="list-style-type: none"> ■ A TMP was developed for works associated with this modification. The TMP specified site speed limits and traffic rules such as which access routes should be used.
<i>Visual screening will be used to reduce the visibility of gas bores on Macquarie Generation owned land to the Brunkers Lane/ realigned Lemington Road and New England Highway as far as practically possible.</i>	<ul style="list-style-type: none"> ■ Screening vegetation was recently planted on the southern side of Lemington Road to create a visual buffer for gas drainage works. ■ Screening of bores located on the northern side of Lemington Road on Macquarie Generation owned land was undertaken using shade cloth, but this was found to make the bores more identifiable in the landscape and had been removed. It was observed by the auditors that bores on Macquarie Generation land are barely visible from Lemington Road or the New England Highway.
<i>Access to Property 130 will be maintained throughout all stages of the project through the Right of Way access track or the alternative access track.</i>	<ul style="list-style-type: none"> ■ A TMP was developed for works associated with this modification. The TMP specified site speed limits and traffic rules such as which access routes should be used.
<i>Gas bores will be set-back a minimum of 50 m from the Property 130 boundary.</i>	<ul style="list-style-type: none"> ■ No gas drainage bores have occurred within 50 metres of Property 130.
<i>The colour of the ventilation fan infrastructure will be selected so as to be visually recessive with the surrounding landscape.</i>	<ul style="list-style-type: none"> ■ The ventilation fan structure was found to be coloured light olive, making it visually recessive in the surrounding landscape.

(1) summarised

3.3.1 Recommendations

The following recommendations were developed following the review of EIS commitments:

- ACOL should continue to implement best practice measures to mitigate dust generation from on-site operations.
- Requirements for methane monitoring associated with Macquarie Generation land and Property 130 should be reflected in an appropriate Management Plan.

3.4 Mining leases and exploration licences

At the time of the audit, ACOL were found to hold:

- Mining Lease No. 1529 issued on 10 September 2003 and valid until 05 December 2022.
- Mining Lease No. 1553 issued on 26 February 2003 and valid until 26 February 2024.
- Mining Lease No. 1623 issued on 30 October 2008 and valid until 30 October 2029.
- Exploration Lease No. 5860 issued on 21 May 2012 and valid until 21 May 2015
- Exploration Lease No. 4918 issued on 17 December 2010 and is valid until 17 December 2015.

Conformance against the environmental aspects of each mining lease was reviewed as part of the audit and the following issues were identified:

- Under ELs 5860 and 4918, ACOL are required to provide an annual report on Community Consultation to DRE within 28 days of the anniversary of the licence being granted. No evidence of any community consultation activities being undertaken regarding exploration activities, or any evidence of an annual report being submitted in accordance with this condition were found during the audit. An annual report for 2011-12 was sighted for EL4918, but this did not describe any consultation activities.
- Under EL's 5860 and 4918, ACOL are required to prepare a Groundwater Monitoring and Modelling Plan in consultation with NOW. The auditors found that the site's Water Management Plan (WMP) covers the requirements for this plan and that ACOL undertakes regular consultation with NOW. The site's WMP does not cover the SEOC area and it is understood that EL's 5860 and 4918 at least partly cover this area. The audit did not find evidence that a separate WMP had been prepared for exploration areas not covered by the existing WMP.

3.4.1 Recommendations

It is recommended that ACOL review the requirements of Conditions 5 -7 and 12 of EL's 5860 and 4918 and consult with DRE and NOW regarding ongoing commitments required under these conditions.

3.5 Environmental management plans

ACOL operates under a series of environmental management plans which were originally required under DA 309-11-2001-i to manage impacts from open cut and underground mining, and coal process and transport operations. The majority of these plans have not been updated to reflect the cessation of open cut operations at the site. The auditor noted that the WMP and Archaeology and Cultural Heritage Management Plan have been updated since open cut mining ceased.

ACOL has received approval from DP&I to amalgamate some of its required plans into the sites current approved MOP. These plans include the Rehabilitation Management Plan, Final Void Management Plan, Land Management Plan and Landscape and Revegetation Management Plan. A review of the requirements

for these plans listed in DA 309-11-2001-i found that the approved MOP which replaces them does not cover some of the requirements for these plans (refer to Section 3.1 and Appendix B for more detail).

Other non-conformances regarding the requirements of DA 309-11-200-i for the Archaeology and Cultural Heritage, Flora and Fauna and Erosion and Sediment Control Management Plans were found during the audit.

The audit found that ACOL commenced revision of its management plans to incorporate operations associated with the SEOC project, although this process was suspended when the SEOC approval was challenged. ACOL has committed to revision of its management plans as a priority once the future of the SEOC is determined.

The audit found evidence that some of the sites management plans have been updated to reflect current operations, and are in the final stages of review, prior to being lodged with relevant regulators for approval. Plans that have been updated recently for the site include the AQMP, Bushfire Management Plan, Lighting Management Plan, Noise Management Plan Spontaneous Combustion Management Plan and Waste Management Plan.

3.5.1 Recommendations

It is recommended that ACOL await the outcome of the review of the SEOC approval before revising its management plans. A decision on the SEOC is anticipated in the coming months. The current management plans implemented at the site were established when the site was operating as an open cut and underground mine and are considered to generally provide an effective level of environmental management for the site's current operations.

If the SEOC project and the corresponding Modification 5 are approved, the site's management plans (including the MOP) should be revised to reflect new approval conditions and environmental management issues. If the SEOC is declined or significantly delayed, the existing suite of management plans applied for the ACP should be amended to reflect the sites current operational activities.

Non-conformances identified during the audit that apply to the management plans or the MOP should be addressed when the plans are revised.

3.6 Environmental reporting

ACOL were found to provide a comprehensive summary of environmental performance and operational activities in Annual Environmental Management Reports (AEMRs), covering the following periods during the audit:

- 2 September 2009 to 1 September 2010 (2009-10 AEMR)
- 2 September 2010 to 1 September 2011 (2010-11 AEMR)
- 2 September 2011 to 31 December 2012 (2011-12 AEMR).

The reporting period for the 2011-12 AEMR was extended following consultation and approval from DP&I, DRE and OEH to align AEMR reporting periods to the calendar year.

The AEMRs were reviewed for the audit and it was found that they did not meet several requirements of DA 309-11-2001-i (refer to Section 3.1 and Condition 9.2 of Appendix B).

The following sections provide an overview of the key issues discussed in each AEMR.

3.6.1 Air Quality

Exceedances of short and long-term air quality criteria occurred during the audit period (refer to Section 3.1 and Condition 6.1 of Appendix B). The 2012 AEMR states that exceedances of air quality criteria at community monitoring points is unlikely to be attributed to ACOL as open cut mining operations have ceased.

Long-term air quality results provided in the 2011-12 AEMR do not show a significant decrease in particulate levels following cessation of open cut mining in September 2011 (a minor decrease is shown at all TSP monitoring points). It was reported that rehabilitation of the eastern emplacement area was completed by May 2012 and TSP rolling averages are shown to increase following this, indicating that the major source of dust received at monitoring sites did not come from ACOL's open cut operation.

The 2009-10 AEMR states that air quality results for that reporting period have not exceeded the predicted levels in the EIS.

3.6.2 Water

The AEMRs report that groundwater monitoring has found that groundwater related impacts from underground mining have been less than predicted in the EIS. The 2011-12 AEMR states that no impacts have been observed in the Glennies Creek, Bowmans Creek or Hunter River alluvium as a result of underground mining.

Water balances undertaken for each AEMR show that the site is a net user of water. The only period where outflows exceeded inflows were reported was between 1 March and 31 August 2012. During all other periods, ACOL received or extracted more water than it used or lost.

No water discharges have occurred from the site since commencement of the ACP in 2001. Water quality monitoring undertaken for Glennies Creek, Bowmans Creek and the Hunter River did not identify any impacts from ACOL's operations during the audit period.

3.6.3 Noise

No exceedances of noise goals occurred during the audit period.

ACOL undertakes quarterly attended noise monitoring at five residential locations located within Camberwell Village and to the east of the mine. Monitoring at these sites undertaken since open cut operations ceased in 2011 found that ACOL operations were inaudible at each location during each monitoring event.

3.6.4 Blasting

Blasting occurred during open cut operations, which ceased in September 2011. Overall, 224 blasts were reported in the AEMRs reviewed for the audit, of these 136 occurred during the audit period. No exceedances of blasting limits were reported during the audit period, although the 5% overall limit for blasts between 115-120dBL was exceeded at St Clements Church and Camberwell Village for the 2009-10 reporting year. It was noted that only two blasts of between 115 and 120 dBL occurred during the audit period.

3.6.5 Community complaints

Community complaints received during each AEMR reporting period are outlined below:

- 2011-12 – 12 complaints, four of which were made directly to ACOL and eight of which were reported through the EPA's Pollution Hotline. These complaints were predominantly about noise.
- 2010-11 – 51 complaints were received, 30 directly to ACOL and 21 through the EPA's Pollution Hotline. Most complaints were received during summer and related to rehabilitation works on the eastern emplacement area.
- 2009-10 – 116 complaints were received during the reporting year 43 of which occurred during the audit period., The AEMR for this period reported that ACOL modified open cut operations in response to complaints through restricting dumping to lower or northern areas following 6.00pm, or by relocating operations during windy periods.

The AEMRs report that the majority of complaints received during the audit period came from a single resident. Evidence was found to show that ACOL investigated the causes of these complaints, including undertaking an independent review of noise impacts at the resident's property in 2011. Complaints have reduced significantly since open cut mining operations ceased in 2011.

3.6.6 Other issues

The AEMRs applicable to the audit period show that the major ground-disturbing activities associated with the ACP occurred prior to the audit period. During the audit period impacts to matters such as biodiversity and Aboriginal heritage occurred through construction of ancillary mine infrastructure such as gas drainage wells and the Bowmans Creek diversions, however; the footprint of the open cut mine and its overburden dump did not expand and the overall level of impact was minor.

3.7 Regulatory actions

3.7.1 Penalties

The audit found that ACOL received one infringement notice from DP&I for breaching Condition 2.8 of DA 309-11-2001-i in November 2010 which provide approved operational hours. This incident occurred when a public complaint was made regarding a dozer associated with open cut operations commencing operations at 7.46am on a Sunday, when the approved start time was 8.00am.

ACOL were found to have implemented the following actions during operation of the SEOC to ensure operational timeframes were adhered to:

- Open Cut Examiner calls a start time over the radio and note this time on the shift report.
- No open cut machinery is to move from the go line until this is called.

3.7.2 Directions from regulators

DP&I provided the following directions regarding the 2009/2010 AEMR reporting on 18 April 2011:

- *Ensure that noise monitoring includes train loading activities from start to finish, specifically the locomotive engine, loading, dozers and the engine revving when leaving the site during the night time period, and submit a copy of any attended noise monitoring carried out on train loading activities during the night time period.*

The audit found that the noise monitoring report provided by Spectrum Acoustics on 10 May 2011 investigated noise associated with train loading at ACOL. This report determined that noise from ACOL was not audible at any monitoring location during any monitoring period.

- *Ensure the next AEMR includes an annual compliance audit table of project performance against conditions of the development consent and other statutory approvals.*

Section 1.4 of the 2010/11 AEMR contains a table outlining non-compliances against the development consent as identified during an internal audit.

- *Ensure the next AEMR contains MOP commitments for rehabilitation (for comparison).*

Section 5.3 of the 2010/11 AEMR provides a comparison of rehabilitation completed during the audit period.

- *Notify nearby residents prior to spreading OGM (Organic Growth Medium) when the odour is likely to impact the village.*

It was reported that no OGM was spread during the audit period.

- *Notify the Singleton DP&I office of any future reportable incidents.*

The audit found that the Singleton office of DP&I were the main point of contact for communications with ACOL during the audit period. Reportable incidents were reported to this office (for example, the breach of operational hours that occurred under Condition 6.41 of the development consent).

- *In the future, please include a table setting out any non-compliant conditions of the Development Consent, including explanatory notes.*

Section 1.4 of the 2010/11 AEMR provides a table that highlights non-conformances against 'project approval conditions and the MOP' and provides reference to where these are discussed in the AEMR. The table does not provide reference to specific conditions of the development consent and neither does the section of the AEMR that it refers to. However, it is considered that the overall intent of this request has been met.

3.8 Site inspection

As described in Section 2.3.4, site inspections were undertaken by all members of the audit team during the site component of the audit. ACOL provided access to all areas associated with the ACP during the audit. Photographs taken during site inspections are provided in Appendix D. Key observations made during these site inspections are outlined below:

- Environmental monitoring stations within Camberwell Village (including real-time dust monitoring units) were found to be well located between the nearest residents and the ACP. These sites were protected by security fencing and no access issues to these sites was observed (refer to Appendix D, Photograph 1).
- Construction of the upcast ventilation shaft and extraction fans associated with Modification 9 is nearing completion. This construction site was observed to be orderly, secure and situated behind an earthen bund to provide visual protection from public areas to the east, such as the New England Highway (Photograph 2).
- A drill site operated by Hunter Drilling Services for a large-diameter gas drainage bore was observed adjacent to Dairy Lane (refer to Appendix D, Photograph 3). This site was found to be properly signposted, demarcated and fenced and causing no disruption to traffic movements on Dairy Lane. The drillers on-site were found to be operating under a well-documented environmental and safety management system, which requires the identification of potential environmental issues through pre-start audits and Hunter Drilling Services SCHEMS. Copies of these documents (completed for the day of the site inspection) and other documents such as Safe Work Method Statements and an Emergency Response Plan were kept on-site by the drilling team. An interview with the Senior Driller on site (James Hand) found that he had a very good understanding of potential issues associated with drilling at that

location and procedures to be followed if an incident occurred. It was noted that this site is located on the access road to Property 130.

- The Voluntary Conservation Area was observed to be well kept and properly protected with fencing. Signs stating that access is restricted to this area were observed to be in place (refer to Appendix D, Photograph 4).
- The diversions of Bowmans Creek are well developed and the site is nearing completion of Stage 1 – Bank Stabilisation, as part of the seven year rehabilitation strategy for the diversion. The Eastern diversion is shown in Appendix D, Photograph 5. The Western diversion is shown in Appendix D, Photograph 6. The diversion has been constructed as described in the Bowmans Creek EA to feature naturally appearing meanders and habitat features such as logs, riffles and pools. Both sections of the diversion are irrigated as required using an array of overhead sprinklers. Irrigation water for this operation is pumped from the Hunter River. Riparian vegetation planted along the diversion areas appears to have been in good condition. Refer to Section 4.3.2 for further discussion of the Bowmans Creek diversion.
- The excised sections of Bowmans Creek were found to contain water in some sections, providing evidence that any subsidence affecting this area has not drained surface water in the creek. Generally these areas appeared to have dried out (refer to Appendix D, Photograph 7). ACOL were found to have recently undertaken a Willow removal program as part of its weed management program and Bowmans Creek Diversion improvement works, along the length of Bowmans Creek that lie on ACOL owned lands.
- Pipelines carrying tailings to ACOL's tailings storage facility located outside it's Mine Lease, within the Macquarie Generation Complex were found to be located within bunds, with catch dams being constructed at intervals within these bunds in sloping areas.
- Coal handling areas and the portals to the underground mine were found to be well maintained and tidy. Plant operational areas were well demarcated. All spill kits within these areas were found to be stocked and it was reported that these are examined and stocked on a weekly basis by the waste collection contractor. No liquid wastes or goods were observed to be stored outside of bunded areas.
- A large capacity water cart was observed to be operating continually in these areas during the audit, providing effective dampening of haul roads and hard stand areas (refer to Appendix D, Photograph 8). Automatically activated sprinkler systems were observed to have been installed in ROM and product coal stockpile areas (refer to Appendix D, Photograph 9).
- The eastern emplacement area was observed to have been rehabilitated with a mixture of pasture and native forest species. Vegetation growth in these areas was found to be good and no issues, such as erosion, poor drainage or slumping was observed (refer to Appendix D, Photograph 10). Further discussion of rehabilitation undertaken by ACOL is provided in Section 4.3.
- Subsidence impacts were found to be minor. Minor cracking was observed on Lemington Road (refer to Appendix D, Photograph 11) and on an unsealed road used by ACOL (refer to Appendix D, Photograph 12). Further discussion of subsidence impacts is provided in Section 4.2.

4. Investigation of key issues

This section outlines the findings of investigations undertaken by technical specialists in response to a direction from DP&I to investigate the following key issues associated with ACOL's operations.

4.1 Groundwater

A review of groundwater management activities applicable to the audit period was undertaken by Shane Trott (Senior Hydrogeologist Parsons Brinckerhoff) as part of the audit (refer to Section 2 for details of the audit process).

4.1.1 Groundwater management

Management of groundwater occurs at ACOL in general accordance with the WMP which was approved by DP&I in August, 2012. In addition to management of groundwater, aspects relating to erosion and sediment control, surface water management and the Bowmans Creek diversion are also captured under the scope of the WMP.

Groundwater management at ACOL is focussed on limiting groundwater inflows to the open cut and underground mine workings through minimising potential for interconnection between aquifers. Limiting the potential to enhance connection between the mine and the alluvial aquifer curtails dewatering requirements and minimises groundwater drawdown and permits ongoing groundwater contribution to the baseflow of Bowmans Creek, Glennies Creek and the Hunter River. For the duration of the audit period, this has largely been achieved through:

- consideration of interconnection between the alluvial aquifer and the target coal seams during the longwall panel planning phase
- monitoring and mitigation of subsidence impacts from coal extraction
- comprehensive monitoring of groundwater levels and pore water pressure within the Quaternary alluvial aquifer and Permian strata during coal extraction
- monitoring of underground inflows in the underground workings.

4.1.2 Dewatering

Mining at ACOL extends below the water table and therefore dewatering is necessary to ensure safe and feasible operation. In accordance with the WMP and as described in the MOP, this occurs broadly via two systems:

- A staged underground pumping system which collects water from the underground operations and discharges via the portal to surface storage for onsite reuse.
- A network of production bores located at the surface in a down dip location at the southern end of the mining area. Water abstracted via these bores is then pumped via a dedicated surface pipeline to the CHPP Settling Dam for reuse in the operation.

Groundwater abstraction and mine water inflow volumes are monitored via a combination of in-line flow meters and timing of filling of storage tanks and sumps. Throughout the duration of the audit period, this data was used routinely to inform modelling of the site water balance to ensure ongoing water security at ACOL.

4.1.3 Groundwater monitoring and compliance reporting

Groundwater monitoring and compliance reporting during the audit period has been comprehensive and has occurred in accordance with the WMP. A groundwater monitoring program including water level, pore water pressure and water quality monitoring commenced in November 2000 as part of EIS studies and has been progressively expanded commensurate with ACOL operations. The ACOL groundwater monitoring network now comprises upwards of a 170 conventional standpipe, nested and vibrating wire piezometers at more than 90 locations across the operation.

The primary focus of groundwater monitoring at ACOL is to monitor and mitigate potential impacts to other groundwater users (i.e. adjacent landowners), and groundwater dependent ecosystems (GDEs), specifically Bowmans and Glennies Creek. Monitoring of groundwater impacts during the audit period was achieved through:

- water quality sampling from groundwater across the project area, on a fortnightly, monthly and annual basis
- monitoring and assessment of groundwater inflows and quality to the open cut and underground mining operations
- monitoring of the volume of water abstracted from the mine workings and via dewatering bores;
- monitoring the volume and quality of individual sources of groundwater inflows, where separation of sources is possible
- monitoring groundwater levels and pore water pressure in:
 - ▶ Alluvial aquifers associated with Glennies Creek, Bowmans Creek and the Hunter River
 - ▶ Targeted and regional coal measures, particularly where present above the goaf of the underground mine and between the mine workings and Glennies Creek

In accordance with the WMP, this data was reviewed on a routine basis throughout the audit period and reported as part of the:

- Annual Environmental Management Report (AEMR)
- Independent groundwater assessment of End of Panel reports relating to completion of longwall panel no's. 6A, 7A and 8, and the
- Annual Return for EPL 11879.

4.1.4 Groundwater modelling

In accordance with Consent Condition 9.2, groundwater impacts were compared with predicted impacts throughout the duration of the audit period. The ACOL groundwater flow model used previously during the 2009 Bowmans Creek diversion was updated during the audit period to enable better definition of subsidence related impacts of underground mining. This is documented in the 2011-12 AEMR. Of note, with minor exceptions, groundwater impacts resulting from operations at ACOL were below levels predicted in the 2001 EIS, the WMP and the Upper Liddell Seam Extraction Plan Impact Assessment.

4.2 Mine subsidence

A review of subsidence management activities applicable to the audit period was undertaken by James Barbato (Associated Director, MSEC) as part of the audit (refer to Section 2 for details of the audit process).

4.2.1 Underground mining activities

ACOL undertook longwall mining throughout the audit period, extracting the following longwall panels:

- Pikes Gully Seam - LW6A, LW7A, LW7B and LW8
- Upper Liddell Seam – LW101.

At the time of the audit ACOl were in the process of mining the LW6B seam in the Pikes Gully Seam.

4.2.2 Subsidence monitoring and modelling

A review of the mine subsidence monitoring techniques implemented by ACOl found that ACOl's monitoring programs adequately outlined the locations, methods, timing, frequency, reporting requirements and monitoring results. Mine subsidence movements were measured during the audit period along a number of ground monitoring lines, including LW6CL1, LW6CL2, LW7CL1, LW7CL2, LW7CL3, LW7CL4, LW8CL1, LW8CL2, LW101CL1, LW101CL2, XL5, XL13 and XL14 lines.

Ground monitoring data reviewed for the audit indicates that the observed mine subsidence movements were less than those predicted for the longwalls which were extracted during the audit period. It is considered, therefore, that the subsidence predictions were adequate for these longwalls (i.e. the ground monitoring results validate the subsidence predictions).

It was found that the ground monitoring lines and monitoring frequency implemented by ACOl was appropriate for the site, based on the mining geometry, surface features and constraints, as well as for the validation of the prediction model and the management of impacts.

4.2.3 Subsidence impacts

Key surface features within underground mining areas potentially affected by subsidence during the audit period include:

- public roads such as the New England Highway and Lemington Road
- unsealed tracks
- three overhead 132 kV powerlines and buried telecommunications cables
- water pipelines and farm dams
- archaeological sites
- Bowmans Creek.

The audit found that the built features have been maintained in safe and serviceable conditions during the audit period. A review of end of panel reports indicates that surface cracking has developed primarily inside the edges of the extracted longwalls. These cracks have been repaired by ripping and recompacting the surface, or by infilling with loam. An area was inspected where surface cracking had been remediated along an unsealed track along the alignment of the 132 kV powerline. It was noted that some reopening and erosion of these cracks was present.

No major surface deformations were observed during the audit site inspection. Minor cracking (less than 10mm) was observed along a section of Lemington Road that was experiencing active subsidence from LW6B. Larger surface cracking (estimated to be between 20mm and 50mm) was observed along an unsealed access track near the original alignment of Bowmans Creek. Ponding was observed within the creek alignment indicating that there has been no loss of surface water in this location. No impacts or remediation actions were found to have occurred at the location of identified archaeological sites.

The audit found that no adverse impacts have occurred to surface features due to subsidence movements resulting from the extraction of longwalls during the audit period.

4.2.4 Subsidence management

Subsidence impacts at ACOL are managed through a number of processes including prediction of subsidence impacts prior to mining, subsidence monitoring and implementation of measures specified in the various management plans. In addition to other approvals, ACOL are required to obtain approval for an extraction plan for each longwall panel and to provide an end of panel report to relevant agencies upon completion of each longwall.

A review of subsidence management plans and procedures was undertaken for the audit. This review found these plans and procedures to be adequate for the operations observed at ACOL and generally compliant with the conditions of DA 309-11-2001-i. It was observed however, that the End of Panel summary reports did not include details such as observed crack widths (i.e. estimated range based on visual monitoring). The reports also do not provide an overview of the assessed impacts for the built features or a statement that no impacts had occurred. It is recommended that future reports be amended to include this information so that ready comparisons between the observed and predicted impacts can be made.

4.2.5 Recommendations

Consider including additional details in End of Panel summary reports such as observed crack widths and assessments of any impacts to built features.

4.3 Mine rehabilitation

A review of mine rehabilitation activities applicable to the audit period was undertaken by Michael Frankcombe (Principal Environmental Scientist – Landloch) as part of the audit (refer to Section 2 for details of the audit process).

Key areas investigated for the review of mine rehabilitation for the audit included the Eastern Emplacement Area, the North East Open Cut and Bowman Creek eastern and western diversions.

4.3.1 Rehabilitation activities

No active open cut mining operations were occurring on-site at the time of the audit. Open cut mining in the North East Open Cut (NEOC) ceased in September 2011. The NEOC void is currently being backfilled with coarse coal rejects and the emplacement area used by the NEOC, known as the 'eastern emplacement area' has been rehabilitated.

Rehabilitation works on site were observed to be of a high standard. ACOL have been proactive in the selective management of topsoil resources for use in agricultural rehabilitation and the amelioration of mine spoil with compost to form a suitable growing media in biodiversity planting areas. Compost has been used successfully on site to improve both agricultural and biodiversity rehabilitation. Further trials with compost and other biological soil additives are continuing.

Despite some steep slopes on the eastern emplacement area there was no evidence of rill, gully or tunnel erosion. Diversion banks and drop structures appeared to be stable with no evidence of erosion. It should be noted that ACOL had imported durable, angular igneous rock for use in the drop structures instead of the common practice of using soft sedimentary rock from the open cut mine.

4.3.2 Bowmans Creek diversion

ACOL finalised construction of two diversions of Bowmans Creek during the audit period. These diversions are known as the eastern and western creek diversions. Both the diversions were observed to be well designed and constructed. There was no evidence of erosion and the planted riparian vegetation appeared to be healthy and growing well. These two creek diversions were considered by the audit team to have achieved a very high standard in terms of construction and rehabilitation.

A number of logs were placed in the creek diversions as habitat features. These logs were placed in a downstream direction. Eddying behind the downstream end of the logs can result in bank erosion. Natural channel design best practice (Rosgen 1996, McCullah and Derrick 2013) recommend that logs be placed angled 30° in an upstream direction to function as a flow diversion vane to divert the creek thalweg away from the creek bank.

4.3.3 Rehabilitation management

The 2013 to 2017 MOP has been written to fulfil the requirements of the Rehabilitation Management Plan, Landscape and Revegetation Management Plan, Final Void Management Plan and Land Management for ACOL.

The audit identified that the MOP does not adequately address all the development consent requirements in this regard (refer to Section 3.1 and Appendix B). The audit also found that, overall the management plans for the Bowmans Creek diversions are more technically robust regarding rehabilitation activities than the MOP.

Areas of subsidence rehabilitation were not inspected by the mine rehabilitation specialist (Michael Frankcombe), however; methodologies for this were discussed with relevant staff members and these were found to be consistent with the techniques outlined in the various management plans.

It was noted that subsidence rehabilitation activities identified through audit interviews involve draining areas of ponding in some cases. In a flood plain environment, discrete areas of ponding is to be encouraged to facilitate water entry into the soils to support vegetation growth. These areas should only be drained if they represent an inrush/ subsidence, stock or public safety hazard. Concentration of flow through the construction of drains significantly increases the erosion potential.

4.3.4 Recommendations

Consider reviewing subsidence management practices to encourage ponding in floodplain areas, unless this presents a safety hazard.

5. Summary of audit findings

Table 5.1 provides a summary of non-compliances identified during the audit.

Table 5.1 Summary of non-compliances

Reference	Summary of finding (non-compliance)	Recommendation
DA 309-11-2001-i Condition 1.2	<ul style="list-style-type: none"> ■ ACP EIS (2001) – Air quality modelling predicted that the project could operate with controls in-place to ensure dust deposition and TSP limits could be achieved at Camberwell Village. Air quality monitoring has shown that exceedance of these criteria has occurred. It is noted that ACOL are unlikely to contribute to the majority of dust received at the village, however; the proportion of dust contributed by ACOL to these exceedances has not been determined. 	<ul style="list-style-type: none"> ■ ACOL should continue to implement best practice measures to mitigate dust generation from on-site operations.
DA 309-11-2001-i Condition 1.21	<ul style="list-style-type: none"> ■ The audit found no evidence to show that a review of all strategies, management plans and programs required under the development consent had occurred within 3 months following an independent audit, completion of an AEMR or modification of the development consent. 	<ul style="list-style-type: none"> ■ Undertake a review of relevant management plans, programs in accordance with DA 309-11-2001-i Condition 1.21. Ensure this review process is recorded to show compliance with this condition in future audits.
DA 309-11-2001-i Condition 2.4	<ul style="list-style-type: none"> ■ ACOL sent a copy of the MOP to SSC on 1 October 2013 (refer to Document 54) and DP&I on 22 October 2013 (refer to Document 156). This was outside the required timeframe. 	<ul style="list-style-type: none"> ■ Ensure any future revisions or new MOPs are provided to SSC and DP&I within 14 days of approval by DRE.
DA 309-11-2001-i Condition 2.5C	<ul style="list-style-type: none"> ■ ACOL have not appended the approved or revised Tailings Emplacement Operational Plan (TEOP) to the 2013-2017 MOP. 	<ul style="list-style-type: none"> ■ Ensure the current approved TEOP is appended to the current MOP.
DA 309-11-2001-i Condition 2.8 and Condition 6.41 EPL 11879 L2.6	<ul style="list-style-type: none"> ■ On 14 November 2010, a complaint was made to the DP&I compliance branch regarding a dozer commencing operation at 7.45 am (15 minutes prior to its approved start time). This complaint resulted in an infringement notice being issued to ACOL by DP&I. ACOL responded to this incident by implementing the following procedures: <ul style="list-style-type: none"> ▶ Open Cut Examiner calls a start time over the radio and notes this time on the shift report. ▶ No open cut machinery is to move from the go line until this is called. 	<ul style="list-style-type: none"> ■ Ensure approved operational hours are adhered to. ■ If a breach of operational hours occurs it should be investigated and the outcomes of the investigation reported to the relevant workforce.
DA 309-11-2001-i Condition 3.30	<ul style="list-style-type: none"> ■ No evidence was found to show the Voluntary Conservation Agreement had been provided to SSC or DP&I following its approval by OEH. 	<ul style="list-style-type: none"> ■ Ensure a copy of the Conservation Agreement is provided to DP&I and OEH.
DA 309-11-2001-i Condition 3.31 and 9.2	<ul style="list-style-type: none"> ■ The 2012 AEMR does not provide the results of archaeological or heritage surveys. Section 3.12 (Aboriginal Heritage) of the 2012 AEMR states that <i>'pre-disturbance inspections for minor surface works within underground surface areas continued throughout the year'</i> but does not provide the results of these surveys. ■ It is considered that the intent of this condition is to report the findings of surveys such as these. 	<ul style="list-style-type: none"> ■ Ensure the results of any cultural heritage surveys are described in future AEMRs.

<p>DA 309-11-2001-i Condition 3.36</p>	<ul style="list-style-type: none"> ■ Appendix A of the Aboriginal Cultural Heritage Management Plan states, for this requirement ‘<i>All management measures are generally consistent with the commitments made in the various documents (refer to Table 5)</i>’ <p>The audit found that the ACHMP does not include a Table 5 and provides no specific reference to commitments made by documents listed in Condition 1.2 of the development consent.</p> <ul style="list-style-type: none"> ■ The ACHMP includes a figure that shows AHIMS registered sites and the boundaries of AHIPs applicable to the site. The VCA area is not shown on this figure. Appendix A of the plan states ‘<i>The conservation areas have been excluded from the AHIP boundaries and these areas will be managed to prevent impacts</i>’. <p>The VCA is referred to throughout the ACHMP, and specific procedures for managing this area are provided in Appendix E. The auditors therefore believe the area should be shown on a figure provided in the ACHMP.</p>	<ul style="list-style-type: none"> ■ Ensure the ACHMP summarises the commitments made in relevant documents listed in Condition 1.2 of the development consent, and shows how consistency has been achieved with these. ■ Revise Figure 1 included in the ACHMP to show the location of the VCA.
<p>DA 309-11-2001-i Condition 3.46</p>	<ul style="list-style-type: none"> ■ The Flora and Fauna Management Plan was reviewed against the sub-requirements of this condition (a-t) and was found to cover all requirements, with the following exceptions: <ul style="list-style-type: none"> ■ (n) Integration of rehabilitation works from nearby mines is not discussed. ■ (r) Table 1 of the plan discusses Aboriginal heritage management but does not provide any specific details of how activities under the plan will avoid impact to Aboriginal heritage values. ■ (s) a protocol for identifying and managing significant impacts to threatened species not identified in the EIS is not included. ■ It was found that the FFMP provided references to the Rehabilitation Management Plan for certain requirements of the development consent. The audit found that the Rehabilitation Management Plan has been replaced by the MOP (refer to Condition 3.51). 	<p>Amend the FFMP to include:</p> <ul style="list-style-type: none"> ■ discussion of how rehabilitation works could be integrated with nearby mines ■ how protection of Aboriginal heritage values against actions described in the FFMP will be achieved ■ include a protocol for identifying and managing significant impacts to threatened species not previously identified ■ update references to the Rehabilitation Management Plan that are provided in the FFMP to reflect that it has been replaced by the MOP.
<p>DA 309-11-2001-i Condition 3.55</p>	<ul style="list-style-type: none"> ■ A review of the contents of the MOP against this condition found that the landscaping and revegetation strategies discussed in the MOP are consistent with this condition, although non-compliances were noted against the following sub-clauses: <ul style="list-style-type: none"> ■ (c) Appropriate erosion and sediment control practices for earthworks associated with landscaping are not discussed. ■ (d) The MOP provides a broad discussion of the visual appearance of buildings, but does not provide a specific description of individual buildings, structures etc. Construction of new structures is an activity covered by the MOP (e.g. upcast vent fan facility); however, specifications for the visual appearance of this facility are not provided. ■ (e) Details, for building/structure maintenance to ensure that their original visual appearance is maintained are not provided. ■ (f) Details of how vegetation screening and 	<ul style="list-style-type: none"> ■ Revise the MOP to ensure it is compliant with the requirements for a Landscape and Revegetation Management Plan under DA 309-11-2001-i. Liaise with DP&I to determine a suitable timeframe for this.

	fauna protection corridors will be incorporated into visual and landscaping works are not provided.	
DA 309-11-2001-i Condition 3.56	<ul style="list-style-type: none"> ■ Section 1 of the 2013-2017 MOP states that it satisfies the requirements for a Final Void Management Plan under this condition. ■ The MOP also outlines that the intended use of the final void is for tailings disposal. A Final Void Management Plan will therefore be redundant, should the final void be completely backfilled as shown on Figure 5A of the MOP. ■ As this condition was current during the audit period and the approved MOP states that it satisfies the requirements under this condition for a Final Void Management Plan, a review of the contents of the MOP against this condition was undertaken. This found it to be non-complaint with the following sub-clauses of this condition: <ul style="list-style-type: none"> ■ (b) the MOP does not outline future use options for the final void other than for tailings disposal ■ (c) the MOP does not include a re-examination and validation of groundwater modelling ■ (d) the MOP does not include details of a strategy for long-term management of the final void ■ (e) the MOP does not include any strategies to minimise impacts where it is identified that potential degradation of surrounding water resources may occur ■ (f) the MOP does not contain programs for catchment management including practices to ensure there is little residual risk of nutrient enrichment of final void water. 	<ul style="list-style-type: none"> ■ Liaise with DP&I to determine an appropriate outcome regarding the requirement for ACOL to have a Final Void Management Plan, given that under current plans, the NEOC void will be completely backfilled.
DA 309-11-2001-i Condition 3.57	<ul style="list-style-type: none"> ■ No evidence was found to show that an annual report such as the AEMR or a similar annual report had been submitted to the Singleton Fire Control Officer and therefore full compliance with this condition could not be demonstrated. 	<ul style="list-style-type: none"> ■ Ensure a copy of the AEMR is provided to the Singleton Fire Control Officer.
DA 309-11-2001-i Condition 3.58	<ul style="list-style-type: none"> ■ A review of the contents of the MOP against this condition found that it is non-compliant with the following sub-clauses of this condition: <ul style="list-style-type: none"> (c) and (d) Section 3.22 of the MOP provides a brief discussion of subsidence crack and ponding rehabilitation in agricultural areas. Section 4.3 provides broad agricultural land rehabilitation objectives and some pasture soil criteria is provided in Tables 28 and 31. Section 8.2.3.1 discusses pasture productivity assessment via laboratory testing. However; it was determined that the MOP does not provide <i>'a strategy for sustainable land management and the enhancement of agricultural values and production across the entire site'</i> as required by this clause. <ul style="list-style-type: none"> ■ (e) There is no discussion of how land degradation will be prevented. ■ (g) The potential for recycling of standing timber removed from the site is not provided in the MOP. ■ (h) Section 3.16.8 provides commitment to control weeds and discusses a plan, however, 	<ul style="list-style-type: none"> ■ Revise the MOP to ensure it is compliant with the requirements for a Land Management Plan under DA 309-11-2001-i. Liaise with DP&I to determine a suitable timeframe for this.

	<p>no detail is provided and there is no discussion of vermin eradication.</p> <ul style="list-style-type: none"> ■ (i) Feral pests are discussed in Section 3.16.8 of the MOP, however; no detail is provided. 	
DA 309-11-2001-i Condition 3.62	<ul style="list-style-type: none"> ■ The Emergency Response System was found to have been amended in 2013 (version 12), but no evidence was found to show this amendment had been approved by DRE. 	<ul style="list-style-type: none"> ■ Ensure the revised Emergency Response Plan applicable to the tailings disposal pipeline is provided to DRE for approval.
DA 309-11-2001-i Condition 4.7	<ul style="list-style-type: none"> ■ The WMP was submitted in June 2012, the required date was June 2011. This was due to ongoing issues relating to the delayed approval of mod 5 and the SEOC project, which would have created further changes in the Management Plan. ■ An Erosion and Sediment Control Plan ESCP has been incorporated into the WMP. This plan was reviewed against Managing Urban Stormwater: Soils and Construction (Landcom 2004). This review found the ESCP : <ul style="list-style-type: none"> ▶ Does not identify critical natural areas requiring special planning or management. ▶ Does not define the nature and extent of earthworks to be undertaken or the location of stockpiles and access roads. ▶ Does not describe general site characteristics (slopes, topography etc.). ▶ Does not describe major soil types present. ▶ Does not describe existing vegetation species. ▶ Does not describe catchment areas above and within the site. ▶ Does not identify any areas within the site with serious erosion or sedimentation potential, such as steeply grading areas and areas with dispersive or magnetic sub or topsoils ▶ Does not provide design standards for erosion control or criteria to be used to select, locate and schedule control measures. ▶ The diversion drain, channel design and sizing criteria provided is not compliant with Table 6.1 of Managing Urban Stormwater: Soils and Construction, Volume 2e Mines and Quarries. 	<ul style="list-style-type: none"> ■ Amend the ESCP to ensure compliance with Managing Urban Stormwater: Soils and Construction Manual (Landcom) 2004.
DA 309-11-2001-i Condition 6.1 and 2001 EIS	<ul style="list-style-type: none"> ■ PM₁₀ – exceedances of the 24-hour cumulative average criteria occurred on 23 occasions at off-site locations and on 52 occasions at on-site monitoring locations. ACOL state in the 2011-12 AEMR that these exceedances <i>'were not attributed to ACOL as the NEOC was no longer operating and all of the available overburden dump had been reshaped and rehabilitated by the end of May 2012'</i>. It is noted that the criteria for 24hr PM₁₀ was reduced from 150ug/m³ to 50 ug/m³ following approval of MOD7 in 2011. ■ Deposited dust – exceedances of annual average criteria occurred during 2010 at sites D6, D7 and D13; and during 2012 at gauges D2, D4 and D5. It was noted that as open cut mining at ACOL ceased in September 2011, the exceedances at D2, D4 and D5 during 2012 are likely to have been influenced by a source outside Ashton Mine. 	<ul style="list-style-type: none"> ■ ACOL should continue to implement best practice measures to mitigate dust generation from on-site operations.

<p>DA 309-11-2001-i Condition 6.10B</p>	<ul style="list-style-type: none"> ■ ACOL has prepared a Greenhouse Gas Abatement Plan and received approval from DP&I for this plan, on the basis that it be revised to reflect the outcomes of Modification 9. ■ No evidence was found to show that the plan had been revised as requested by DP&I. 	<ul style="list-style-type: none"> ■ Ensure the Greenhouse Gas Abatement Plan is modified as required by DP&I.
<p>DA 309-11-2001-i Condition 6.22 and EPL 11879 L3.2</p>	<ul style="list-style-type: none"> ■ The 5% overall limit for 115-120 dBL blasts during the 2009-10 reporting period was exceeded at St Clements Church and Camberwell Village. 	<ul style="list-style-type: none"> ■ Ensure effective blast planning and controls are implemented if open cut operations recommence in the future.
<p>DA 309-11-2001-i Condition 6.48</p>	<ul style="list-style-type: none"> ■ The NMP does not specify measures to assess noise results for low-frequency, tonal or impulsive components. ■ Noise monitoring results presented in the AEMRs and Quarterly Monitoring Reports do not provide any analysis on frequency, tonality or impulsive components of noise monitored. 	<ul style="list-style-type: none"> ■ Ensure noise monitoring reporting includes an analysis of low-frequencies, tonality and impulsive sounds.
<p>DA 309-11-2001-i Condition 8.2</p>	<ul style="list-style-type: none"> ■ The AQMP and WMP do not specify quality control or assurance measures for monitoring programs. ■ The AQMP does not specify how laboratory analysis of dust samples should occur. 	<ul style="list-style-type: none"> ■ Amend management plans to include quality control/assurance measures and specify how laboratory analysis should be undertaken.
<p>DA 309-11-2001-i Condition 8.12</p>	<ul style="list-style-type: none"> ■ The audit did not find evidence to show that the site is recording Sigma-Theta through meteorological monitoring. 	<ul style="list-style-type: none"> ■ Ensure sigma theta is recorded at monitoring stations and provide evidence that this is occurring in a relevant report such as the AEMR.
<p>DA 309-11-2001-i Condition 9.2</p>	<ul style="list-style-type: none"> ■ The AEMRs do not discuss changes to agricultural land or land suitability as a result of mining operations. 	<ul style="list-style-type: none"> ■ Ensure future AEMRs discuss any impacts to agricultural land, including potential changes to land suitability.
<p>EPL 11879 M2.2</p>	<ul style="list-style-type: none"> ■ Annual returns applicable to the audit period were observed to contain all required information (refer to Documents 16-18), with the following exception: <ul style="list-style-type: none"> ▶ Total Suspended Solids were not analysed during October 2012 due to a laboratory error and therefore no results were received for any site for this month. It is understood that corrective actions were undertaken following this incident to ensure analysis of all collected samples occurs correctly. 	<ul style="list-style-type: none"> ■ Ensure required analyses are undertaken for all collected water quality samples.
<p>EPL 11879 U1.2</p>	<ul style="list-style-type: none"> ■ The Particulate Matter Best Management Practice Pollution Reduction Program does not include a timeframe for undertaking the review of current practices and developing a procedure for undertaking site watering practices and therefore full compliance with this condition cannot be demonstrated. 	<ul style="list-style-type: none"> ■ Outline and commit to timeframes or address the actions proposed in the Particulate Matter Best Management Practice Pollution Reduction Program within the AQMP revision.
<p>EPL 11879 U1.4</p>	<ul style="list-style-type: none"> ■ The Particulate Matter Best Management Practice Pollution Reduction Program was finalised on 4 July 2012, 5 days after the deadline. 	<ul style="list-style-type: none"> ■ Ensure future compliance reports are submitted to the required agency by the required deadline.
<p>EL 4918 and EL 5860 (Conditions 5-7)</p>	<ul style="list-style-type: none"> ■ ACOL are required to provide an annual report on Community Consultation to DRE within 28 days of the anniversary of the licence being granted. ■ No evidence of any community consultation activities being undertaken regarding exploration activities, or any evidence of an annual report 	<ul style="list-style-type: none"> ■ Submit an annual report to DRE within 28 days of the anniversary of each EL detailing any community consultation activities undertaken in regard to exploration activities.

	being submitted in accordance with this condition were found during the audit. An annual report for 2011-12 was sighted for EL4918, but this did not describe any consultation activities.	
EL 4918 and EL 5860 (Condition 12)	<ul style="list-style-type: none"> ■ ACOL are required to prepare a Groundwater Monitoring and Modelling Plan in consultation with NOW. ■ The auditors found that the site's WMP covers the requirements for this plan and that ACOL undertakes regular consultation with NOW. ■ The site's WMP does not cover the SEOC area and it is understood that EL's 5860 and 4918 at least partly cover this area. It is understood that a Draft Groundwater and Verification Monitoring Program has been prepared for the South East Open Cut and that it covers exploration activities, although this program was not viewed during the audit. 	<ul style="list-style-type: none"> ■ It is recommended that ACOL review its commitments under this requirement and consult with DRE and NOW regarding compliance with this requirement.

Table 5.2 provides a summary of observations made during the audit where compliance had been demonstrated, but the auditors noted that improvements could be achieved.

Table 5.2 Summary of audit observations

Reference	Summary of finding (observation)	Recommendation
DA 309-11-2001-i Condition 3.58	<ul style="list-style-type: none"> ■ The MOP is required to include a '<i>Strategy for sustainable land management... for the land proposed to be swapped for the existing Camberwell Common and Travelling Stock Reserve</i>'. The MOP states that 'Timing' of these requirements is 'This MOP', however no further reference to these land parcels is provided in the document. ■ It was found that the compensation agreement under which the strategy referred to above was formalised following commencement of the NEOC and was found to be compliant in the 2004 audit. ■ The MOP should be amended to reflect this. 	<ul style="list-style-type: none"> ■ Amend the MOP to clarify the status of the Camberwell Common and Travelling Stock Reserve.
DA 309-11-2001-i Condition 3.63	<ul style="list-style-type: none"> ■ This condition requires that emergency response procedures be effectively maintained and operational at all times during operation of the tailings pipelines. ■ The audit found that a tailings pipeline burst occurred on 6 March 2013 during a flushing procedure. The audit found that safety alarms may not have been operational on the pipeline as it was undergoing a maintenance procedure. ■ This incident report form for this incident included a field for '<i>were any safety devices inoperative at the time of the incident?</i>' However, this part of the form was not filled in. 	<ul style="list-style-type: none"> ■ Review the Incident Reporting Procedure to ensure that it addresses the completion of all appropriate fields.
DA 309-11-2001-i Condition 6.10A	<ul style="list-style-type: none"> ■ The audit found that ACOL has undertaken several activities to reduce greenhouse gas emissions from its operations, these have included: <ul style="list-style-type: none"> ▶ Engagement of a consultant to analyse and provide recommendations for energy 	<ul style="list-style-type: none"> ■ Ensure commitments to implementing greenhouse gas emission reduction or energy efficiency programs are reflected in relevant documents such as a relevant management plan.

Reference	Summary of finding (observation)	Recommendation
	<p>efficiency.</p> <ul style="list-style-type: none"> ▶ Implementing 'Lean production practices' (currently at an early stage on-site). ▶ Preparation of a greenhouse gas abatement program. ■ No measures, programs or commitments to reducing greenhouse gas emissions or implementing energy efficiency were identified in relevant documents such as the MOP, AEMRs or AQMP. 	
<p>DA 309-11-2001-i Condition 6.44</p>	<ul style="list-style-type: none"> ■ ACOL has continued monitoring noise at locations to the east of the mine (in Camberwell Village) following completion of overburden emplacement and rehabilitation on the eastern emplacement area. 	<ul style="list-style-type: none"> ■ Consider reviewing noise monitoring requirements for locations east of the eastern emplacement area in consultation with DP&I, now that noise generating activities associated with the NEOC have ceased.
<p>Environmental Assessments for MOD 10</p>	<ul style="list-style-type: none"> ■ Requirements for methane monitoring associated with Macquarie Generation land and Property 130 should be reflected in an appropriate Management Plan. ■ Nothing to define 'work areas' on Macquarie Generation land was observed during the audit. 	<ul style="list-style-type: none"> ■ Requirements for methane monitoring associated with Macquarie Generation land and Property 130 should be reflected in an appropriate management plan.
<p>Mine subsidence review (Section 4.2)</p>	<ul style="list-style-type: none"> ■ End of Panel summary reports should describe the observed surface crack widths (i.e. estimated range based on visual monitoring) so that these can be more readily compared with predicted impacts. ■ End of Panel summary reports should include an overview of the assessed impacts for the built features, such as 'No adverse impacts were identified for the 132 kV powerline with the installation of cable rollers'. In this way, comparisons can be more readily made between the observed and assessed impacts, similar to those made for subsidence movements. 	<ul style="list-style-type: none"> ■ Consider including additional details in End of Panel summary reports such as observed crack widths and assessments of any impacts to built features.
<p>Mine rehabilitation review (Section 4.3)</p>	<ul style="list-style-type: none"> ■ It was noted that subsidence rehabilitation activities identified through audit interviews involve the draining areas of ponding in some cases. ■ In a flood plain environment, discrete areas of ponding should be encouraged to facilitate water entry into the soils to support vegetation growth. These areas should only be drained if they represent a stock or public safety hazard. Concentration of flow through the construction of drains significantly increases the erosion potential. 	<ul style="list-style-type: none"> ■ Consider reviewing subsidence management practices to encourage ponding in floodplain areas, unless this presents a safety hazard.

6. Conclusions

Based on the review of available documentation and observations made during the audit, it was found that ACOL has implemented effective procedures to manage its environmental impacts. ACOL has made a substantial commitment to managing its environmental impacts through employment of an environmental management team of four, implementation of a comprehensive environmental monitoring network that includes a relatively large number of monitoring points, and ongoing environmental monitoring for impacts such as noise and dust that have generally diminished since open cut operations ceased in 2011. The audit also found that all staff interviewed had a good understanding of environmental issues applicable to the site.

Site inspections found the site to be well kept and operations to be efficient, with no areas of concern being noted by the audit team. Rehabilitation work and the Bowmans Creek diversion was found to have been undertaken to a very high standard.

The audit found a number of non-compliances against the requirements of DA 309-11-2001-i and some non-compliances against EPL 11879, exploration licences and air quality predictions made in the original environmental assessment. The majority of identified non-compliances are associated with administrative matters such as management plans not providing enough detail to fulfil the detailed requirements of the compliance documents, or reporting requirements not being met. Several non-compliances were associated with overall blast overpressure limits and air quality criteria. As open cut mining has now ceased at the site the audit found that ongoing issues associated with dust exceedances are not likely to be within ACOLs control.

ACOL received one penalty notice during the audit period, when it was found that a dozer commenced operations 15 minutes before the approved operating times on a Sunday in 2010.

The audit noted that ACOL is awaiting approval of an open cut expansion, which is likely to result in a new project approval being issued for the project. If this approval is granted, it is expected that ACOL will be required to revise its established environmental management regime.



Appendix A

Audit documents



A1. Document list

Table A.1 Document list

No	Document
1.	Ashton Coal Project Bowmans Creek Diversion Environmental Assessment (Evans and Peck), December 2009
2.	Ashton Coal Project Environmental Assessment for the Modification of DA 309-11-2001-i (MOD 9) Compromising Upcast Ventilation Shaft, Fans and Mine Service Infrastructure (Wells Environmental Services) February 2012
3.	Ashton Coal Project Environmental Assessment for the Modification of DA 309-11-2001-i (MOD 10) Comprising Central Gas Drainage Plant and Associated Surface Infrastructure (Wells Environmental Services) August 2012
4.	Ashton Coal Project Environmental Assessment for the Modification of DA 309-11-2001-i (MOD 7) Comprising Underground Mine Interim Gas Drainage Open Cut Hebden Seam Recovery Condition 3.14
5.	Letter from Michael Moore (Ashton) to David Kitto (DP&I) (2 December 2011) Re: Modification application to Ashton Coal Project DA 309-11-2001 – MOD 8
6.	Ashton Coal Mine Mining Operations Plan 2007-2012 (Hansen Bailey) March 2008
7.	Ashton Coal Mining Operations Plan 2013 – 2017 (AECOM) March 2013
8.	Ashton Coal Operations Pty Limited Annual Environmental Management Report 2009/2010
9.	Ashton Coal Operations Pty Limited Annual Environmental Management Report 2010/2011
10.	Ashton Coal Operations Pty Limited Annual Environmental Management Report 2011/2012
11.	Environmental Audit of Ashton Coal Mine for Department of Infrastructure, Planning and Natural Resources (Pacrim Environmental) September 2004
12.	Ashton Coal Mine Project Independent Environmental Audit (Trevor Brown and Associates) August 2010
13.	Ashton Coal Operations – Underground and Open Cut Environmental Regulatory Compliance Audit Report (Pacrim Environmental) October 2007
14.	Biannual Complaints Report 1 September 2010 to 28 February 2011
15.	Biannual Complaints Report 1 September 2011 to 28 February 2012
16.	Annual Return for EPL 11879 (2 Sept 2009 to 1 Sept 2010)
17.	Annual Return for EPL 11879 (2 Sept 2010 to 1 Sept 2011)
18.	Annual Return for EPL 11879 (2 Sept 2011 to 1 Sept 2012)
19.	Weed Management Survey Report (Enright Land Management) Summer 2013 (March)
20.	Ashton Weed Action Plan 2012 (Hunter Land Management) March 2012
21.	J00779 – Ashton Coal Operations 2010 Weed Action Plan (Hunter Land Management) June 2010
22.	Ashton Coal Mine Construction Mining Operations Plan Bowmans Creek Diversion Version A, February 2011
23.	Ashton Coal Site Safety Standards Doc No. 4.7.1 Emergency Management System – Emergency Response CHPP, September 2012
24.	Ashton Coal Project Soil Stripping Management Plan, Version A, September 2003
25.	Ashton Coal Bushfire Management Plan, Version B, March 2005

No	Document
26.	Ashton Coal Project Road and Rail Closure Management Plan, Version A, January 2004
27.	Ashton Coal Project Spontaneous Combustion Management Plan, Version A, January 2004
28.	Ashton Coal Project Flora and Fauna (Biodiversity) Management Plan, 17 August 2012
29.	Ashton Coal Air Quality Management Plan Part 2, Version C, 19 August 2006
30.	Ashton Coal Project Archaeology and Cultural Heritage Management Plan, 1 August 2012
31.	Ashton Coal Blasting/Vibration Management Plan Part 2, Version C, 19 August 2006
32.	Ashton Coal Environmental Management Strategy, Phase 2 Underground Mining Operations, Issue B, 19 August 2006
33.	Ashton Coal Lighting Management Plan, Version A, 12 January 2004
34.	Ashton Coal Noise Management Plan, Part 2, Version C, 19 August 2006
35.	Ashton Coal Waste Management Plan, Version A, 9 September 2003
36.	Ashton Coal Water Management Plan, MP 3.4.1.8, Version E, 25 July 2012
37.	Exploration Licence 4918
38.	Exploration Licence 5860
39.	Mining Lease 1529
40.	Mining Lease 1533
41.	Mining Lease 1623
42.	Letter from Julia Pope (DP&I) to Lisa Richards (Ashton) dated 18 April 2011 <i>Ashton Coal Mine 2009/10 AEMR Review</i>
43.	Letter from David Kitto (DP&I) to Lisa Richards (Ashton) dated 14 June 2012 <i>Ashton Coal Mine 2010/11 AEMR Review</i>
44.	Letter from Scott Brooks (DP&I) to Julie McNaughton (Ashton) dated 26 July 2013 <i>Ashton Coal Mine 2012 AEMR Review</i>
45.	Ashton Coal Project Pikes Gully Longwall 6B Extraction Plan
46.	Letter from Greg Summerhayes (DRE) to the General Manager (Ashton) dated 2 September 2008 <i>Ashton Coal Mine Mining Operation Plan 2007 – 2012</i>
47.	Letter from Michael Lloyd (DRE) to Lisa Richards (Ashton) dated 7 December 2011 <i>RE: Bowmans Creek Diversion CMOP Additional Temporary Clean Water Diversion Structure</i>
48.	Letter from Greg Summerhayes (DRE) dated 28 March 2013 to Brian Wesley (Ashton) dated 28 March 2013 <i>RE: Ashton Coal MOP 2013 - 2017</i>
49.	Letter from Scott Brooks (DP&I) to the General Manager (Ashton) dated 21 March 2013 <i>Ashton Mine – DA 309-11-2001-i</i>
50.	Ashton Coal Project Asset Management Plan Roads and Maritime Services PG LW 6B, 7B (Short) & 8, ULD LW1-8
51.	Minutes from meeting between AAPT and Ashton at AAPT's Glebe office (23 November 2012)
52.	Minutes from meeting between Dam Safety Committee and Ashton at DSC's Parramatta Office (23 November 2012)
53.	Email from Neil McLeod (AAPT) to Michael Moore (Ashton) dated 12/02/2013 <i>Re: Ashton Coal – AAPT fibre optic cable management plans</i>
54.	Letter from Julie McNaughton (Ashton) to Melinda Hale (Singleton Shire Council) dated 1 October 2013 <i>Notification- Mining Operations Plan Approved by the Division of Resources and Energy</i>

No	Document
55.	Letter from Julie McNaughton (Ashton) to Marianne Bonnay (DRE) dated 27 September 2013 <i>Re: Ashton Coal – Tailings Emplacement Operation Plan (TEOP)</i>
56.	Ashton Coal Project Plan of Management Voluntary Conservation Area (20 December 2012)
57.	Letter from Howard Reed (DP&I) to Michael Moore (Ashton) dated 10 August 2012 <i>Ashton Coal Project (DA 309-11-2001-ii) – Upper Liddell Seam Longwalls 1-8 Extraction Plan and Related EMPs</i>
58.	Excavation Permit 0632, dated 3 August 2012, completed by Ryan Davidson
59.	Ashton Coal Permit to Disturb, completed by Ryan Davidson 2 August 2012
60.	Ashton Coal Site SHEC Standards Doc No. 3.4.7.3 Macquarie Generation Void4 Tailings Dam Management Plan
61.	Ashton Coal Site SHEC Standards SWP No. 3.4.7.3.1.1 Roadside Inspection of Tailings Dam System, Pipes, Pipe Line Blockage SWP.
62.	Ashton Coal Site Safety Standards Doc No. 4.7.1 Emergency Management System – Emergency Response CHPP
63.	Letter from Greg Summerhayes (DRE) to Mike Chapman (Ashton) dated 21 May 2007 <i>Tailings Emplacement Operational Plan (TEOP) Approval</i>
64.	Ashton Coal Incident Report Form prepared by Ian McTaggart for Tailings Pipeline Burst (8 March 2013)
65.	Email from Ian McTaggart to Julie McNaughton (1 August 2013) <i>Contained Tailings Leak at Catchment Dam west of Lemington Road</i>
66.	Email from Brian Wesley to Ian McTaggart (1 August 2013) <i>Re: Contained Tailings Leak at Catchment Dam west of Lemington Road</i>
67.	Word document containing photos of Tailings Leak (20130731.docx)
68.	Ashton Coal Incident Report Form prepared by Jeff Randall (31 July 2013) for tailings leakage at gasket above Lemington Road
69.	Letter from Lisa Richards (Ashton) to Licence Administration and Revenue Unit dated 25 October 2010 <i>Annual Return – EPL 11879</i>
70.	Registered post receipt for package sent to Regulatory and Compliance Support Unit, Office of Environment and Heritage Sydney (28 October 2011)
71.	Letter from Lisa Richards (Ashton) to Regulatory and Compliance Support Unit dated 25 October 2012 <i>Annual Return EPL 11879</i>
72.	Letter from Mike Young (DP&I) to Tracey Rock (Ashton) dated 4 September 2006 <i>Ashton Coal Mine – Review of Environmental Management Plans</i>
73.	Letter from Michael Moore (Ashton) to Howard Reed (DP&I) dated 22 December 2011 <i>Re: Ashton Coal Project – Greenhouse Gas Abatement Investigation Report</i>
74.	Letter from David Kitto (DP&I) to Peter Barton (Ashton) dated 23 December 2003 <i>Ashton Coal Project – Review of Environmental Management Plans</i>
75.	Email from Mark Ihlein (Singleton Shire Council) to Peter Barton (Ashton) dated 19 November 2003 <i>RE: Ashton Environmental Management Plans</i>
76.	Email from Julia Pope (DP&I) to Lisa Richards (Ashton) dated 15 August 2012 <i>Re: ACOL GHG Report</i>
77.	Letter from Scott Brooks (DP&I) to The General Manager Ashton Coal Operations dated 27 September 2013 <i>Ashton Coal Mine Reporting Requirements</i>
78.	Letter from Julie McNaughton (Ashton) to Scott Brooks (DP&I) dated 26 September 2013 <i>Reduction to Reporting Requirements – Quarterly Dust Reports and Six Monthly Complaint Reports</i>
79.	Ashton Coal Complaint/Enquiry Form (Number 1364) for complaint received by anonymous on 14 September 2011 re: Explosion

No	Document
80.	Email from Scotney Moore (Ashton) to Steve Clair (EPA) dated 16 September 2011 <i>Re: Enviro Line Enquiry</i>
81.	Calibration Certificate for Noise Monitor (Texcel Pty Ltd, Serial Number 720, 11 May 2010)
82.	Calibration Certificate for Blast Monitoring Station (Dynamaster, 23 July 2010, Camberwell Church)
83.	Calibration Certificate for portable blast monitors (Hunter Acoustics) for monitors A5030, A5036 (undated)
84.	Calibration Certificate for Noise Monitor (Texcel Pty Ltd, Serial Number 5030, 23 August 2011)
85.	Letter from Andrew Russell (PB) to Peter Horn (Ashton) dated 4 April 2006 <i>Re-inspection of St Clements Anglican Church, Glennies Creek Road, Camberwell</i>
86.	Letter to Julie Pope (DP&I) from Brian Wesley (Ashton) dated 24 November 2010 <i>Ashton Coal Mine – Start time 14 November 2010</i>
87.	Letter from Ben Harrison (DP&I) to The General Manager Ashton Coal dated 4 July 2011 <i>Ashton Coal Mine Request for Independent Review</i>
88.	Letter from Brian Wesley (Ashton) to Camberwell Village Resident dated 6 August 2012 <i>Re: Independent Noise Review</i>
89.	Ashton Coal South East Open Cut and Bowmans Crossing Diversion Concept Construction Traffic Management Plan (Rev D) October 2010
90.	Letter from Chris Callum (RTA) to James McIntyre (Ravensworth Operations/AECOM) dated 5 October 2011 <i>Lemington Road Closure – Ravensworth North Coal Mine</i>
91.	Letter from Michael Moore (Ashton) to David Kitto (DP&I) dated 19 December 2012 <i>Ashton Coal Mine – Lemington Road Alignment</i>
92.	Ravensworth Operations and Ashton Coal Lemington Road Alignment Independent Review Report (August 2013)
93.	Ashton Coal Pre-Blast Telephone Contact List (sighted for blast on 14.09.11 at 4.00 pm)
94.	Letters from Scotney Moore to the Ashton Community Consultative Committee, DP&I (Sydney & Singleton), NSW Industry & Investment (Agriculture, Fisheries, Minerals), Mine Subsidence Board, NSW Office of Water, DECCW, RTA, and Singleton Shire Council dated 29 November 2010 providing a copy of the 2010 Independent Environmental Compliance Audit required under Condition 8.8 of DA 309-11-2001-i.
95.	Letter from Julie McNaughton (Ashton) to Scott Brooks (DP&I) dated 24 July 2013 <i>Ashton Coal Independent Compliance Audit – approval of audit team requested</i>
96.	Letters from Lisa Richards (Ashton) to CCC members, local residents, DECCW, NSW Industry and Investment, DoP, Macquarie Generation, NOW and Singleton Council dated 8 February 2011 <i>Ashton Coal Project – Annual Environmental Management Report (2010)</i>
97.	Letters from Lisa Richards (Ashton) to CCC members, local residents, DP&I, DTIRIS, Macquarie Generation, NOW, OEH and Singleton Council dated 30 March 2012 <i>Ashton Coal Project – Annual Environmental Management Report (2011)</i>
98.	Letters from Scotney Moore (Ashton) to CCC members, local residents, DP&I, DRE, Macquarie Generation, NOW, OEH, Singleton Shire Council dated 15 July 2013 <i>Ashton Coal Project – Annual Environmental Management Report (2012)</i>
99.	Letter from Julia Pope (DP&I) to Lisa Richards (Ashton) dated 18 April 2011 <i>Ashton Coal Mine 2009/10 AEMR Review</i>
100.	Letter from David Kitto (DP&I) to The General Manager Ashton Coal Operations dated 14 June 2012 <i>Ashton Coal Mine 2010/11 AEMR Review</i>
101.	Letter from Scott Brooks (DP&I) to the General Manager Ashton Coal Operations dated 26 July 2013 <i>Ashton Coal Mine 2012 AEMR Review</i>
102.	Letter from Scott Brooks (DP&I) to the General Manager Ashton Coal Operations dated 27 September 2013 <i>Ashton Coal Mine Reporting Requirements</i>

No	Document
103.	Letter from Julie McNaughton (Ashton) to Scott Brooks (DP&I) dated 26 September 2013 <i>Reduction to Reporting Requirements – Quarterly Dust Reports and Six Monthly Complaint Reports</i>
104.	Ashton Coal Operations Environmental Management Strategy – Phase 2 Underground Mining Operations
105.	Letter from Phil Fletcher (Ashton) to Macquarie Generation dated 1 May 2012 <i>Proposed Ashton Multi-seam Gas Drainage Development Consent Modification (DA 309-11-2001 MOD 10)</i>
106.	Email from Fegus Hancock (NOW) to Phil Fletcher (Ashton) dated 2 May 2012 <i>RE: Ashton Water Management Plan and Extraction Plan Consultation</i>
107.	Letter from Cassandra Storm (Ashton) to Mitch Bennett (OEH) dated 4 July 2012 <i>Ashton Coal Pollution Reduction Program</i>
108.	Particulate Matter Best Management Practice Pollution Reduction Program – Ashton Coal Operations 4 July 2012 (Job Number 12050093) Todoroski Air Sciences
109.	Ashton Coal Site SHEC Standards Doc No. 4.6.2.1 Broad Brush Risk Assessment Coal Handling Preparation Plant V5
110.	Ashton Coal Broad Brush Risk Assessment Open Cut Operations Version 4
111.	Ashton Coal Site SHEC Standards Doc No. 3.1.1.3. Whole of Mine Risk Assessment Underground Operation Version 4
112.	Email from Scott McDougal (Ashton) to various recipients dated 8 October 2013 <i>Ashton Coal Pikes Gully Seam LW6B Subsidence Bi-Weekly report</i>
113.	Ashton Coal Operations Air Quality Management Plan Version D (Effective September 2013 - September 2018)
114.	Ashton Coal Bushfire Management Plan Version C (Effective January 2013 – January 2018)
115.	Ashton Coal Lighting Management Plan Version B (Effective October 2013 – October 2018)
116.	Ashton Coal Noise Management Plan Version D (Effective September 2013 – September 2018)
117.	Ashton Coal Waste Management Plan Version B (Effective September 2013 – September 2018)
118.	ACOL Environmental Awareness Training Presentation (August 2013)
119.	ACOL Environmental Awareness Training Questionnaire (completed 6/9/13 for Kel Martin)
120.	Ashton Coal Underground & CHPP/Surface Contractor Induction (9 October 2013)
121.	Letter from Neil Pennington and Ross Hodge (Spectrum Acoustics) to Ashton dated 10 May 2011 <i>Re: 6 May 2011 Noise Monitoring Results</i>
122.	Ashton Coal Underground Volume 1 – Written Report Longwall & Miniwall Panels 5 to 9 Doc No. DO-006, 31 October 2008
123.	Upper Liddell Seam Extraction Plan, Written Report, Version 01/08/2012
124.	Extraction and Land Management Plan Upper Liddell Seam LW 1-8 (01/08/2012)
125.	Pikes Gully Longwall 6B Extraction Plan (30/05/2013)
126.	Ashton Longwall 4 – End of Panel Summary Report, Ashton Coal Mine, Ref: ACOL LW4 End of Panel Report Draft 3, 12/05/2010 (EoP)
127.	Ashton Longwall 6A – End of Panel Summary Report, Ashton Coal Mine, Ref: ACOL LW6A End of Panel Report, Draft 1, 8/12/2011 (EoP)
128.	Ashton Longwall 7A – End of Panel Summary Report, Ashton Coal Mine, Ref: ACOL LW7A End of Panel Report, 31/05/2012 (EoP)
129.	Ashton Longwall 8 – End of Panel Summary Report, Ashton Coal Mine, Ref: ACOL LW8 End of Panel Report, 25/02/2013 (EoP)

No	Document
130.	Ashton Coal Mine LW6A End of Panel Groundwater Report (Report No. S55/S55D/D5) 16/08/2011 (RPS Aquaterra)
131.	Ashton Coal Mine Longwall 8 End of Panel Groundwater Report (Report No. S55D/55C) 14/08/2013 (RPS Aquaterra)
132.	Subsidence Assessment for Ashton Coal Mine Longwalls 5 to 8 (Report No. ASH3391A) 10/10/2008 (SCT)
133.	Multi-seam Subsidence Assessment for Ashton Coal Mine Longwalls 5 to 9 (Report No. ASH3584) 23/10/2009 (SCT)
134.	Subsidence Assessment for Longwalls 6B to 8 in the Pikes Gully Seam based on the Bowmans Creek Diversion Mine Plan (Report ASH3687) Rev 1, 10/2/2011 (SCT)
135.	Ashton Multi-seam Subsidence Predictions 3D Exploration (Report ASH3852) 24/10/2011
136.	Longwall 6A – End of Panel Subsidence Report (Report No. ASH3911A) 3/2/2012
137.	Longwall 7A – End of Panel Subsidence Report (Report No. ASH3911A) 3/2/2012
138.	Subsidence Assessment for Upper Liddell Seam, Longwalls 1-8 Extraction Plan (Report No. ASH3657) 16/07/2012
139.	Longwall 8 – End of Panel Subsidence Report (Report No. ASH4036, Rev 1), 21/11/2012
140.	Letter from Diane Crosdale (OEH) to Phil Fletcher (Ashton) dated 14/6/2012 <i>RE: ASHTON COAL MINE – FLORA AND FAUNA (BIODIVERSITY) MANAGEMENT PLAN AND ABORIGINAL CULTURAL HERITAGE</i>
141.	Rehabilitation Monitoring Report for Ashton Coal Operations (Carbon Based Environmental) February 2011
142.	Rehabilitation Monitoring Report for Ashton Coal Operations (Carbon Based Environmental) June 2012
143.	Rehabilitation Monitoring Report for Ashton Coal Operations (Carbon Based Environmental) January 2013
144.	Ashton Coal Project Environmental Impact Statement (1 November 2001) HLA Envirosiences Project No. U842
145.	Position Description – Environment and Community Relations Manager
146.	Position Description – Environmental Coordinator
147.	Position Description – Approvals Manager
148.	Letter to various recipients from ACOL dated 16.4.13 providing details of the appointment of Julie McNaughton and contact details for the environment team.
149.	Quarterly Air Quality Report Quarter 3 2011-2012 1 March 2012 – 31 May 2013 (ACOL)
150.	Spreadsheet titled 'blast summary – 10-11.xlsx' provided by ACOL on 21 October 2013.
151.	ACOL Pre-blast notification contact list (BVMP) (for blast on 14.09.11)
152.	Spreadsheet titled 'Current Complaints List.xlsx' provided by ACOL on 21 October 2013.
153.	Quarterly Noise Monitoring Report (Spectrum Acoustics) 15 November 2011
154.	Letter from Richard Pickles (MSB) to Hugh Drummond (Ashton Coal) dated 17 June 2013 <i>Development Application No. TBA13-24532S1 Methane Drainage Plan Lot 3 DP1114623 Camberwell General Terms of Approval</i>
155.	ACOL Construction MOP, Bowmans Creek Diversion, Version A (11 February 2011)
156.	Hunter Land Management – Ashton Coal Operations 2012 Weed Action Plan
157.	Email from Julie McNaughton (ACOL) to Scott Brooks (DP&I) dated 22 October 2013 <i>Link to Mining Operations Plan</i>
158.	Ashton Coal Bowmans Creek Diversion Site Specific Induction TRA_010_v5 Ashton Coal – Bowmans Creek Site Induction



Appendix B

DA 309-11-2001-i checklist



	Condition	Findings	Recommendation	Rating: C N/C N/A
1.	General			
	Obligation to Minimise harm to the environment			
1.1	There is an obligation on the Applicant to prevent and minimise harm to the environment throughout the life of the project. This requires that all practicable measures are to be taken to prevent and minimise harm that may result from the construction, operation and, where relevant, decommissioning of the development.	<ul style="list-style-type: none"> ■ Reviews of relevant documents and audit site inspections found that effective construction and operational controls were being implemented across the site and that generally, a thorough and effective environmental management regime was applied at the site during the audit period. ■ Some non-compliances were identified against certain administrative requirements of this development consent, such as requirements for management plans to contain certain information or reporting of specific activity. ■ The issues identified with this development consent are not considered to pose an immediate environmental or safety risk and the overall environmental performance of ACOL is considered to be high. 	<ul style="list-style-type: none"> ■ None 	C
	Scope of Development			
1.2	<p>The Applicant shall carry out the development generally in accordance with the:</p> <ul style="list-style-type: none"> a) Development application No.309-11-2001-I as amended by the document in sub clause v). b) EIS, 3 volumes, dated November 2001, prepared by HLA Enviro-sciences Pty Ltd and certified in accordance with Section 78A(8) of the Act. c) Aboriginal Cultural Heritage Assessment dated July 2001, prepared by the Upper Hunter Wonnarua Council and forwarded in a letter from WML received 12 December 2001. d) Conceptual design for upgrade works to Glennies Creek Road provided to SSC and Planning NSW by WML dated 10 December 2001. e) Information provided to Planning NSW by WML on 4 February 2002, titled "Ashton Coal Project Meeting – 	<p>Refer to Section 3.3 of the main report.</p> <ul style="list-style-type: none"> ■ The following non-compliance was identified: <ul style="list-style-type: none"> ▶ ACP EIS (2001) – Air quality modelling predicted that the project could operate with controls in-place to ensure dust deposition and TSP limits could be achieved at Camberwell Village. Air quality monitoring has shown that exceedance of these criteria has occurred. It is noted that ACOL are unlikely to contribute to the majority of dust received at the village, however; the proportion of dust contributed by ACOL to these exceedances has not been determined. 	<ul style="list-style-type: none"> ■ ACOL should continue to implement best practice measures to mitigate dust generation from on-site operations. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>Planning NSW".</p> <p>f) Additional information relating to flora and fauna surveys, the diversion of Bowmans Creek, water quality, groundwater, air quality and Aboriginal cultural heritage provided by HLA Enviro-sciences to Planning NSW and other government agencies, dated 28 February 2002.</p> <p>g) Information relating to groundwater impacts provided by HLA-Enviro-sciences to Planning NSW dated 14 March 2002.</p> <p>h) Additional information relating to subsidence impacts, groundwater impacts, agricultural impacts, project justification and blasting impacts provided by HLA Enviro-sciences to Planning NSW dated 28 March 2002.</p> <p>i) Additional water management information provided to DEC and other NSW Government agencies prepared by HLA Enviro-sciences Pty Ltd, dated 5 April.</p> <p>j) Fax from WML to PlanningNSW dated 13 May 2002 relating to a meeting held on 7 May 2002.</p> <p>k) Letter from HLA Enviro-sciences to PlanningNSW dated 16 May 2002, relating to flora and fauna surveys and agricultural impacts.</p> <p>l) Description and proposed diversion option 2 provided by WML to Planning NSW dated 17 May 2002.</p> <p>m) Response to public submissions from HLA Enviro-sciences to PlanningNSW dated 31 May 2002.</p> <p>n) Additional information provided by WML regarding Northern Woodland Remnant dated 31 May 2002.</p> <p>o) Additional information and letter provided by WML to PlanningNSW regarding Salinity and Green Offsets for the Project dated 20 June 2002.</p> <p>p) Revised Aboriginal cultural heritage survey provided by HLA Enviro-sciences to PlanningNSW dated 24 June 2002.</p>			

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>q) Letter from HLA-Envirosciences to PlanningNSW dated 2 July 2002 relating to Green Offsets report.</p> <p>r) Letter from HLA-Envirosciences to NPWS dated 3 July 2002 relating to Aboriginal cultural heritage.</p> <p>s) Additional information relating to Aboriginal cultural heritage from HLA Envirosciences to PlanningNSW dated 15 July 2002.</p> <p>t) Fax from WML to PlanningNSW dated 25 July 2002 relating to Aboriginal consultation.</p> <p>u) Letter from WML to PlanningNSW dated 12 August 2002 relating to a conservation area.</p> <p>v) Amendment to DA from WML to PlanningNSW titled "Description of Alternate Mine Layout for Underground Mine (Option 4) dated 6 September 2002.</p> <p>w) Fax from WML to PlanningNSW dated 13 September 2002 relating to an internal coal haul road.</p> <p>x) Submission Pursuant to Section 96(2) of the Environmental Planning and Assessment Act 1979, dated August 2004, prepared by Ashton Coal Operations Pty Limited.</p> <p>y) Supplementary Air Quality Information, dated 9 November 2004, prepared by Holmes Air Sciences.</p> <p>z) Documents titled Ashton Coal Tailings Pipeline – Application to Modify Development Consent and Statement of Environmental Effects, dated 2 November 2006 and prepared by Parsons Brinkerhoff.</p> <p>aa) Document titled Development Consent Modification DA 309-11-2001-I MOD 4 dated July 2009, prepared by Wells Environmental Services.</p> <p>bb) Document titled Second Response to Submissions - Ashton Coal Operations Ltd. (ACOL) - Longwall/Miniwall Panel No. 9 dated 24 December 2009.</p> <p>cc) Documents titled Ashton Coal Bowmans Creek Diversion Environmental Assessment dated 3 December 2009, prepared by Evans & Peck, Ashton</p>			

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>Coal Bowmans Creek Diversion Response to Submissions, prepared by Wells Environmental Services, dated May 2010, and Ashton Coal Bowmans Creek Diversion Statement of Commitments, dated December 2010 (see Schedule C).</p> <p>dd) Documents titled Environmental Assessment for the Modification of DA 309-11-2001-i (MOD 7) comprising underground mine interim gas drainage open cut Hebden seam recovery Condition 3.14 (Schedule 2) amendment, dated February 2011, prepared by Wells Environmental Services, Response to Issues – development consent modification application for the Ashton coal mine - DA 309-11-2001-i MOD 7, dated 29 April and 3 May 2011, prepared by Ashton Coal Operations Pty Ltd and statement of commitments dated 6 May 2011 (see Schedule E).</p> <p>ee) Documents titled Modification application to Ashton Coal Project DA 30-9-11-2001 MOD 8, dated 2 December 2011 prepared by Ashton Coal Operations Pty Limited, Aboriginal Archaeological Assessment, Development of Gas Drainage Boreholes in areas of Potential Archaeological Deposits, dated December 2011, prepared by Insite Heritage Pty Ltd and the plan in Schedule D.</p> <p>ff) Documents titled Environmental Assessment for the Modification of DA 309-11-2001-I (MOD 9) Comprising Upcast Ventilation Shaft, Fans and Mine Service Infrastructure, dated February 2012, prepared by Wells Environmental Services, Response to Submissions, dated 16 April 2012, prepared by Ashton Coal, the plan in Schedule F and the Statement of Commitments in Schedule G.</p> <p>gg) Documents titled Environmental Assessment for the Modification of DA 309-11-2001-i (MOD 10) Comprising Central Gas Drainage Plant and Associated Surface Infrastructure, dated 2 August 2012 prepared by Wells Environmental Services, the plan in Schedule H and the statement of commitments in Schedule I.</p> <p>hh) Conditions of this consent.</p>			

	Condition	Findings	Recommendation	Rating: C N/C N/A
1.3	If there is any inconsistency between the above documents, the latter document shall prevail over the former to the extent of the inconsistency. However, the conditions of this consent shall prevail over all other documents to the extent of any inconsistency.	<ul style="list-style-type: none"> No inconsistencies were identified between any compliance documents during the audit. 		C
Provision of Documents				
1.4	Where practicable, the Applicant shall provide all draft documents and reports required to be submitted to the Director-General under this consent in an appropriate electronic format. Approved versions of documents are to be provided as a hard copy. Provision of documents and reports to other parties, as required under this consent, shall be in a format acceptable to those parties and shall aim to minimise resource consumption. Note: at the date of this consent, an appropriate electronic format for submission to the Director-General is the "portable document format" (PDF) or another format that may be readily converted to portable document format.	<ul style="list-style-type: none"> The audit found that the majority of final documents required under DA 309-11-2001-i are available in pdf format on the ACOL website. Evidence was found to show that hard copies of required compliance documents had been submitted to DP&I (e.g. Documents 94, 96, 97, 98). The audit did not identify any requests or comments from DP&I or other stakeholders relating to the format of reports provided by ACOL during the audit period. 		C
1.5	Nothing in this consent prevents the Applicant from combining reporting requirements under this consent with identical or similar reporting requirements for submission to another relevant party. Reporting requirements shall only be combined with the prior agreement of the Director-General of Planning and the Director-General (or equivalent) of the other relevant party, if reporting to that party is to be modified. Note: the purpose of conditions 1.4 and 1.5 is to provide for minimisation of resource utilisation (particularly paper) associated with administration of this consent.	<ul style="list-style-type: none"> In September 2013, ACOL provide a request to DP&I to combine certain quarterly reporting requirements with annual reporting or reports provided monthly on the ACOL website (Document 77). This request related to quarterly reporting requirements for air quality under Condition 6.12 and community complaints under Condition 10.3 of the development consent. This request was approved by DP&I on 27 September 2013 (Document 76). 		C
1.6	The Applicant shall make the following documents available to the public upon request at the mine site and SSC, and shall post all documents on the internet, within 14 days of approval of the documents by the Director-General or relevant agency: <ol style="list-style-type: none"> this consent; any licenses or approvals for the mine obtained from Government agencies; 	<p>ACOL website provides relevant documents at:</p> <ul style="list-style-type: none"> http://www.ashtoncoal.com.au/Reports--Publications/ <p>Relevant licences and approvals are provided at:</p> <ul style="list-style-type: none"> http://www.ashtoncoal.com.au/Licences--Approvals/ It was noted that SSC were provided with hardcopies of each AEMR (Documents 96-98), however; it is not clear if hardcopies of all required documents were provided to 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>3. the Mining Operations Plan; and,</p> <p>4. all documents required under this consent, including the environmental management strategy, environmental management plans, AEMRs, SMIARs, and Independent Audits.</p>	<p>the Council. As public internet access is available at Singleton Library, members of the public can gain access to all relevant documents at this location if required.</p>		
Statutory Requirements				
1.7	<p>The Applicant shall ensure that all licenses, permits and approvals for the development are obtained and kept up-to-date as required.</p>	<ul style="list-style-type: none"> ■ The audit did not identify any licences, permits or approvals that were out of date. ■ ACOL reported that an approvals register (spreadsheet) is currently being developed to ensure compliance with this condition is tracked. 		C
Dispute resolution				
1.8	<p>In the event that a dispute arises between the Applicant and Council or the Applicant and a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter shall be referred by either party to the Director-General, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding on all parties. For the purpose of this condition, "public authority" has the same meaning as provided under section 4 of the Act. Note: Section 121 of the Environmental Planning and Assessment Act 1979 provides mechanisms for resolution of disputes between the Department, the Director-General, councils and public authorities.</p>	<ul style="list-style-type: none"> ■ Interviews with various ACOL staff and review of audit documentation found that no disputes have occurred between ACOL and any public authority. 		N/A
Compliance				
1.9	<p>The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.</p>	<ul style="list-style-type: none"> ■ Environmental Coordinator (Scotney Moore) stated that a site induction is provided to all new staff and contractors. ■ The Ashton Coal Underground & CHPP/Surface Contractor Induction was sighted by the auditors. ■ Environmental awareness training is provided to all staff on an annual basis. The last environmental training program was held in August 2013. ■ Environmental awareness training presentation for 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
		<p>August 2013 was sighted by the auditors and was found to cover legal responsibilities, fines, environmental incidents, approvals, environmentally sensitive areas and environmental controls to be implemented on site. It was found that the presentation did not provide specific details of the location of certain heritage sites (refer to Section 3.3 of the main report).</p> <ul style="list-style-type: none"> Staff are required to complete a questionnaire following completion of the environmental awareness training package. Completed examples of this were sighted by the auditors (Document 119). 		
1.10	<p>At least two weeks prior to each of the events listed from a) to b) below, an independent person(s) or organisation(s), approved by the Director-General, shall certify in writing to the satisfaction of the Director-General, that the Applicant has complied with all conditions of this consent applicable prior to that event. Where an event is to be undertaken in stages, the Applicant may, subject to the agreement of the Director-General, stage the submission of compliance certification consistent with the staging of activities relating to that event:</p> <p>a) commencement of construction; and b) commencement of mining operations</p>	<ul style="list-style-type: none"> This condition does not apply to the audit period. 2004 audit confirmed compliance with this condition. 		N/A
1.11	<p>Notwithstanding condition 1.10 of this consent, the Director-General may require an update report on compliance with all, or any part, of the conditions of this consent. Any such update shall meet the requirements of the Director-General and be submitted within such period as the Director-General may agree.</p>	<ul style="list-style-type: none"> No request for an update on the compliance with DA 309-11-2001-i was received from DP&I during the audit period. It is noted that compliance issues are assessed by internal compliance audits, which are reported in Section 1.4 of each AEMR and assessed in detail by each independent environmental compliance audit. 		N/A
1.12	<p>The Applicant shall meet the reasonable requirements of the Director-General in respect of the implementation of any measure necessary to ensure compliance with the conditions of this consent, and general consistency with the documents listed under condition 1.2 of this consent. The Director-General may direct that such a measure be implemented in response to the information contained within any report, plan,</p>	<p>The auditors found that directions had been provided by DP&I in response to reviews of AEMRs, as follows:</p> <p>2009/10 AEMR</p> <ul style="list-style-type: none"> Ensure that noise monitoring includes train loading activities from start to finish, specifically the locomotive engine, loading, dozers and the engine revving when 	<ul style="list-style-type: none"> Ensure that AEMRs report specific conditions of the development consent for which non-compliances are identified through internal audits. 	C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>correspondence or other document submitted in accordance with the conditions of this consent, within such time as the Director-General may agree.</p>	<p><i>leaving the site during the night time period , and submit a copy of any attended noise monitoring carried out on train loading activities during the night time period.</i></p> <ul style="list-style-type: none"> ■ The audit found that the noise monitoring report provided by Spectrum Acoustics on 10 May 2011 investigated noise associated with train loading at ACOL. This report determined that noise from ACOL was not audible at any monitoring location during monitored periods. ■ <i>Ensure the next AEMR includes an annual compliance audit table of project performance against conditions of the development consent and other statutory approvals.</i> ■ Section 1.4 of the 2010/11 AEMR contains a table outlining non-compliances against the development consent as identified during an internal audit. ■ <i>Ensure the next AEMR contains MOP commitments for rehabilitation (for comparison).</i> ■ Section 5.3. of the 2010/11 AEMR provides a comparison of rehabilitation completed during the audit period. ■ <i>Notify nearby residents prior to spreading OGM when the odour is likely to impact the village.</i> ■ It was reported that no OGM was spread during the audit period. ■ <i>Notify the Singleton DP&I office of any future reportable incidents.</i> ■ The audit found that the Singleton office of DP&I were the main point of contact for communications with ACOL during the audit period. <p>2010/11 AEMR</p> <ul style="list-style-type: none"> ■ <i>In the future, please include a table setting out any non-compliant conditions of the Development Consent, including explanatory notes.</i> ■ Section 1.4 of the 2010/11 AEMR provides a table that highlights non-conformances against 'project approval conditions and the MOP' and provides reference to 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
		where these are discussed in the AEMR. The table does not provide reference to specific conditions of the development consent. Instead it refers to sections of the AEMR that covers broad requirements of the development consent. Non-conformances are noted and it is considered that the overall intent of this request has been met, however improvements are recommended.		
1.13	Any compliance report or compliance update required under condition 1.10 or 1.11 of this consent shall be made available for public inspection on request.	<ul style="list-style-type: none"> Conditions 1.10 and 1.11 do not relate to the audit period. ACOL provide a number of compliance reports on their website, including AEMRs, independent compliance audits, complaint reports and others: http://www.ashtoncoal.com.au/Reports--Publications/ 		C
1.14	If at any time, the Director-General is made aware of the occurrence of any environmental impacts from the proposal that pose serious environmental and/or amenity concerns, due to the failure of environmental measures required by the Conditions of Consent to ameliorate the impacts, the Director-General may order the Applicant to cease the activities causing those impacts until those concerns have been addressed to the satisfaction of the Director-General.	<ul style="list-style-type: none"> No directions were received from DP&I or other regulators to cease any activities associated with this development consent during the audit period. 		N/A
Period of Approval/Project Commencement				
1.15	This consent provides approval for mining for a period of 21 years from the date of granting of a mining lease pursuant to this consent. Note: Conditions of this consent may require activities to be carried out by the Applicant beyond the period of approval for mining.	<ul style="list-style-type: none"> Operational activities under the development consent commenced in 2001 and are therefore valid under this condition till 2022. 		C
1.16	Date of commencement of construction and Mining Operations is to be notified in writing to the Director-General, and SSC, at least two weeks prior to commencement of construction and Mining Operations respectively.	<ul style="list-style-type: none"> Compliance with this condition was verified as part of the 2004 audit. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
Security Deposits and Bonds				
1.17	Security deposits and bonds will be paid as required by DRE Minerals under mining lease approval conditions.	<ul style="list-style-type: none"> A revised security deposit bond covering MLs 1533, 1623 and 1529 was lodged with DRE on 29 May 2013 (sighted by auditor) 		C
Prohibition of Works				
1.18	The Applicant shall design underground workings to ensure that longwall voids do not result closer than 40 metres from any point vertically beneath the high bank of Bowmans Creek (except those sections of channel made redundant by the diversion).	<ul style="list-style-type: none"> Section 2.12 of the 2013 – 2017 MOP (Document 7) states <i>'The mine plan has been designed to minimise surface subsidence effects on overlying natural and built features as far as practically possible. This includes diversion of Bowmans Creek and adherence to a 40m horizontal setback beneath the high bank of the creek (in its diverted form) and the projected vertical edge of the longwall void'</i>. Staged plans included in the MOP (3A – 3E) show that longwall panels have been set back at least 40 metres from the creek. The audit found that ACOL employ ground monitoring programs to enable the comparison of predicted impacts against actual impacts. A review of the findings of this program determined that, during the audit period, subsidence impacts were less than predicted. A longwall extraction plan was reviewed by the auditors (Document 45) and was found to include numerous references to the restriction of mining to within 40 metres of Bowmans Creek. Detailed plans provided with this plan were found to restrict mining within 40 metres of the creek. 		C
1.19	The Applicant shall not construct any private haul road from the site to the Macquarie Generation coal conveyor as proposed in the EIS.	<ul style="list-style-type: none"> No haul roads were constructed during the audit period. 		N/A
1.20	<i>(Deleted)</i>			N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
Management Plans/ Monitoring Programs				
1.21	<p>Within 3 months of the submission of an:</p> <p>a) audit under condition 8.8 of Schedule 2</p> <p>b) annual environmental management report under condition 9.2 of schedule 2; and/or</p> <p>c) a modification to this approval, the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Director-General.</p> <p>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.</p>	<ul style="list-style-type: none"> ■ Non-compliance. The audit found no evidence to show that a review of all strategies, management plans and programs required under the development consent had occurred within 3 months following an independent audit, completion of an AEMR or modification of the development consent. ■ ACOL provided evidence to show that management plans and programs had been revised during the audit period, including: <ul style="list-style-type: none"> ▶ MOP ▶ Emergency Response System (CHPP) ▶ Flora and Fauna Management Plan ▶ Archaeology Management Plan ▶ Water Management Plan ■ It was also found that reviews of the following management were underway at the time of the audit: <ul style="list-style-type: none"> ▶ Air Quality Management Plan ▶ Bushfire Management Plan ▶ Lighting Management Plan ▶ Noise Management Plan ▶ Waste Management Plan ▶ Spontaneous Combustion Management Plan 	<ul style="list-style-type: none"> ■ Undertake a review of relevant management plans, programs in accordance with DA 309-11-2001-i Condition 1.21. Ensure this review process is recorded to show compliance with this condition in future audits. 	NC
Staged Submission of any Strategy, Plan or Program				
1.22	<p>With the approval of the Director-General, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis.</p> <p>Note: While any strategy, plan or program may be submitted on a progressive basis, the Applicant will need to ensure that the existing operations on the development site are covered by suitable strategies, plans or programs at all times.</p>	<ul style="list-style-type: none"> ■ It was stated by the Environment and Community Manager (Julie McNaughton) that ACOL had sought approval from DP&I to progressively update the site's management plans to include the Ashton Coal South East Open Cut (SEOC) project, which was pending approval at the time of the audit. ■ It was stated that DP&I initially agreed to this approach, however; as the SEOC project was subject to an appeal process, it was agreed by both parties to go ahead and update the plans. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
1.23	Until they are replaced by an equivalent strategy, plan or program approved under this consent, the Applicant shall continue to implement the existing strategies, plans or programs for development on the development site that have been approved under previous consents or approvals.	<ul style="list-style-type: none"> ACOL were found to be implementing all required management plans. Some plans had been replaced by the MOP (Document 7). It was found that DP&I approved this (Document 49). 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
2	Mine Management			
	Mine Management Plan, Operations and Methods			
2.1	No mining undertaken in accordance with this consent shall occur until the Applicant has submitted and had accepted by the DRE, a Mining Operations Plan (MOP) in accordance with current guidelines issued by DRE.	<ul style="list-style-type: none"> ■ ACOL developed and implemented two MOPs during the audit period, one covering 2007-2012 and the other being prepared during the MOP period for 2013-2017. (Documents 6 and 7 respectively). These MOPs cover all operational areas within mining tenements held by ACOL. A separate MOP has been implemented for tailings disposal activities undertaken within the Ravensworth Operations mine site. ■ The auditors sighted letters from DRE approving these MOPs (Documents 46, 48 and 63). 		C
2.2	<p>The MOP shall:</p> <ul style="list-style-type: none"> d) be prepared in accordance with DRE Guidelines for the Preparation of Mining Operations Plans (Document 08060002.GUI or its most recent equivalent). e) demonstrate consistency with the conditions of this consent and any other statutory approvals. f) demonstrate consistency with the Environmental Management Strategy and Environmental Management Plans for the project site. g) provide the basis for implementing mining operations, environmental management, and ongoing monitoring. h) include a mine rehabilitation and Land Use Management Plan. i) identify a schedule of proposed mine development for the period covered by the plan and include: <ul style="list-style-type: none"> i) the area proposed to be impacted by mining activity and resource recovery mining methods and remediation measures ii) areas of environmental, heritage or archaeological sensitivity and mechanisms for appropriately minimising impact 	<ul style="list-style-type: none"> ■ The MOPs prepared and applicable to the audit period (Documents 6 and 7) were prepared in accordance with the following guidelines which were relevant at the time: <ul style="list-style-type: none"> ▶ <i>EDG03 Guidelines to the mining, rehabilitation and environmental management process</i>, January 2006 for the 2007-2012 MOP (Document 6). ▶ <i>ESG3: Mining Operations Plan (MOP) Guidelines, Draft December 2012</i> for the 2013-17 MOP (Document 7). ■ The MOPs were found to be consistent with approval conditions and controls outlined in the site's environmental management plans and strategies. ■ Section 4 of the previous MOP (Document 6) covers proposed rehabilitation activities during the MOP period. Section 5 discussed final rehabilitation. ■ Section 5 of the current MOP (Document 7) provides for rehabilitation planning and management. Section 4 discusses and commits to post mining land use. ■ Section 3 of the previous MOP (Document 6) describes proposed mining activities and a production schedule. Section 7 describes environmental features and controls. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<ul style="list-style-type: none"> iii) water management iv) proposals to appropriately minimise surface impacts. 	<ul style="list-style-type: none"> ■ The current MOP (Document 7) provides staged mining and rehabilitation plans. Section 6 provides a detailed rehabilitation schedule and Section 2 describes proposed mining activities and timeframes. Environmentally sensitive areas and controls are discussed in Section 3. 		
2.3	In preparing the MOP, the Applicant shall consult with affected service authorities and make arrangements satisfactory to those authorities for the protection or relocation of those services.	<ul style="list-style-type: none"> ■ Details of consultation undertaken during preparation of the 2007-12 MOP are included in Section 1.9 of the document (Document 6). Consultation was undertaken with service providers such as EnergyAustralia, RTA, Powertel, Telstra and SSC. ■ Details of consultation undertaken during preparation of the 2013-2017 MOP are included in Section 1.5 of that document (Document 7). This section states 'Affected service authorities are regularly consulted on operational issues through ACOLs extraction plan approval process'. The auditors sighted a number of examples of consultation with potentially affected service providers during the audit (e.g. Documents 51-55, 90, 94-98, 105). 		C
2.4	A copy of the MOP, excluding commercial in confidence information, shall be forwarded to SSC and the Director-General within 14 days of acceptance by DRE.	<ul style="list-style-type: none"> ■ Approval of the 2007-2012 MOP occurred outside the audit timeframe (refer to Document 46). ■ Approval of the 2013-2017 MOP (Document 7) was received from DRE on 28 March 2013 (refer to Document 48). ■ Non-compliance. ACOL sent a copy of the MOP to SSC on 1 October 2013 (refer to Document 54). This was outside the required timeframe. ■ Non-compliance. The MOP was provided to DP&I on 22 October 2013 (refer to Document 157). This was outside the required timeframe. 	<ul style="list-style-type: none"> ■ Ensure any future revisions or new MOPs are provided to SSC and DP&I within 14 days of approval by DRE. 	NC
2.5	At least two years prior to the cessation of mining operations the Applicant shall investigate, determine and report, taking account of the potential community benefits, on a final strategy for the future use of the mine site, weirs, dams and any other infrastructure in consultation with the Department, NoW and SSC and for approval of DRE and the Director-	<ul style="list-style-type: none"> ■ This condition has not been triggered. ■ ACOL has approval to continue mining until October 2023 under DA 309-11-2001-i. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
	General.			
2.5A	The Applicant shall submit a detailed design and management plan to the DRE. The Applicant shall not place overburden on the eastern emplacement area above RL 125 metres until the DRE has approved the plan.	<ul style="list-style-type: none"> ■ MOP documents (Documents 6 and 7) provide detailed design and management plans. ■ MOP plan 4(b) from the approved 2007 MOP (Document 6) allows dumping to 135 RL. This plan was approved by Greg Summerhayes of DRE on 1/09/08 (signed plan was sighted during the audit). 		C
2.5B	<p>Prior to placing overburden on the eastern emplacement area above RL 125 metres, the Applicant shall revise the Mine Operations Plan (MOP) for the development to the satisfaction of the DRE. The revised MOP shall:</p> <p>a) demonstrate consistency with the commitments made in documents listed in condition 1.2 and compliance with conditions of this consent; and</p> <p>b) include a schedule for the rehabilitation of the eastern emplacement area.</p>	<ul style="list-style-type: none"> ■ Refer to conditions 2.1 and 2.5A. ■ 2007-2012 MOP (Document 6) included operations in the eastern emplacement area. ■ Table 1 of the 2007-2012 MOP discusses commitments made in compliance documents listed under Condition 1.2. ■ The 2007-2012 MOP does not include a schedule for rehabilitation of the eastern emplacement area. ■ It is noted that the 2007-2012 MOP was prepared outside the audit period, was approved by DRE and was found to be compliant during the previous independent audit. It is also noted that the 2013-2017 MOP includes detailed rehabilitation schedules. 		C
2.5C	<p>Tailings Emplacement Operation Plan</p> <p>Prior to commissioning pipelines for offsite emplacement of tailings the Applicant shall:</p> <p>a) develop a Tailings Emplacement Operation Plan (TEOP) to the satisfaction of DRE The TEOP shall become an annexure to the Ashton Coal MOP and shall include details of the proposed stabilisation and revegetation of all soil disturbance areas and other detail as described in Ashton Coal Tailings Pipeline - Application to Modify Development Consent and Statement of Environmental Effects, dated 2 November 2006 and prepared by Parsons Brinkerhoff; and</p> <p>b) provide a revised security deposit calculation for rehabilitation to the DRE based on the amended MOP.</p>	<ul style="list-style-type: none"> ■ ACOL provided a revised TEOP to DRE on 27 September 2013 (Document 55) and approval was pending at the time of the audit. The previous TEOP was approved by DRE in 2007. ■ The TEOP was amended to reflect requests from DRE for the TEOP to include: <ul style="list-style-type: none"> ▶ A detailed Life of Mine Tailings Management Strategy ▶ Measures to monitor, control and mitigate against spontaneous combustion ▶ Details of approvals and notification tasks associated with the tailings storage area. ■ Non-compliance. ACOL have not appended the approved or revised TEOP to the 2013-2017 MOP. ■ ACOL have been requested by DRE to provide a revised Rehabilitation Security Calculation when 	<ul style="list-style-type: none"> ■ Ensure the current approved TEOP is appended to the current MOP. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A												
		submitting the revised TEOP.														
Spontaneous Combustion																
2.6	The Applicant shall prepare, prior to the commencement of Mining Operations, a Spontaneous Combustion Management Plan to the satisfaction of DRE.	<ul style="list-style-type: none"> ACOL prepared a Spontaneous Combustion Management Plan which was approved by DRE on 12 December 2003. 		C												
Limit on Production/Hours of Operation																
2.7	Annual production of coal from the ACP shall not exceed 5.45 Mtpa of ROM coal.	<ul style="list-style-type: none"> ACOL reports annual production figures in each AEMR. ROM coal records during audit period were found to be: <ul style="list-style-type: none"> 2009/10 – 4.3 Mt ROM 2010/11 – 2.6 Mt ROM 2011/12 – 3.1 Mt ROM 		C												
2.8	<p>Hours of operation at the development shall be as follows:</p> <table border="1"> <thead> <tr> <th>Operation</th> <th>Operating Hours</th> </tr> </thead> <tbody> <tr> <td>Open cut mining</td> <td>7am-10pm Monday to Saturday and 8 pm-10pm Sunday</td> </tr> <tr> <td>Underground mining, train loading and CHPP operation</td> <td>24 Hrs, 7 days</td> </tr> <tr> <td>Blasting</td> <td>9am-5pm Monday to Saturday</td> </tr> <tr> <td>Bowmans Creek Diversion works</td> <td>7am - 6pm Monday to Saturday 8am - 6pm Sundays and Public Holidays</td> </tr> <tr> <td>Construction of gas wells</td> <td>7am - 6pm Monday to Saturday 8am - 6pm Sundays and Public Holidays</td> </tr> </tbody> </table>	Operation	Operating Hours	Open cut mining	7am-10pm Monday to Saturday and 8 pm-10pm Sunday	Underground mining, train loading and CHPP operation	24 Hrs, 7 days	Blasting	9am-5pm Monday to Saturday	Bowmans Creek Diversion works	7am - 6pm Monday to Saturday 8am - 6pm Sundays and Public Holidays	Construction of gas wells	7am - 6pm Monday to Saturday 8am - 6pm Sundays and Public Holidays	<ul style="list-style-type: none"> Interviews with Environment coordinator (Scotney Moore) and Safety and Training Manager (Mark Cook) confirmed that working hours are monitored for all staff on-site. Controls to monitor and limit working hours include: <ul style="list-style-type: none"> Employees are required to log on and off at the start and end of each shift. Supervisors review log in and log-off times for OH&S and compliance purposes. Contractors are required to log on- and off at the sites administration office via an automated system that will not allow log in out of hours (i.e. standard construction hours). This system automatically alters relevant management staff if a contractor works past their required log off time. Non-compliance. On 14 November 2010, a complaint was made to the DP&I compliance branch regarding a dozer commencing operation at 7.45 am (15 minutes prior to its approved start time). This complaint resulted in an infringement notice being issued to ACOL by DP&I. ACOL responded to this incident by implementing the following procedures: <ul style="list-style-type: none"> Open Cut Examiner calls a start time over the radio No open cut machinery is to move from the go line until this is called. 	<ul style="list-style-type: none"> Ensure approved operational hours are adhered to. If a breach of operational hours occurs it should be investigated and the outcomes of the investigation reported to the relevant workforce. 	NC
Operation	Operating Hours															
Open cut mining	7am-10pm Monday to Saturday and 8 pm-10pm Sunday															
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	Condition	Findings	Recommendation	Rating: C N/C N/A
3	LAND AND SITE ENVIRONMENTAL MANAGEMENT			
	Appointment of Environmental Officer			
3.1	<p>The Applicant shall employ a suitably experienced Environmental Officer(s) for the duration of activities undertaken under this consent whose appointment is to receive prior approval by the Director-General. The Officer(s) shall:</p> <p>a) be responsible for the preparation of the environmental management plans;</p> <p>b) be responsible for considering and advising on matters specified in the conditions of this consent and compliance with such matters;</p> <p>c) be responsible for receiving and responding to complaints in accordance with condition 10.3;</p> <p>d) facilitate an environmental induction and training program for all persons involved in any activities undertaken under this consent; and</p> <p>e) have the authority to require reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts and failing the effectiveness of such steps, to stop work immediately if an adverse impact on the environment is likely to occur.</p>	<ul style="list-style-type: none"> ■ ACOL employ the following environmental team: <ul style="list-style-type: none"> ▶ Environment and Community Relations Manager – Julie McNaughton in an acting role (replacing Lisa Richards who is currently on maternity leave). ▶ Approvals Co-ordinator – James Barben. ▶ Environment and Community Relations Coordinators – Alan Tight and Scotney Moore ▶ Site Services Supervisor – Bruce Moffitt ■ Positions descriptions were reviewed for these roles (with the exception of site supervisor) (refer to Documents 145-147. These show that the Environment and Community Manager is responsible for fulfilling the responsibility as the appointed Environmental Officer for ACOL as required by this condition. ■ All position descriptions for the ACOL environment group require communication within and outside ACOL. The Environment and Community Manager is required to participate in Management Review Meetings and provide regular communication of issues and corrective actions required. ■ Through undertaking audit interviews with senior management staff at ACOL, the auditors found that that environment group had a high level of influence within the organisation and the required authority to ensure potential issues and concerns are mitigated. 		C
3.2	<p>The Applicant shall notify the Director-General, DRE, OEH, EPA, RMS, MSB, SSC, and the CCC of the name and contact details of the Environmental Officer(s) upon appointment and any changes to that appointment.</p>	<ul style="list-style-type: none"> ■ A letter was sent to all required parties on 16 April 2013 providing details of the ACOL environment team and notification of Lisa Richards temporary replacement with Julie McNaughton (Document 148). 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
Environmental Management Strategies and Plans				
3.3	The Applicant shall prepare an Environmental Management Strategy providing a strategic context for the environmental management plans (refer condition 3.6). The Environmental Management Strategy shall be prepared following consultation with the OEH, EPA, DRE, SSC, RMS, MSB, and the Department, to the satisfaction of the Director-General. The strategy shall be provided to the Director-General no later than two weeks before the first environmental management plan under condition 3.6 is submitted.	<ul style="list-style-type: none"> ■ The Environmental Management Strategy (EMS) was prepared and approved initially (Phase 1 – Open Cut Mining) in May 2003 and revised (Phase 2 – Underground Mining) in November 2005. ■ The 2010 audit found evidence to show both documents were approved by the agencies listed in this condition. 		C
3.4	<p>The Environmental Management Strategy shall include, but not be limited to:</p> <ul style="list-style-type: none"> a) statutory and other obligations which the Applicant is required to fulfil during construction and mining, including all approvals and consultations and agreements required from authorities and other stakeholders, and key legislative policies; b) definition of the role, responsibility, authority, accountability and reporting of personnel relevant to environmental management, including Environmental Officer(s); c) overall environmental management objectives and performance outcomes, for construction, mining and decommissioning of the mine, for each of the key environmental elements for which management plans are required under this consent; d) overall environmental and social objectives for the project, and a strategy for the restoration and management of the environmental and social values affected by mining operations within the context of those objectives; e) identification of cumulative environmental impacts and procedures for dealing with these at each stage of the development; f) overall objectives and strategies to promote economic productivity within the area affected by mining; 	<ul style="list-style-type: none"> ■ A review of the EMS Phase 2 (Document 32) was undertaken for the audit and this found the document to be compliant with sub-conditions a) to j) under this condition. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>g) procedures to ensure that all relevant approvals, management plans, and procedures are complied with by all staff and contractors;</p> <p>h) processes for conflict resolution in relation to environmental management of the project;</p> <p>i) a conceptual project schedule indicating when key activities would be undertaken and proposed timeframes and proposed timeframes for submissions and approval of EMPs;</p> <p>j) documentation of the results of consultations undertaken in the development of the EMS.</p>			
3.5	The Applicant shall make copies of the Environmental Management Strategy available to NoW, OEH, EPA, DRE, SSC, RMS, MSB and the Department, and the CCC within fourteen days of approval by the Director-General.	<ul style="list-style-type: none"> ■ The 2007 audit found evidence to show that the EMS (Phase 1) was provided to required agencies on 6 June 2003. ■ The 2010 audit found evidence to show the EMS (Phase 2) was provided to required agencies on 19 August 2006. 		C
3.6	<p>The Applicant shall prepare the following environmental management plans, which may also form part of the Mining Operations Plan:</p> <p>a) Spontaneous Combustion Management Plan (refer condition 2.6)</p> <p>b) Extraction Plan (refer condition 3.12)</p> <p>c) Archaeology and Cultural Heritage Management Plan (refer condition 3.36)</p> <p>d) Flora and Fauna Management Plan (refer condition 3.46)</p> <p>e) Rehabilitation Management Plan (refer condition 3.51)</p> <p>f) Landscape and Revegetation Management Plan (refer condition 3.55)</p> <p>g) Final Void Management Plan (refer to condition 3.56)</p> <p>h) Bushfire Management Plan (refer condition 3.57)</p> <p>i) Land Management Plan (refer condition 3.58)</p> <p>j) Water Management Plan (refer condition 4.7)</p>	<ul style="list-style-type: none"> ■ The auditors sighted each required management plan during the audit, with the exception of the Rehabilitation Management Plan, Final Void Management Plan and Land Management Plan. These were amalgamated with the MOP (as approved by DP&I). ■ The currency of each management plan is outlined below: <ul style="list-style-type: none"> ▶ Spontaneous Combustion Management Plan (12 January 2004) ▶ Extraction Plan – (various – refer to Documents 45, 123-125) ▶ Archaeology and Cultural Heritage Management Plan (1 August 2012) ▶ Flora and Fauna Management Plan (1 August 2008) ▶ Rehabilitation Management Plan – replaced by MOP (See condition 3.51) ▶ Landscape and Revegetation Management Plan – replaced by MOP (See condition 3.55) 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>k) Waste Management Plan (refer condition 5.3)]</p> <p>l) Construction Air Quality Management Plan (refer condition 6.10)</p> <p>m) Operations Air Quality Management Plan (refer condition 6.10)</p> <p>n) Blasting/Vibration Management Plan (refer condition 6.26)</p> <p>o) Road and Rail Closure Management Plan (refer to condition 6.27)</p> <p>p) Construction Noise Management Plan (refer condition 6.42)</p> <p>q) Noise Management Plan (refer condition 6.43)</p> <p>r) Lighting Management Plan (refer condition 6.56)</p> <p>Note: In general terms, these environmental management plans apply throughout the DA area. However, where an Extraction Plan has been prepared and approved, the Director-General may agree to certain environmental management plans (e.g. the Flora and Fauna, Land and Water Management Plans) or parts of such plans applying only in those parts of the DA area outside of the underground mining area, to avoid duplication or overlap with the plans required under condition 3.12.</p>	<ul style="list-style-type: none"> ▶ Final Void Management Plan – replaced by MOP (see condition 3.56) ▶ Bushfire Management Plan (9 March 2005) ▶ Land Management Plan – replaced by MOP (refer to Condition 3.58) ▶ Water Management Plan (25 July 2012) ▶ Waste Management Plan (4 September 2003) ▶ Construction Air Quality Management Plan – superseded by current Air Quality Management Plan ▶ Operations Air Quality Management Plan (Part 2) – now called Air Quality Management Plan Part 2 (19 August 2006) ▶ Blasting/Vibration Management Plan (18 August 2006) ▶ Road and Rail Closure Management Plan (23 December 2003) ▶ Construction Noise Management Plan – superseded by Noise Management Plan ▶ Noise Management Plan (19 August 2006) ▶ Lighting Management Plan (23 December 2003). 		
3.7	<p>The Applicant may, subject to written approval of the Director-General, divide the preparation and submission of any environmental management plans required under this consent, listed in condition 3.6, between open cut and underground mining operations. Any intention to divide environmental management plans shall be declared and approved in the Environmental Management Strategy (condition 3.3).</p>	<ul style="list-style-type: none"> ■ A number of management plans were divided into Stage 1 (Open cut) and Stage 2 (Underground). ■ Stage 1 plans were rescinded when open cut operations ceased in September 2011. 		C
3.8	<p>The Applicant shall make copies of the environmental management plans in condition 3.6 above available to the relevant government agencies, SSC and the CCC, within 14 days of approval.</p>	<ul style="list-style-type: none"> ■ The audit found evidence to show that approved management plans were provided to relevant agencies, SSC and CCC following approval. ■ ACOL's management plans are available on the ACOL website. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A								
	Subsidence Management											
	Performance Measures – Natural and Heritage Features, etc.											
3.9	<p>The Applicant shall ensure that underground mining does not cause any exceedances of the performance measures in Table 1, to the satisfaction of the Director-General.</p> <p>Table 1: Subsidence Impact Performance Measures</p> <table border="1"> <thead> <tr> <th>Watercourses</th> </tr> </thead> <tbody> <tr> <td>Bowmans Creek - No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)</td> </tr> <tr> <td>Bowmans Creek Eastern and Western Diversions - Hydraulically and geomorphologically stable</td> </tr> <tr> <td>Bowmans Creek Alluvium - No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)</td> </tr> <tr> <th>Biodiversity</th> </tr> <tr> <td>Threatened species, threatened populations, or endangered ecological communities - Negligible impact or environmental consequences</td> </tr> <tr> <th>Aboriginal heritage features</th> </tr> <tr> <td>Waterhole Site - Negligible impact or environmental consequence Other Aboriginal heritage sites - No greater subsidence impact or environmental consequences than approved under a permit issued under section 90 of the National Parks and Wildlife Act 1974</td> </tr> </tbody> </table> <p>Notes: 1) The Applicant will be required to define more detailed performance indicators for each of these performance measures in the various management plans that are required under this consent (see condition 3.12 below).</p> <p>2) The requirements of this condition only apply to the</p>	Watercourses	Bowmans Creek - No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)	Bowmans Creek Eastern and Western Diversions - Hydraulically and geomorphologically stable	Bowmans Creek Alluvium - No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)	Biodiversity	Threatened species, threatened populations, or endangered ecological communities - Negligible impact or environmental consequences	Aboriginal heritage features	Waterhole Site - Negligible impact or environmental consequence Other Aboriginal heritage sites - No greater subsidence impact or environmental consequences than approved under a permit issued under section 90 of the National Parks and Wildlife Act 1974	<ul style="list-style-type: none"> ACOL completed extraction of longwalls LW6A, LW7A, LW7B, LW8 in the Pikes Gully Seam and LW101 in the Upper Liddell Seam. ACOL has approval to undertake underground mining in the Pykes Gully, Upper Liddell, Upper Lower Liddell and Lower Barrett Seams. Mining is currently being undertaken in the LW6B longwall in the Pikes Gully Seam. ACOL prepares an 'End of Panel Report' at completion of each longwall (Documents 126-131, 136-137 and 139). These reports include specialist assessments of groundwater and subsidence and are available at: http://www.ashtoncoal.com.au/Reports--Publications/Mining/End-of-Panel-Reports/ The audit found that end of panel reports do not specifically discuss impacts to biodiversity, although the audit did not find any evidence that biodiversity impacts have occurred from underground mining during the audit period. It is noted that biodiversity issues are discussed in Section 3 of each AEMR for the audit period. Environmental Coordinator (Alan Tight) stated that there have been no identified impacts to the Waterhole site to date. Whist LW4 was extracted outside the audit period, the end of panel report for this longwall does not appear to comment on the effects of mine subsidence at this site. The only other longwall in the vicinity of this site is LW6B which is currently being mined. End of panel reports LW6A, LW7A and LW8 state that no surface remediation has been required in the vicinity of any archaeological sites. 	<ul style="list-style-type: none"> Ensure each End of Panel Report discusses any identified impacts, or the lack of any noticeable impacts, to the performance measures listed under this condition. 	C
Watercourses												
Bowmans Creek - No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)												
Bowmans Creek Eastern and Western Diversions - Hydraulically and geomorphologically stable												
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	Condition	Findings	Recommendation	Rating: C N/C N/A						
	impacts and consequences of mining operations undertaken following the date of approval of modification 6.									
3.10	<p>The Applicant shall ensure that underground mining does not cause any exceedances of the performance measures in Table 2, to the satisfaction of the Director-General of DRE.</p> <p>Table 2: Subsidence Impact Performance Measures.</p> <table border="1"> <thead> <tr> <th>Built features</th> </tr> </thead> <tbody> <tr> <td>New England Highway, including the bridge over Bowmans Creek - Always safe and serviceable. Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.</td> </tr> <tr> <td>Brunkers Lane - In accordance with recommendations of the report prepared under condition 7.14</td> </tr> <tr> <td>Other built features, including other public infrastructure - Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repaired or replaced, or else fully compensated.</td> </tr> <tr> <th>Public safety</th> </tr> <tr> <td>Public safety – No additional risk</td> </tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> 1) The Applicant will be required to define more detailed performance indicators for each of these performance measures in Built Features Management Plans (see condition 3.12 below). 2) The requirements of this condition only apply to the impacts and consequences of mining operations undertaken following the date of modification 6. 3) Requirements regarding “safe” or “serviceable” do not prevent preventative or migratory actions being taken prior to or during mining in order to achieve or maintain these outcomes. 	Built features	New England Highway, including the bridge over Bowmans Creek - Always safe and serviceable. Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.	Brunkers Lane - In accordance with recommendations of the report prepared under condition 7.14	Other built features, including other public infrastructure - Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repaired or replaced, or else fully compensated.	Public safety	Public safety – No additional risk	<p>Surface features</p> <ul style="list-style-type: none"> ■ No reported adverse impacts to the safety or serviceability of the New England Highway were identified during the audit period. ■ Roadworks were undertaken along Brunkers Lane during mining of LW8, caused surface cracking which was reported to have been repaired. No cracking in the vicinity of LW8 was observed during the audit site inspection. ■ Surface cracking was observed to have occurred during the audit site inspection due to current mining of LW6B. This resulted in cracks of less than 20 mm, which were observed to have closed up. This was assumed to have been from the movement of heavy vehicles across the cracks. ■ There was no reported loss of stored waters in dams (some dams were intentionally dewatered during active subsidence). Surface cracking was reported to have been observed in some dams, which required repair and re-profiling. ■ No adverse impacts to infrastructure such as overhead powerlines, buried telecommunications lines and buried pipelines was reported during the audit period. Cable rollers were observed to have been installed on overhead powerlines to manage potential impacts. <p>Public safety</p> <ul style="list-style-type: none"> ■ No reported impacts on public safety were identified during the audit period. 		C
Built features										
New England Highway, including the bridge over Bowmans Creek - Always safe and serviceable. Damage that does not affect safety or serviceability must be fully repairable, and must be fully repaired.										
Brunkers Lane - In accordance with recommendations of the report prepared under condition 7.14										
Other built features, including other public infrastructure - Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repaired or replaced, or else fully compensated.										
Public safety										
Public safety – No additional risk										

	Condition	Findings	Recommendation	Rating: C N/C N/A
	4) Compensation required under this condition includes any compensation payable under the Mine Subsidence Compensation Act 1961 and/or the Mining Act 1992.			
3.11	Any dispute between the Applicant and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 2 is to be settled by the Director-General of DRE. The Director-General of DRE may seek the advice of the MSB on the matter. Any decision by the Director-General of DRE shall be final and not subject to further dispute resolution under this consent.	<ul style="list-style-type: none"> The audit found no indication that any dispute occurred between ACOL and the owner of any built feature regarding subsidence impacts, during the audit period. 		C
3.12	<p>The Applicant shall prepare and implement an Extraction Plan for the second workings within each seam to be mined to the satisfaction of the Director-General. Each Extraction Plan must:</p> <ol style="list-style-type: none"> be prepared by a team of suitably qualified and experienced persons whose appointment has been endorsed by the Director-General; be approved by the Director-General before the Applicant carries out any of the second workings covered by the plan; include detailed plans of existing and proposed first and second workings and any associated surface development; include detailed performance indicators for each of the performance measures in Tables 1 and 2; provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this consent; describe the measures that would be implemented to ensure compliance with the performance measures in Tables 1 and 2, and remediate any impacts and/or environmental consequences; include the following to the satisfaction of DRE: <ol style="list-style-type: none"> a coal resource recovery plan that demonstrates 	<p>Extraction and management plans</p> <ul style="list-style-type: none"> Extraction plans relevant to the audit period (Documents 123–125) were found to include: a written report, Coal Resource Recovery Plans, Subsidence Monitoring Programs, Built Features Management Plans, Public Safety Management Plans, Water Management Plans, Land Management Plans and Heritage Management Plans. The Built Features Management Plans provide performance indicators, preventative measures (where required) and methods of remediation for surface features. Refer to Condition 4.7 for review of the adequacy of the water management plan. <p>Subsidence predication and monitoring</p> <ul style="list-style-type: none"> Subsidence reports have been prepared by Strata Control Technologies (SCT) and appended to the extraction plans. These reports provide revised subsidence predictions. Subsidence monitoring programs have been prepared and included in each extraction plan. These programs include the locations, methods, timing, frequency and reporting requirements for monitoring results. The audit found that the maximum measured subsidence, tilt, horizontal movement and strains for LW6A, LW7A and LW8 were less than the maximum 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>effective recovery of the available resource;</p> <p>ii) a subsidence monitoring program to:</p> <ul style="list-style-type: none"> – provide data to assist with the management of the risks associated with subsidence; – validate the subsidence predictions; and – analyse the relationship between the subsidence effects and impacts under the plan and any ensuing environmental consequences; <p>iii) a Built Features Management Plan, which has been prepared in consultation with the owner/s of potentially affected feature/s, to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings;</p> <p>iv) Public Safety Management Plan to ensure public safety in the mining area; and</p> <p>v) appropriate revisions to the Rehabilitation Management Plan required under condition 3.51; and</p> <p>h) include a:</p> <p>i) Water Management Plan, which has been prepared in consultation with EPA and NoW, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on surface water resources, groundwater resources and flooding, and which includes:</p> <ul style="list-style-type: none"> – surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality; – a program to monitor and report groundwater inflows to underground workings; and <p>ii) a program to manage and monitor impacts on groundwater bores on privately-owned land; Biodiversity Management Plan, which has been prepared in consultation with OEH and DRE, which:</p>	<p>predicted in the extraction plans.</p> <ul style="list-style-type: none"> ■ A review of subsidence monitoring undertaken by Mine Subsidence Engineering Consultants (MSEC) for this audit found that the layout and frequency of monitoring is appropriate for the mining geometry, surface features and constraints, as well as for the validation of the predication model and management of risk. 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<ul style="list-style-type: none"> – includes a program of works to ensure that overall terrestrial and aquatic biodiversity values are the same or better than existed in Bowmans Creek prior to longwall mining; – provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna; <p>iii) Land Management Plan, which has been prepared in consultation with any affected public authorities, to manage the potential impacts and/or environmental consequences of the proposed second workings on land in general;</p> <p>iv) Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders for Aboriginal heritage, to manage the potential environmental consequences of the proposed second workings on Aboriginal heritage sites or values; and</p> <p>v) include a program to collect sufficient baseline data for future Extraction Plans. Note: An SMP approved by DRE prior to 30 June 2011 is taken to satisfy the requirements of this condition.</p>			
3.13	<p>The Applicant shall ensure that the management plans required under condition 3.12(h) above include:</p> <ul style="list-style-type: none"> a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this consent; b) a detailed description of the measures that would be implemented to remediate predicted impacts; and c) a contingency plan that expressly provides for adaptive management. 	<ul style="list-style-type: none"> ■ The audit found that the Built Features Management Plans included in the extraction plans relevant to the audit period (Documents 123 – 125) provide performance indicators, preventative measures (where required) and methods of remediation for surface features. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
First Workings				
3.14	The Applicant may carry out first workings within the underground mining area, other than in accordance with an approved extraction plan, provided that DRE is satisfied that the first workings are designed to remain long-term stable and non-subsiding, except insofar as they may be impacted by second workings. Note: The intent of this condition is not to require an additional approval for first workings, but to ensure that first workings are built to geotechnical and engineering standards sufficient to ensure long term stability, with zero resulting subsidence impacts.	<ul style="list-style-type: none"> The audit did not identify any instances where first workings were carried out outside the boundaries of an approved extraction plan during the audit period. 		C
Payment of Reasonable Costs				
3.15	The Applicant shall pay all reasonable costs incurred by the Department to engage independent experts to review the adequacy of any aspect of an Extraction Plan.	<ul style="list-style-type: none"> The audit did not identify any instances where DP&I had engaged an independent expert to review extraction plans. It is noted that ACOL engage SCT to prepare an independent review of subsidence monitoring results and compare these against subsidence predictions made in subsidence management and extraction plans and the EA. 		C
3.16	<i>(Deleted).</i>			N/A
3.17	<i>(Deleted).</i>			N/A
3.18	<i>(Deleted).</i>			N/A
3.19	<i>(Deleted).</i>			N/A
3.20	<i>(Deleted).</i>			N/A
3.21	<i>(Deleted).</i>			N/A
3.22	<i>(Deleted).</i>			N/A
3.23	<i>(Deleted).</i>			N/A
3.24	<i>(Deleted).</i>			N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
3.25	<i>(Deleted).</i>			N/A
3.26	<i>(Deleted).</i>			N/A
3.27	<i>(Deleted).</i>			N/A
3.28	<i>(Deleted).</i>			N/A
3.29	<i>(Deleted).</i>			N/A
Heritage Assessment, Management and Monitoring – General				
General				
3.30	<p>The Applicant shall provide for permanent conservation of the land shown on the indicative plan in Schedule 3 (the “conservation area”) through establishment of a Conservation Agreement with the Minister for the Environment under Part 4, Division 7 of the National Parks and Wildlife Act 1974. The purpose of the Conservation Agreement shall be to protect and conserve Aboriginal cultural heritage, and biodiversity, within the conservation area and any other purpose agreed to by the Applicant and the Minister for the Environment. The agreement shall include provision for the developing of a Plan of Management for the conservation area, developed in consultation with the local Aboriginal community, which reflects the purpose of the Conservation Agreement. The content of the Plan of Management shall be as agreed by the relevant parties and generally in accordance with the following principles:</p> <p>a) the area shall be conserved in perpetuity;</p> <p>b) agriculture and grazing shall be allowed in areas where such activities would not compromise or conflict with:</p> <p>i) conservation of Aboriginal cultural heritage sites;</p> <p>ii) conservation of biodiversity; or,</p> <p>iii) commitments regarding revegetation and management of native habitat areas, particularly the southern woodland remnant, made in documents referred to in condition 1.2;</p>	<ul style="list-style-type: none"> ■ A Conservation Agreement was made between ACOL and the NSW Minister for the Environment under the NSW National Parks and Wildlife Act 1974 on 16 September 2010. ■ A review of the agreement undertaken during the audit found it to be compliant with all sub-conditions 3.30 a) to h). ■ Section 1.3 and Appendix C of the agreement provide details of consultation undertaken during its preparation. ■ The agreement includes an Aboriginal Heritage Impact Permit issued by OEH on 23 December 2011 for activities covered by the agreement (including protection of certain Aboriginal objects, salvage excavations, community collection and harm to certain Aboriginal objects through the proposed works. ■ Non-compliance. No evidence was found to show the agreement had been provided to SSC or DP&I following its approval by OEH. 	<ul style="list-style-type: none"> ■ Ensure a copy of the Conservation Agreement is provided to DP&I and OEH. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>c) weed control and bushfire protection measures shall be permitted as necessary;</p> <p>d) underground mining of the conservation area shall be permitted, in accordance with this consent;</p> <p>e) specific measures shall be developed to ensure conservation of Aboriginal heritage and threatened species;</p> <p>f) rehabilitation and revegetation works shall be permitted where they do not conflict with conservation of Aboriginal cultural heritage;</p> <p>g) a permanent access road across the area shall be permitted; and</p> <p>h) access to the area by the local Aboriginal community shall be permitted.</p> <p>The Applicant shall commence negotiations with the Minister for the Environment within six months of the granting of the mining lease. The Applicant shall provide a copy of the agreement to the Director General and SSC within 14 days of the agreement being signed.</p>			
3.31	<p>The Applicant shall report on results of cultural heritage surveys and monitoring of the site before, during, and after mining operations annually in the AEMR. The purpose of the reporting shall be to identify new areas or increases to the area identified in condition 3.30 for the establishment of Conservation Agreements as defined in condition 3.30. The Applicant shall submit AEMRs to EPA and the Director-General for consideration. Following evaluation of the reporting in the AEMRs, the Director-General may, in consultation with EPA, request the Applicant to establish a Conservation Agreement following the procedure in condition 3.30.</p>	<ul style="list-style-type: none"> ■ Section 3.12 and Appendix 5 or 6 of each AEMR reports on Aboriginal heritage consultation activities and surveys/monitoring etc. ■ The 2011/2012 AEMR reports on archaeological clearance and salvage activities that occurred within and outside the VCA area referred to in Condition 3.30. No reason to extend the VCA or create a new VCA is noted. ■ Non-compliance. The 2012 AEMR does not provide the results of archaeological or heritage surveys. Section 3.12 (Aboriginal Heritage) of the 2012 AEMR states that <i>'pre-disturbance inspections for minor surface works within underground surface areas continued throughout the year'</i> but does not provide the results of these surveys. ■ The auditors sighted evidence to show that each AEMR was provided to the EPA and DP&I (or equivalent agency) (refer to Condition 9.2). 	<ul style="list-style-type: none"> ■ Ensure the results of any cultural heritage surveys are described in future AEMRs. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
3.32	Within six months of the commencement of mining operations, the Applicant shall make a contribution of \$50,000 towards a trust fund set up by the Department and the Public Trustee for the purposes of a regional study into Aboriginal cultural heritage as defined by the Trust Deed.	<ul style="list-style-type: none"> Compliance with this condition was verified as part of the 2007 independent audit. It was found that ACOL provided \$50,000 to the regional cultural heritage study in 2004. 		C
3.33	The Applicant shall provide the local Aboriginal community with the opportunity to recover artifacts as approved by the s90 permits, and arrange access to Aboriginal heritage on the site upon receipt of a request.	<ul style="list-style-type: none"> Section 3.12 of each AEMR reports on activities undertaken with Registered Aboriginal Parties (RAPs). Detailed consultation logs are provided in Appendix 5 or 6 of each document. During the audit period, the AEMRs reported that RAPs participated in clearance and salvage works and development of the ACHMP and Voluntary Conservation Agreement. 		C
3.34	If, during the course of any activities conducted under this consent, the Applicant becomes aware of any heritage or archaeological sites not previously identified, all work likely to affect the site shall cease immediately. The Applicant shall then consult with relevant authorities and decide on an appropriate course of action prior to recommencement of work. The relevant authorities may include OEH, the NSW Heritage Office, and the relevant local Aboriginal community. Any necessary permits or consents shall be obtained and complied with prior to recommencement of work.	<ul style="list-style-type: none"> The audit did not identify anything to indicate any previously undiscovered archaeological sites were identified by ACOL during the audit period. 		C
3.35	The Applicant shall consult regularly with the local Aboriginal community using consultation principles and strategies consistent with those outlined in the "Guidelines for best practice community consultation in the NSW Mining and Extractive Industries" or relevant OEH guidelines when available. The results of these consultations shall be documented in the AEMR.	<ul style="list-style-type: none"> Section 3.12 and Appendix 5 or 6 of each AEMR reports on Aboriginal heritage consultation activities and surveys/monitoring etc. An audit of compliance of the ACHMP against the development consent is provided in Appendix A of the plan, and states for this condition: <i>'Ongoing consultation with the Aboriginal community in accordance with the most recent OEH guidelines is carried out as part of the AHIP application and development process'</i>. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
Archaeology and Cultural Heritage Management Plan				
3.36	<p>The Applicant shall prepare an Archaeology and Cultural Heritage Management Plan (ACHMP) to address Aboriginal and European cultural heritage issues. The Plan shall be prepared in consultation with the local Aboriginal community, and OEH, and to the satisfaction of the Director-General. The Plan shall include but not be limited to:</p> <ol style="list-style-type: none"> demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent; identification of all areas of conservation within the DA area; provision of management strategies including procedures and protocols for conservation and protection of Aboriginal heritage sites for all parts of the DA area; identification of any salvage, excavation and monitoring programs for any cultural heritage/archaeological sites within the DA area; details of any Section 90 applications to be lodged, or consents obtained from OEH; details of consultation undertaken with the local Aboriginal community in the preparation of this Plan; details of procedures and programs to implement monitoring requirements in condition 3.37. details of the measures to fully document, in accordance with the NSW Heritage Office guidelines, any non-indigenous heritage sites that will be required to be removed as a result of the development; and details of proposed monitoring that will be undertaken in the areas adjacent to the non-indigenous heritage sites identified within the EIS . <p>The ACHMP shall be submitted for the approval of the Director-General no later than one month prior to the commencement of construction of the development, or within</p>	<ul style="list-style-type: none"> ■ A review of the ACHMP was undertaken for this audit against this condition and found it to be compliant with all requirements, with the following exceptions: <ul style="list-style-type: none"> ▶ Non-compliance. Appendix A states, for this requirement '<i>All management measures are generally consistent with the commitments made in the various documents (refer to Table 5)</i>' ▶ The audit found that the ACHMP does not include a Table 5 and provides no specific reference to commitments made by documents listed in Condition 1.2 of the development consent. ▶ Non-compliance. The ACHMP includes a figure that shows AHIMS registered sites and the boundaries of AHIPs applicable to the site. The VCA area is not shown on this figure. Appendix A of the plan states '<i>The conservation areas have been excluded from the AHIP boundaries and these areas will be managed to prevent impacts</i>'. ▶ The VCA is referred to throughout the ACHMP, and specific procedures for managing this area are provided in Appendix E. The auditors therefore believe the area should be shown on a figure provided in the ACHMP. 	<ul style="list-style-type: none"> ■ Ensure the ACHMP summarises the commitments made in relevant documents listed in Condition 1.2 of the development consent, and shows how consistency has been achieved with these. ■ Revise Figure 1 included in the ACHMP to show the location of the VCA. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	such period otherwise agreed by the Director-General. Construction shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the ACHMP to Council, OEH, and local Aboriginal community groups within 14 days. The Applicant shall make the ACHMP available for public inspection on request.			
Monitoring				
3.37	<p>The Applicant shall monitor the effectiveness of the measures outlined in the Archaeology and Cultural Management Plan (Condition 3.36). A summary of monitoring results shall be included in the AEMR.</p> <p>No Aboriginal archaeological sites shall be disturbed in any way without the prior approval of the Director-General of OEH, under section 90 of the National Parks and Wildlife Act 1974.</p>	<ul style="list-style-type: none"> Section 3.12 and Appendix 5 or 6 of each AEMR reports on Aboriginal heritage surveys/monitoring etc. 		C
Flora and Fauna Assessment, Management and Monitoring				
General				
3.38	The revegetation of the DA area shall include, as a minimum, vegetation as shown on the Conceptual Final Landform and Vegetation Patterns plan attached as Figure A to information submitted to the Department on 28 March 2002 where this activity does not impact on Aboriginal heritage values.	<ul style="list-style-type: none"> Covered by Plan 4 of the 2013-2017 MOP (Document 7). The 2013-2017 MOP provides a more detailed and staged approach to revegetation. 		C
3.39	Domestic stock and, where necessary, native fauna shall be excluded from all bushland revegetation areas.	<ul style="list-style-type: none"> Stock and animal control measures were observed to be effectively implemented on-site. These included fencing and cattle grids. The Environment and Community Coordinator (Alan Tight) stated that ACOL had recently gained approval to undertake culling of kangaroos in the vicinity of the VCA and Bowmans Creek diversion area. The auditors noted a high number of kangaroo's were being killed by vehicles on Lemington Road, adjacent to these areas, during the audit. Feral animal controls are described in the MOP. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
3.40	Revegetation of areas not to be disturbed by open-cut mining, surface infrastructure, or overburden emplacement shall be completed within 6 years of the granting of a mining lease.	<ul style="list-style-type: none"> Revegetation was observed to be completed within the mine site for areas where no further disturbance is planned to occur. Section 7 of the 2013-2017 MOP (Document 7) shows that no new revegetation of disturbed areas is to commence in the next 5 years. 		C
3.41	The Applicant shall use, to the greatest extent possible, indigenous seed and propagation materials in revegetation of the site. This shall be based on an environmentally sensitive program of seed collection on the site and from surrounding vegetation remnants, subject to landholders consent.	<ul style="list-style-type: none"> No revegetation occurred during the audit period. Section 3.16.2 of the 2013-2017 MOP commits to using native seeds for revegetation and for seed collection to be undertaken by an appropriately experienced contractor engaged based on their ability to follow Florabank Guidelines (1999). 		C
3.42	If threatened species are identified on the site during construction or operation of the coal mine, the Applicant shall cease any work immediately which could adversely impact on the species pending investigation and consultation with relevant government agencies. The Applicant shall engage a suitably qualified ecologist to investigate, and identify appropriate amelioration measures.	<ul style="list-style-type: none"> The Environmental Coordinator, (Scotney Moore) stated that to his knowledge no situations where potential impacts to threatened species outside actions that approval has been gained for, have occurred at the site to date. 		N/A
3.43	Those areas proposed to be mined and those areas proposed to be revegetated both by natural means and by direct seeding/planting shall be mapped so that the spatial and temporal relationship between the sequence of vegetation clearing, mining and habitat rehabilitation is clearly demonstrated.	<ul style="list-style-type: none"> Active mining, disturbance and rehabilitation areas are shown on staged plans (3A to 3E) in the 2013-2017 MOP (Document 7). 		C
3.44	Natural drainage patterns shall be re-established as far as practical.	<ul style="list-style-type: none"> The 2013-2017 MOP provides staged rehabilitation plans for the next 5 years (Plans 3A to 3E) and a Final Rehabilitation and Post Mining Land Use 2023 (Plan 4). The plans show drainage lines that appear natural in appearance. The audit site inspection noted that the Bowmans Creek diversion has been created to have a natural appearance (refer to Appendix D). 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
3.45	<p>During the life of the mine and until the revegetated areas are established to the satisfaction of the DRE, the Applicant shall maintain the revegetated areas. Maintenance shall include, where necessary, but not be limited to:</p> <ul style="list-style-type: none"> a) replanting failed or unsatisfactory areas b) repairing erosion problems c) fire management, fire suppression or fire encouragement d) pest and weed control e) control of feral animal populations f) maintain and repair fencing g) fertiliser application h) application of lime or gypsum to control pH and improve soil structure. 	<ul style="list-style-type: none"> ■ The AEMRs for the audit reporting period indicated that there were no areas of unsatisfactory rehabilitation or areas or failure. Some areas skimmed for Galenia control were fertilised and re-seeded. ■ No areas of erosion were observed on revegetated areas during the site inspection. The AEMRs for the audit period did not report any erosion issues or erosion repairs. ■ The AEMRs provide evidence of weed control during the audit period, including Green Cestrum, African Boxthorn, Galenia, St Johns Wort, Lantana and Blackberry. Areas of Galenia chemical control were observed on site on the eastern emplacement area. ■ The Environmental Coordinator (Scotney Moore) confirmed that feral animal control is undertaken within rehabilitation areas. ■ Cattle fencing on-site was observed to be in acceptable condition. ■ Fertiliser was applied to areas ‘skimmed’ for physical control of Galenia. ■ Gypsum is applied during soil preparation for rehabilitation. The pH of mine spoils does not require lime adjustment. Landscape Function Analysis (LFA) rehabilitation monitoring is undertaken annually of which pH is one of the soil parameters measured. 		C
Flora and Fauna Management Plan				
3.46	<p>The Applicant shall prepare and implement a Flora and Fauna Management Plan (FFMP) for the DA area. The Plan is specifically required to outline procedures for clearing or disturbing vegetation and other habitat types, along with measures for habitat reinstatement and management. The Plan shall be prepared in consultation with OEH and SSC, and to the satisfaction of the Director-General. The Plan shall be prepared by an appropriately qualified and experienced ecologist. The ecologist shall be responsible for providing advice to minimise potential impacts upon</p>	<ul style="list-style-type: none"> ■ The Flora and Fauna Management Plan (Document 28) provides details of strategic vegetation management, but does not outline timeframes for clearing and revegetation activities. A number of maps are provided, but there is no overarching map that captures the intent and staging of vegetation and revegetation strategies. ■ OEH approved the FFMP on 14/6/2012 (Document 140). ■ Non-compliance. The management plan was reviewed 	<p>Amend the FFMP to include:</p> <ul style="list-style-type: none"> ■ discussion of how rehabilitation works could be integrated with nearby mines ■ how protection of Aboriginal heritage values against actions described in the FFMP will be 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>threatened and protected fauna species that may utilise the site and to provide expert advice on the regeneration and reconstruction of flora and fauna habitat on mined areas. The Plan shall include but not be limited to:</p> <p>a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent;</p> <p>b) details of strategic vegetation management, outlining timeframes for clearing and re-vegetation activities and a map illustrating the Plan. The Plan should aim to maximise scope for new vegetation to establish and restore ecological integrity;</p> <p>c) details of the creation, landscaping and management of on-site vegetation to provide habitat for the Grey-crowned Babbler and other threatened species likely to occur on the site;</p> <p>d) details of the creation, landscaping and management of ponds along Bowmans Creek, where practical, to provide for Green and Golden Bell Frog habitat; the creation of new habitat must be based on current findings related to nearby populations and must be integrated with existing habitat for this species on the site at Bowmans Creek and Bettys Creek, and with habitat which is proposed to be created on Bettys Creek by Glendell Mine;</p> <p>e) details of the schedule for clearing activities incorporating seasonal habitat requirements for species such as bats and other mammals, with the objective of avoiding incidents during sensitive hibernation and breeding periods.</p> <p>f) details of pre-clearance inspections, including the identification and inspection of trees containing tree hollows, including stags, prior to clearing of any vegetation;</p> <p>g) details of how micro habitats including dead trees, stags, stumps and hollow branches will, where practical, be salvaged and relocated to areas depauperate of tree hollow habitat and in the recreation of habitat areas;</p>	<p>against the sub-requirements of this condition (a-t) and was found to cover all requirements, with the following exceptions:</p> <ul style="list-style-type: none"> ▶ (n) integration of rehabilitation works from nearby mines is not discussed. ▶ (r) Table 1 of the plan discusses Aboriginal heritage management but does not provide any specific details of how activities under the plan will avoid impact to Aboriginal heritage values. ▶ (s) a protocol for identifying and managing significant impacts to threatened species not previously identified is not included. <p>■ It was found that the FFMP provided references to the Rehabilitation Management Plan for certain requirements of the development consent. The audit found that the Rehabilitation Management Plan has been replaced by the MOP (refer to Condition 3.51).</p>	<p>achieved</p> <ul style="list-style-type: none"> ■ include a protocol for identifying and managing significant impacts to threatened species not previously identified ■ update references to the Rehabilitation Management Plan that are provided in the FFMP to reflect that it has been replaced by the MOP. 	

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>h) details of the establishment of roost and denning boxes appropriate for bat and avifauna species and methods for their regular maintenance. The details on the specific height, aspect, design, location and timing for the placement of the roosts and nest boxes shall consider any publicly available results and recommendations following the ongoing fauna habitat monitoring program occurring at the Mt Owen mine;</p> <p>i) details of the methods for strategically placing felled trees between cleared and remnant bushland to provide runways of ground cover for dispersion of animals;</p> <p>j) details of measures to care for any animals injured or found during clearing activities, including the use of WIRES to attend to fauna as necessary, and the methods for their relocation if appropriate. This shall include measures for harbouring and releasing nocturnal animals at night;</p> <p>k) strategies for the establishment of long-term post-mining land use objectives over the site;</p> <p>l) measures to re-instate vegetation communities and to use local endemic species for revegetation as soon as possible;</p> <p>m) methods to actively manage existing areas of remnant vegetation (habitat management zones) through fencing (using animal friendly materials) to exclude grazing animals and control of feral animals where practical, revegetate where appropriate, and maintain weed and fire controls;</p> <p>n) strategies for the establishment of wildlife corridor links to adjoining habitat areas and integration of rehabilitation works with nearby mines;</p> <p>o) details of strategies for the exclusion of grazing stock on areas of native bushland reconstruction;</p> <p>p) measures to monitor the success of revegetated areas and plant additional species where necessary;</p> <p>q) methods of revegetation;</p> <p>r) consideration of Aboriginal heritage management to</p>			

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>ensure that activities under the Plan do not impact on Aboriginal heritage values;</p> <p>s) development of a protocol for identifying and managing significant impacts on any threatened flora and fauna species not identified in the EIS, during construction or operation of the mine; and</p> <p>t) details of habitat monitoring required under this consent.</p> <p>The FFMP shall be submitted for the approval of the Director-General, in consultation with OEH, no later than one month prior to the commencement of construction of the development, or within such period otherwise agreed by the Director-General. Construction shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the FFMP to Council, NoW, DRE, and OEH, within 14 days. The Applicant shall make the FFMP available for public inspection on request.</p>			
Monitoring				
3.47	<p>The regeneration works shall be monitored by an appropriately qualified and experienced ecologist. The results of the monitoring and the effectiveness of the revegetation and the FFMP shall be reported annually as part of the Annual Environmental Management Report in accordance with the Department of Mineral Resource's Guidelines to the Mining, Rehabilitation and Environmental Management Process (March 1998) or its latest version.</p>	<ul style="list-style-type: none"> ■ Annual revegetation monitoring is undertaken for revegetation works by Carbon Based Environmental (refer to Documents 141-143). ■ Results are provided in each AEMR. 		C
3.48	<p>The Applicant shall prepare a detailed monitoring program of habitat areas on the site, including any wetlands and aquatic habitats, during the development and for a period after the completion of the development to be determined by the Director-General in consultation with OEH. The monitoring program shall be included in the FFMP and a summary of the results shall be provided in the AEMR. The program shall:</p> <p>a) monitor impacts attributable to the development and include monitoring of the success of any restoration or reconstruction works. The Applicant shall carry out any further works required by the Director-General and DRE</p>	<ul style="list-style-type: none"> ■ Section 4 of the FFMP (Document 28) contains a habitat area monitoring methodology that covers the requirements listed under sub-conditions a) to c). ■ Appendix B of the FFMP provides details of consultation with OEH undertaken during preparation of the plan. ■ Habitat monitoring is reported in Section 3.6 of each AEMR. The 2011-2012 AEMR includes an OEH monitoring form, as requested by OEH following the 2010/2011 AEMR. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A								
	<p>as a result of the monitoring;</p> <p>b) establish an ongoing monitoring program of the existing and proposed revegetated areas to assess their floristics and structure and to propose contingency measures for improvements to revegetation if required; and</p> <p>c) establish an ongoing monitoring program of fauna species diversity and abundance and the effectiveness of reconstructed ecosystems in providing fauna habitat and contingency measures should impacts be identified as occurring.</p> <p>Note: Emphasis should be given to the need for monitoring of the effectiveness of rehabilitation to learn from the process. It should be noted that both positive and negative outcomes need to be reported, to maximise the opportunity to incorporate best practice principles into future mining proposals. The information obtained from the monitoring shall be used to guide future revegetation efforts on the mine site.</p>											
REHABILITATION												
Rehabilitation objectives												
3.49	<p>The Applicant shall rehabilitate the DA area to the satisfaction of the Director-General of DRE. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA and comply with the objectives in Table 3. Table 3: Rehabilitation Objectives</p> <table border="1"> <thead> <tr> <th>Feature</th> <th>Objective</th> </tr> </thead> <tbody> <tr> <td>DA Area</td> <td>Safe, stable & non-polluting</td> </tr> <tr> <td>Surface infrastructure</td> <td>To be decommissioned and removed, unless the Director-General of DRE agrees otherwise</td> </tr> <tr> <td>Sections of Bowmans Creek within the</td> <td>Restore pre-mining surface flow and pool holding capacity</td> </tr> </tbody> </table>	Feature	Objective	DA Area	Safe, stable & non-polluting	Surface infrastructure	To be decommissioned and removed, unless the Director-General of DRE agrees otherwise	Sections of Bowmans Creek within the	Restore pre-mining surface flow and pool holding capacity	<ul style="list-style-type: none"> ■ Progressive rehabilitation has been undertaken on-site and site inspections undertaken by the auditors and a specialist in the field of mine rehabilitation found rehabilitation work at the site to be of a high standard. ■ The mine was found to have developed suitable growing media from mine spoil and subsoil through amelioration with compost. The eastern and western diversion sections of Bowmans Creek were found to have an excellent establishment of riparian vegetation. The creek diversion was found to mimic the form and function of a natural channel and appeared to be stable. ■ It is noted that full compliance with this condition cannot be demonstrated until DRE have approved the rehabilitation work undertaken at the site. ACOL are considered to be compliant with the other requirements 		C
Feature	Objective											
DA Area	Safe, stable & non-polluting											
Surface infrastructure	To be decommissioned and removed, unless the Director-General of DRE agrees otherwise											
Sections of Bowmans Creek within the	Restore pre-mining surface flow and pool holding capacity											

Condition		Findings	Recommendation	Rating: C N/C N/A
underground mining area (except those section of channel made redundant by diversion)	as soon as reasonably practicable Hydraulically and geomorphologically stable, with riparian vegetation that is the same or better than existed prior to mining	of this condition.		
Bowmans Creek – Eastern and Western Diversions	Hydraulically and geomorphologically stable, with riparian vegetation that is the same or better than existing in the adjacent channel prior to mining			
Land to be restored or maintained for agricultural purposes	Restored and maintained to the same or higher land capability and agricultural suitability than prior to mining			
Other land affected by the development	Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of: <ul style="list-style-type: none"> ■ local native plant species (unless the Director-General of DRE agrees otherwise); and ■ a landform consistent with the surrounding environment. 			
Built features affected by subsidence	Repair to pre-mining condition or equivalent unless: <ul style="list-style-type: none"> ■ the owner agrees otherwise; or ■ the damage is fully restored, repaired or compensated under the Mine Subsidence Compensation Act 1961. 			

Condition		Findings	Recommendation	Rating: C N/C N/A
Community	Ensure public safety. Minimise the adverse socio-economic effects associated with mine closure			
<p>Notes:</p> <p>1) These rehabilitation objectives apply to all subsidence impacts and environmental consequences caused by mining undertaken following the date of approval of modification 6; and to all surface infrastructure that forms part of the development, whether constructed prior to or following the approval of modification 6.</p> <p>2) Rehabilitation of subsidence impacts and environmental consequences caused by mining which took place prior to the approval of modification 6 may be subject to the requirements of other approvals (e.g. under a mining lease or an Subsidence Management Plan approval) or the Applicant's commitments</p>				
Progressive Rehabilitation				
3.50	The Applicant shall carry out the rehabilitation of the DA area progressively, that is, as soon as reasonably practicable following disturbance.	<ul style="list-style-type: none"> ■ The audit determined that the majority of rehabilitation works undertaken at the site had occurred prior to the audit period, during open cut operations which ceased in 2011. ■ The AEMRs for the audit period describe the progressive rehabilitation undertaken at the site and planned rehabilitation activities. No areas awaiting rehabilitation were observed on-site. Areas of progressive rehabilitation were observed during the site inspection. ■ The MOP for 2013-2017 (Document 7) provides a detailed schedule for progressive rehabilitation. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
Rehabilitation Management Plan				
3.51	<p>The Applicant shall prepare and implement a Rehabilitation Management Plan for the development, to the satisfaction of the Director-General of DRE. This plan must:</p> <ol style="list-style-type: none"> be prepared in consultation with the Department, OEH, NoW, Council and the CCC; be prepared in accordance with any relevant DRE guideline; build, to the maximum extent practicable, on the other management plans required under this consent; and be submitted to the Director-General of DRE for approval by the end of December 2011. <p>Note: The Rehabilitation Management Plan should address all land impacted by the development, whether prior to or following the date of this consent.</p>	<ul style="list-style-type: none"> ■ The 2013-2017 MOP (Document 7) includes a detailed rehabilitation management plan. ■ The auditors sighted evidence to show the MOP was approved by DRE (Document 48). ■ Section 1.5 and Appendix C of the MOP provides details of consultation undertaken during preparation of the document. All required parties were consulted with. ■ The auditors sighted a letter from DP&I (Document 49) approving the MOP as equivalent of a Rehabilitation Management Plan. ■ The MOP is considered to have been prepared in a manner that addresses the requirements of several management plans, so that repetition is avoided. 		C
3.52	<i>(Deleted).</i>			
Visual Amenity and Landscaping				
General				
3.53	<p>The Applicant shall design buildings and structures associated with the development with a colour scheme which aims to minimise the visual impact of the development on surrounding land uses and maximise the ability of the development to "blend into" local vegetation and other visual components.</p>	<ul style="list-style-type: none"> ■ The audit site inspection found that all buildings and structures associated with the mine have are coloured to minimise visual impacts on the surrounding area (refer to Appendix D – photographs). ■ It was also found that gas drainage infrastructure constructed during the audit period had been effectively positioned to minimise visibility from the New England Highway and Lemington Road. A row of screening trees has also been planted by ACOL on the southern side of Lemington Road to provide screening for gas drainage wells to be constructed in the vicinity of the road. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
3.54	The Applicant shall ensure that visual bunding is installed at strategic locations around the site, generally in accordance with the EIS, to minimise impacts on visual amenity.	<ul style="list-style-type: none"> ■ The 2001 EIS committed to establishing visual screening bunds along the New England Highway and to screen visibility of operational areas from Camberwell Village. ■ The audit found that effective earth bunds have been established along the New England Highway and southern parts of the mine to screen operational areas (refer to Appendix D – photographs). 		C
Landscape and Revegetation Management Plan				
3.55	<p>The Applicant shall prepare a Landscape and Revegetation Management Plan (LRMP) for approval by the Director-General. The Plan shall be prepared in consultation with the SSC and DRE. The plan shall have regard to DRE's Synoptic Plan – Integrated Landscapes for Minesite Rehabilitation (1999) for the Upper Hunter, or its latest version. The Plan shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent; b) an on-site landscaping strategy detailing design and proposed planting of trees and shrubs and the construction of mounding or bunding along Glennies Creek Road and the New England Highway; c) appropriate erosion control and sediment control practices for earthworks associated with the landscaping; d) details of visual appearance of all buildings, structures, facilities or works (including paint colours and specifications); e) details, specifications, and staged work programs to be undertaken, maintenance of all landscape works and maintenance of building materials and cladding; f) details of how vegetation screening and fauna protection corridors will be incorporated into the proposed visual and landscaping works; and 	<ul style="list-style-type: none"> ■ Section 1 of the 2013-2017 MOP states that it includes the requirements for a Landscape and Revegetation Management Plan as required by this condition. ■ The auditors sighted evidence to show the MOP was approved by DRE (Document 48). ■ The auditors sighted evidence to show that DP&I approved the MOP as being equivalent of the Landscape and Revegetation Management Plan required under this clause (Document 49). ■ Non-compliance. A review of the contents of the MOP against this condition found that the landscaping and revegetation strategies discussed in the MOP are consistent with this condition, although non-compliances were noted against the following sub-clauses: <ul style="list-style-type: none"> ▶ (c) Appropriate erosion and sediment control practices for earthworks associated with landscaping are not discussed. ▶ (d) The MOP provides a broad discussion of the visual appearance of buildings, but does not provide specific descriptions of individual buildings, structures etc. Construction of new structures is an activity covered by the MOP (e.g. upcast vent fan facility), however, specifications for the visual appearance of this facility are not provided. ▶ (e) Details, for building/structure maintenance to ensure that their original visual appearance is 	<ul style="list-style-type: none"> ■ Revise the MOP to ensure it is compliant with the requirements for a Landscape and Revegetation Management Plan under DA 309-11-2001-i. Liaise with DP&I to determine a suitable timeframe for this. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>g) use of indigenous species and fauna habitat reconstruction in revegetation areas .</p> <p>The LRMP shall be submitted for the approval of the Director General, no later than one month prior to the commencement of construction of the development, or within such period otherwise agreed by the Director General. Construction shall not commence until written approval has been received from the Director General. Upon receipt of approval, the Applicant shall supply a copy of the LRMP to Council, and DRE within 14 days. The Applicant shall make the LRMP available for public inspection on request.</p>	<p>maintained are not provided.</p> <ul style="list-style-type: none"> ▶ (f) Details of how vegetation screening and fauna protection corridors will be incorporated into visual and landscaping works are not provided. 		
3.55A	<p>Within 1 month of placing overburden on the eastern emplacement area above RL 125 metres, the Applicant shall:</p> <p>a) commence implementation of an on-site and off-site landscaping strategy to minimise the visual impacts of the eastern emplacement area which includes tree planting along Glennies Creek Road, the slopes of the ridge south of Glennies Creek Road and adjacent to the New England Highway; and</p> <p>b) revise the Landscape and Revegetation Management Plan for the development to demonstrate consistency with the commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent, to the satisfaction of the Director-General.</p>	<ul style="list-style-type: none"> ■ Emplacement of overburden on the eastern emplacement area above RL 125 was undertaken outside the audit period and was subject to the previous Landscape and Revegetation Management Plan (revised in 2006). ■ The 2010 independent compliance audit verified compliance with this audit condition. 		N/A
Final Void Management				
3.56	<p>The Applicant shall prepare a Final Void Management Plan (FVMP) to the satisfaction of the Director-General, in consultation with DRE, NoW, and SSC. The Plan shall include, but not be limited to, the following:</p> <p>a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent;</p> <p>b) an investigation of options for future use of the final void;</p> <p>c) a re-examination and validation of groundwater modelling of the potential effects on the local and</p>	<ul style="list-style-type: none"> ■ The auditors sighted evidence to show the MOP was approved by DRE (Document 48). ■ The auditors sighted evidence to show that DP&I approved the MOP as being equivalent of the Final Void Management Plan as required under this clause (Document 49). ■ Section 1 of the 2013-2017 MOP states that it satisfies the requirements for a Final Void Management Plan under this condition. ■ The MOP also outlines that the intended use of the final void is for tailings disposal. A Final Void Management 	<ul style="list-style-type: none"> ■ Liaise with DP&I to determine an appropriate outcome regarding the requirement for ACOL to have a Final Void Management Plan, given that under current plans, the NEOC void will be completely backfilled. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>regional groundwater;</p> <p>d) details of a strategy for the long term management of the final void;</p> <p>e) details of strategies to minimise any adverse impacts where the assessment indicates the potential for degradation to surrounding water resources; and</p> <p>f) details of programs for catchment management, including the types of fertilisers used in the rehabilitation programs to ensure that there is little residual risk of nutrient enrichment of final void water.</p> <p>The FVMP shall be submitted for the approval of the Director General, no later than the end of year 5 of the development or within such period otherwise agreed by the Director General. Upon receipt of approval, the Applicant shall supply a copy of the FVMP to Council, Now, and DRE within 14 days. The Applicant shall make the FVMP available for public inspection on request. The FVMP shall be reviewed and updated every five years, or as otherwise agreed by the Director General.</p>	<p>Plan will therefore be redundant, should the final void be completely backfilled as shown on Figure 5A of the MOP.</p> <ul style="list-style-type: none"> ■ Non-compliance. As this condition was current during the audit period and the approved MOP states that it satisfies the requirements under this condition for a Final Void Management Plan, a review of the contents of the MOP against this condition was undertaken. This found it to be non-complaint with the following sub-clauses of this condition: <ul style="list-style-type: none"> ▶ (b) the MOP does not outline future use options for the final void other than tailings disposal ▶ (c) the MOP does not include a re-examination and validation of groundwater modelling ▶ (d) the MOP does not include details of a strategy for long-term management of the final void ▶ (e) the MOP does not include any strategies to minimise impacts where it is identified that potential degradation of surrounding water resources may occur ▶ (f) the MOP does not contain programs for catchment management including practices to ensure there is little residual risk of nutrient enrichment of final void water. 		
Bushfire and other Fire Controls				
3.57	<p>The Applicant shall:</p> <p>a) provide adequate fire protection works on site, including the availability of trained personnel, water tankers and fire fighting equipment and annual hazard reduction measures with particular attention to boundaries of adjoining landholdings;</p> <p>b) make available to the Rural Fire Service and emergency services when required, water carts and trucks in cases of bushfire incidents on the mine site;</p> <p>c) submit an annual report on fire management activities to</p>	<ul style="list-style-type: none"> ■ Interview with the Environment Coordinator (Scotney Moore) found that: <ul style="list-style-type: none"> ▶ ACOL train all personnel working in the CHPP and underground mine in basic site based fire fighting. ▶ The local Rural Fire Service deal with any bush or grass fire issues and ACOL assist wherever possible with this by providing water carts etc. ▶ ACOL undertakes hazard reduction activities such as grass slashing and cattle agistment to reduce fuel loads. 	<ul style="list-style-type: none"> ■ Ensure a copy of the AEMR is provided to the Singleton Fire Control Officer. 	NC.

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>the Singleton Fire Control Officer; and</p> <p>d) prior to commencement of mining operations prepare a Bushfire Management Plan for all its holdings contained in the DA area, to the satisfaction of SSC and the Rural Fire Service.</p>	<ul style="list-style-type: none"> ■ Three water carts were sighted by the auditors during the audit. ■ Section 3 of each AEMR was found to contain reporting on bushfire issues and management activities. ■ Non-compliance. No evidence was found to show that an annual report such as the AEMR or a similar annual report had been submitted to the Singleton Fire Control Officer and therefore full compliance with this condition could not be demonstrated. 		
Land Management				
3.58	<p>The Applicant shall, prepare a Land Management Plan (LMP) for the areas of the proposed surface facilities, and its holdings in the DA area, to provide for proper land management in consultation with NoW, DRE, OEH, and SSC, and to the satisfaction of the Director-General. The plan shall include, but not be limited to:</p> <p>a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent;</p> <p>b) a strategy for sustainable land management, including rehabilitation, revegetation, and habitat reconstruction works, for the land proposed to be swapped for the existing Camberwell Common and Travelling Stock Reserve. The strategy is to be funded and implemented by the Applicant and developed in consultation with the Camberwell Common Trust, the Rural Lands Protection Board, NoW, Singleton Landcare, and the Hunter Catchment Management Trust. The strategy must have the approval of the Camberwell Common Trust and the Rural Lands Protection Board before submission to the Director-General. In the event that the land swap is not finalised when the LRMP is submitted, the Applicant shall provide an indicative timetable for implementation of the strategy and completion of the land swap;</p> <p>c) a strategy for sustainable land management and enhancement of agricultural values and production across the entire site, taking into account biodiversity</p>	<ul style="list-style-type: none"> ■ Section 1 of the 2013-2017 MOP states that it includes the requirements for a Land Management Plan as required by this condition. ■ The auditors sighted evidence to show the MOP was approved by DRE (Document 48). ■ The auditors sighted evidence to show that DP&I approved the MOP as being equivalent of the Land Management Plan as required under this clause (Document 49). ■ Non-compliance. A review of the contents of the MOP against this condition found that it is non-compliant with the following sub-clauses of this condition: <ul style="list-style-type: none"> ▶ (c) and (d) Section 3.22 of the MOP provides a brief discussion of subsidence crack and ponding rehabilitation in agricultural areas. Section 4.3 provides broad agricultural land rehabilitation objectives and some pasture soil criteria is provided in Tables 28 and 31. Section 8.2.3.1 discusses pasture productivity assessment via laboratory testing. However; it was determined that the MOP does not provide 'a strategy for sustainable land management and the enhancement of agricultural values and production across the entire site' as required by this clause. ▶ (e) There is not discussion of how land degradation will be prevented. 	<ul style="list-style-type: none"> ■ Revise the MOP to ensure it is compliant with the requirements for a Land Management Plan under DA 309-11-2001-i. Liaise with DP&I to determine a suitable timeframe for this. ■ Amend the MOP to clarify the status of the Camberwell Common and Travelling Stock Reserve. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>and Aboriginal heritage values as appropriate;</p> <p>d) pastures and vegetation management</p> <p>e) prevention and rehabilitation of land degradation;</p> <p>f) control of weed infestation on topsoil stockpile material;</p> <p>g) assessment of the potential for recycling of standing timber removed from the site;</p> <p>h) eradication of vermin and noxious weeds as required by the Rural Lands Protection Board, the Upper Hunter Weeds Authority, the Prickly Pear Authority and other relevant authorities; and,</p> <p>i) feral animal control.</p> <p>The LMP shall be submitted for the approval of the Director General, no later than one month prior to the commencement of mining operations, or within such period otherwise agreed by the Director General. Mining operations shall not commence until written approval has been received from the Director General. Upon receipt of approval, the Applicant shall supply a copy of the LMP to Council, NoW, OEH, and DRE within 14 days. The Applicant shall make the LMP available for public inspection on request.</p>	<ul style="list-style-type: none"> ▶ (g) The potential for recycling of standing timber removed from the site is not provided in the MOP. ▶ (h) Section 3.16.8 provides commitment to control weeds and discusses a plan, however; no detail is provided and there is no discussion of vermin eradication. ▶ (i) Feral pests are discussed in Section 3.16.8 of the MOP, however; no detail is provided. 		
3.59	<p>The Applicant shall minimise the removal of trees and other vegetation from the proposed surface facilities area, and restrict any clearance to the areas occupied by mine activity, buildings and paved surfaces, and those areas necessary for fire control in accordance with SSC requirements.</p>	<ul style="list-style-type: none"> ■ The audit found that little vegetation clearing occurred during the audit period. Construction activities were limited to the Bowmans Creek diversion, construction of vent shafts and gas drainage wells. ■ ACOL have implemented a comprehensive permit to disturb process which requires sign off from the environment team, area manager and operator (refer to Documents 58 and 59). This process also requires signoff following completion of works. ■ Due diligence assessments are undertaken for archaeology and ecology prior to approval of the permit to disturb. 		C
Pipelines for offsite tailings emplacement and water sharing				
3.60	<p>The Applicant shall ensure that all pipelines for offsite tailings emplacement and water sharing are designed to remain</p>	<ul style="list-style-type: none"> ■ Compliance with this condition was verified as part of previous independent compliance audits. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
	safe, serviceable and repairable taking into account proposed and future mining by Newpac Underground Mine. The Applicant shall submit final working drawings for construction of pipelines in areas overlying the Newpac Underground Mine workings to the MSB for approval prior to commencement of works.	<ul style="list-style-type: none"> ■ No changes to the design of tailings disposal pipelines occurred during the audit period. 		
3.61	<p>The Applicant shall ensure that design and construction of the pipeline crossing under the New England Highway shall be undertaken in accordance with paragraphs (a) – (k) or otherwise to the satisfaction of the RMS:</p> <p>a) the design shall be in accordance with information provided by Parsons Brinkerhoff (Drawing reference 2118508A-CIV-Figure 4) in the letter to the RTA dated 19 September 2006;</p> <p>b) a detailed survey with reference to bridge deck levels, the adjacent bridge piers and the proposed excavation levels shall be provided to the RMS's satisfaction;</p> <p>c) the difference between the bed level of the pipeline and the ground level at any pier shall not exceed 1.5m. If the level difference exceeds 1.5m a structural engineering report assessing the impact on the bridge structure shall be provided to the RMS;</p> <p>d) the proposed works shall not impact on the existing bridge structure, approaches or road pavements. All works shall be clear of the bridge including any proposed widening of the bridge structure;</p> <p>e) permanent markers are to be provided at the entry and exit points of the pipelines to the road reserve and the pipelines are to cross the road reserve in a straight line and as close to perpendicular as possible;</p> <p>f) any access points and valves shall be located outside of the highway reserve;</p> <p>g) all construction access shall be via existing access points, such as Brunkers Lane and the existing Ashton Coal access road. No new access to the New England Highway is permitted;</p> <p>h) the Applicant shall identify and avoid damaging any</p>	<ul style="list-style-type: none"> ■ Design and construction of tailings pipelines occurred prior to the audit period and was audited as part of previous independent compliance audits. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>existing services, subsurface structures or above ground structures during construction works;</p> <p>i) any damage or impacts to the existing bridge structure or services within the road reserve caused during construction shall be repaired or remediated to the satisfaction of the RMS;</p> <p>j) all areas within the road reserve that are disturbed shall be restored to their original condition upon completion of the works and all restoration work shall be carried out to the satisfaction of the RMS; and</p> <p>k) works-as-executed drawings shall be provided to the RMS following completion of works within the road reserve.</p>			
3.62	<p>Prior to commissioning pipelines for offsite emplacement of tailings and water sharing the Applicant shall:</p> <p>a) ensure that an activated alarm system and emergency response procedures are established, as described in Ashton Coal Tailings Pipeline - Application to Modify Development Consent and Statement of Environmental Effects, dated 2 November 2006 and prepared by Parsons Brinkerhoff; and</p> <p>b) amend the Ashton Coal Emergency Management Plan to incorporate the pipelines and emergency response procedures, to the satisfaction of the DRE.</p>	<ul style="list-style-type: none"> ■ The 2010 independent audit found that the activated alarm system and emergency management procedures had been established on the tailings pipeline. ■ ACOL has developed a Tailings Dam Management Plan (Document 60) and SWP for inspection of tailings dam systems, pipes etc. (Document 61). ■ Section B9 of the ACOL Emergency Management System (Emergency Response CHPP) (Document 23) was found to include pipeline emergency response procedures. ■ Non-compliance. The Emergency Response System was found to have been amended in 2013 (version 12), but no evidence was found to show this amendment had been approved by DRE. 	<ul style="list-style-type: none"> ■ Ensure the revised Emergency Response Plan applicable to the tailings disposal pipeline is provided to DRE for approval. 	NC
3.63	<p>The Applicant shall ensure that the alarm system and emergency response procedures established under condition 3.62 are effectively maintained and operational at all times during the operation of the pipelines.</p>	<ul style="list-style-type: none"> ■ The audit found that leak detection systems and procedures as required under Condition 3.62 have been established and are being followed on site. ■ The audit found that a tailings pipeline burst occurred on 6 March 2013 during a flushing procedure. A 'significant incident report form' was sighted for the incident (signed by Ian McTaggart on 8 March 2013). It appears that safety alarms may not have been operational on the pipeline as it was undergoing a maintenance procedure. This is not clear from the information available on the 	<ul style="list-style-type: none"> ■ Review the Incident Reporting Procedure to ensure that it addresses the completion of all appropriate fields. 	C

	Condition	Findings	Recommendation	Rating: C N/C N/A
		<p>form.</p> <ul style="list-style-type: none"> ■ This condition requires that emergency response procedures be effectively maintained and operational at all times during operation of the tailings pipelines. ■ The audit found that a tailings pipeline burst occurred on 6 March 2013 during a flushing procedure. The audit found that safety alarms may not have been operational on the pipeline as it was undergoing a maintenance procedure. ■ This incident report form for this incident included a field for '<i>were any safety devices inoperative at the time of the incident?</i>' However, this part of the form was not filled in. Another tailings pipeline leak occurred on 31 July 2013, due to a gasket failure. Operational alarms were found to be functional at the time of this leak and reported the leak via the site's 'citect' system. 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
4	WATER MANAGEMENT AND MONITORING			
	Water Supply			
4.1	<p>The Applicant shall ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of mining operations to match its water supply. Note: The Applicant is required to obtain all necessary water licences for the development under the Water Act 1912 and/or Water Management Act 2000.</p>	<ul style="list-style-type: none"> ■ All necessary water licences are current and in place with necessary contingency including additional high security water to account for potential reduction in groundwater contribution to the baseflow of Glennies Creek and Bowmans Creek. ■ Reviews of relevant documents and audit site inspections demonstrated effective water security measures were in place to ensure sufficient water was available for all stages of development in dry conditions and sufficient storage during periods of heavy rainfall. ■ At the time of the inspection, ACOL indicated their intent to adopt progressive mine water management techniques via the implementation of Goldsim (a progressive mine water balance tool). ■ Routine 6-monthly site water balance reconciliation is conducted and this was been reported in the AEMR's published during the audit period. 		C
	Baseflow Offsets			
4.2	<p>The Applicant shall offset the loss of any baseflow to the surrounding watercourses and/or associated creeks caused by the development to the satisfaction of the Director-General. Notes1) This condition does not apply in the case of losses of baseflow which are negligible. 2) Offsets for long-term baseflow losses should be provided via the retirement of adequate water entitlements to account for the loss attributable to the development.</p>	<ul style="list-style-type: none"> ■ ACOL detail commitment to offsetting potential reduction to baseflow in Bowmans Creek, Glennies Creek and the Hunter River in the ACOL WMP. ■ Provision has been made by ACOL through the purchase of additional high security water to offset the potential reduction in groundwater contribution to baseflow, even under periods of reduced allocation. This high security water is prioritised for this purpose. 		C
	Compensatory Water Supply			
4.3	<p>The Applicant shall provide compensatory water supply to any landowner of privately-owned land whose water entitlements are impacted (other than an impact that is negligible) as a result of the development, in consultation with NoW, and to the satisfaction of the Director-General.</p>	<ul style="list-style-type: none"> ■ ACOL have determined through numerical groundwater modelling that no non-ACOL registered bores in surrounding areas will be impacted by its operations. Furthermore, independent verification of the model predictions documented in the AEMR suggest 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the development. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.</p> <p>If the Applicant and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.</p> <p>If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant shall provide alternative compensation to the satisfaction of the Director-General.</p>	<p>propagation of groundwater drawdown associated with the development have been less than predicted during the audit period.</p> <ul style="list-style-type: none"> ■ ACOL are committed to providing a compensatory water supply to any landowner of privately-owned land whose water entitlements are impacted as referenced in the section 10.4.3 of the WMP. ■ No complaints were registered in this regard during the audit period. 		
Surface Water Discharges				
4.4	<p>The Applicant shall ensure that all surface water discharges from the DA area comply with the:</p> <p>(a) discharge limits (both volume and quality) set for the development in any EPL; or</p> <p>(b) relevant provisions of the POEO Act or Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.</p>	<ul style="list-style-type: none"> ■ ACOL is considered a nil discharge operation. Reviews of relevant documents and audit site inspections demonstrated effective water security measures were in place to ensure sufficient storage was available during periods of heavy rainfall. ■ No complaints were registered in this regard during the audit period. 		C
Bowmans Creek – Eastern and Western Diversions				
4.5	<p>The Applicant shall construct, manage and maintain the eastern and western diversions of Bowmans Creek in the underground mining area to the satisfaction of the Director-General.</p> <p>Within 6 months of completing the construction of the diversions, the Applicant shall submit an as-executed report, certified by a practising engineer, to the Director-General and to NoW.</p> <p>Note: The objective of the report is to confirm that the diversions are and will remain sufficiently hydraulically and geomorphologically stable.</p>	<ul style="list-style-type: none"> ■ A comprehensive monitoring program is in place to enable assessment of the performance of the diversion in relation to surface water, groundwater, aquatic ecology, and geomorphology. This performance has been documented in the AEMR since construction commenced. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
Water Management Plan				
4.7	<p>The Applicant shall prepare and implement a Water Management Plan for the development to the satisfaction of the Director-General. This plan must:</p> <ul style="list-style-type: none"> a) be prepared in consultation with EPA, NoW, DRE and Council by suitably qualified and experienced persons whose appointment has been approved by the Director-General; b) be submitted to the Director-General for approval by the end of June 2011; and include: c) a Site Water Balance, which must: <ul style="list-style-type: none"> i) include details of: <ul style="list-style-type: none"> – sources and security of water supply; – water use on site; – water management on site; and – any off-site water transfers, and ii) describe what measures would be implemented to minimise clean water use on site; d) a Bowmans Creek Diversion Management Plan for the proposed creek diversions in the underground mining area, which must: <ul style="list-style-type: none"> i) be consistent with any related requirements in future Extraction Plan(s); and ii) include: <ul style="list-style-type: none"> – a vision statement for the creek relocations; – an assessment of the surface water and groundwater quality, ecological, hydrological and geomorphic baseline conditions within the creek; – the detailed design specifications for the creek relocations; – a construction program for the creek relocations, describing how the work would be staged, and integrated with mining operations; – a revegetation program for the relocated creeks 	<ul style="list-style-type: none"> ■ Non-compliance. Management of water at ACOL occurs in general accordance with the Ashton Coal Water Management Plan, MP 3.4.1.8, Version E (WMP) which was submitted in June 2012 and approved by DP&I in August, 2012. The required date was June 2011. This was due to ongoing issues relating to the delayed approval of Mod 5 and the SEOC project, which would have created further changes in the Management Plan. ■ In addition to management of groundwater, aspects relating to erosion and sediment control, surface water management and the Bowman Creek diversion are also captured under the scope of the WMP. ■ Aspects relating to the site water balance are addressed in section 4 of the WMP. ■ A Bowmans Creek Diversion Management Plan: Version 2 (BCDMP) was finalised on 24 July 2012. It is appended to the WMP as Appendix F. It is consistent with requirements in future extraction plans and addresses all conditions stipulated as follows: <ul style="list-style-type: none"> ▶ A vision statement in section 2 ▶ Details of an assessment of baseline surface water, groundwater, geomorphology and aquatic ecology in section 4 ▶ Detailed design specifications for the creek relocations in Appendix A of the BCDMP ▶ A staged construction program for the creek relocations described in section 3 and again in Appendix A of the BCDMP. ▶ A description of a revegetation program in section 3.2 ▶ Established performance and completion criteria for the creek relocation in section 5 ▶ Details of a program to monitor and maintain surface water and groundwater quality, ecological, hydrological and geomorphic stability of the creek ▶ diversions in section 5 	<ul style="list-style-type: none"> ■ Amend the ESCP to ensure compliance with Managing Urban Stormwater: Soils and Construction Manual (Landcom) 2004. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>using a range of suitable native species;</p> <ul style="list-style-type: none"> – water quality, ecological, hydrological and geomorphic performance and completion criteria for the creek relocations based on the assessment of baseline conditions; and – a program to monitor and maintain surface water and groundwater quality, ecological, hydrological and geomorphic stability of the creek diversions; <p>e) an Erosion and Sediment Control Plan which must:</p> <ul style="list-style-type: none"> i) be consistent with the requirements of the Managing Urban Stormwater: Soils and Construction Manual (Landcom 2004, or its latest version); ii) identify activities that could cause soil erosion and generate sediment; iii) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters; iv) describe the location, function, and capacity of erosion and sediment control structures; and v) describe what measures would be implemented to maintain the structures over time. <p>f) a Surface Water Management Plan, which must include:</p> <ul style="list-style-type: none"> i) detailed baseline data on surface water flows and quality in creeks and other waterbodies that could potentially be affected by the development; ii) surface water impact assessment criteria including trigger levels for investigating any potentially adverse surface water impacts from the development; iii) a program to monitor and assess surface water flows and quality, impacts on water users and stream health; <p>g) a Groundwater Management Plan, which must include:</p> <ul style="list-style-type: none"> i) detailed baseline data of groundwater levels, yield 	<ul style="list-style-type: none"> ■ Non-compliance. An Erosion and Sediment Control Plan ESCP has been incorporated into the ACOL WMP. This plan was reviewed against Managing Urban Stormwater: Soils and Construction (Landcom 2004). This review found the ESCP : <ul style="list-style-type: none"> ▶ Does not identify critical natural areas requiring special planning of management. ▶ Does not define the nature and extent of earthworks to be undertaken or the location of stockpiles and access roads. ▶ Does not describe general site characteristics (slopes, topography etc.). ▶ Does not describe major soil types present. ▶ Does not describe existing vegetation species. ▶ Does not describe catchment areas above and within the site. ▶ Does not identify any areas within the site with serious erosion or sedimentation potential, such as steeply grading areas and areas with dispersive or magnetic sub or topsoils ▶ Does not provide design standards for erosion control or criteria to be used to select, locate and schedule control measures. ▶ The diversion drain, channel design and sizing criteria provided is not compliant with Table 6.1 of Managing Urban Stormwater: Soils and Construction, Volume 2e Mines and Quarries. ■ A Surface Water Management Plan has been incorporated into the ACOL WMP. It addresses all conditions stipulated as follows: <ul style="list-style-type: none"> ▶ Details of baseline surface water data are presented in section 8.2 ▶ Surface water impact assessment criteria and trigger level actions are presented in section 7.2 and 10.3 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>and quality in the area, and privately-owned groundwater bores, which could be affected by the development;</p> <p>ii) groundwater impact assessment criteria including trigger levels for investigating any potentially adverse groundwater impacts from the development; and</p> <p>iii) a program to monitor and assess:</p> <ul style="list-style-type: none"> – groundwater inflows to the open cut and underground mining operations; and – impacts of the development on the region’s aquifers, any groundwater bores and surrounding watercourses, in particular Bowmans Creek, Glennies Creek and the Hunter River and adjacent alluvium; and <p>h) a Surface and Groundwater Response Plan, which must include:</p> <p>i) a response protocol for any exceedances of the surface water and groundwater assessment criteria;</p> <p>ii) measures to offset the loss of any baseflow to watercourses caused by the development;</p> <p>iii) measures to compensate landowners of privately-owned land whose water supply is adversely affected by the development; and</p> <p>iv) measures to mitigate and/or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation.</p>	<p>respectively</p> <ul style="list-style-type: none"> ▶ Details of the surface water monitoring program are provided in section 9.2 <ul style="list-style-type: none"> ■ A Groundwater Management Plan has been incorporated into the ACOL WMP. It addresses all conditions stipulated as follows: <ul style="list-style-type: none"> ▶ Details of baseline groundwater data including levels, pressures and water quality are presented in section 8.3 ▶ Groundwater impact assessment criteria and trigger level actions are presented in sections 7.3 and 10.4 respectively ▶ Details of the groundwater monitoring program including water levels, pore water pressure, mine inflows, abstraction volumes and water quality are provided in section 9.3 ■ A surface water and groundwater response plan are incorporated into the ACOL WMP in sections 10.3 and 10.4 respectively. Other stipulated conditions are satisfied as follows: <ul style="list-style-type: none"> ▶ Details of measures to offset reduced baseflow caused by the development in section 5.3.1 ▶ Details of measures to compensate landowners of privately-owned land whose water supply is adversely affected by the development are provided in section 10.4.3 ▶ Details of measures to mitigate and/or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation are provided in section 10.4.5 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
5	HAZARDOUS MATERIALS AND OVERBURDEN MANAGEMENT			
	Overburden Emplacement and Management			
5.1	The Applicant shall construct and manage the overburden emplacements as set out in the EIS, and to the satisfaction of the DRE; and	<ul style="list-style-type: none"> ■ No overburden emplacement occurred during the audit period. ■ The audit site inspection found that the overburden dump had been successfully revegetated, mostly with native forest and no evidence of ponding, scouring or instability was noted. ■ Maintenance activities associated with the overburden emplacement area are discussed in each AEMR, which were found to have been provided to DRE for approval. 		C
5.2	The Applicant shall undertake measures, as far as practical, to prevent spontaneous combustion from occurring on the site.	<ul style="list-style-type: none"> ■ The acting CHPP manager (Peter Grey) stated that no incidents of spontaneous combustion occurred during the audit period. ■ ACOL has Spontaneous Combustion Management Plan (Document 27) to manage such issues if they arise. 		C
	Waste			
5.3	<p>One month prior to the commencement of construction works, the Applicant shall prepare and implement a Waste Management Plan (WMP) for the DA area in consultation with SSC and EPA and to the satisfaction of the Director-General. The Plan shall include, but not be limited to:</p> <p>a) details of measures to facilitate waste management on site;</p> <p>b) details of compliance with the Applicant's obligations under the Protection of the Environment Operations Act (1997);</p> <p>c) identification of all types and quantities of waste materials produced at the mine site during construction, commissioning and operation;</p> <p>d) programs aimed at minimising the production of waste</p>	<ul style="list-style-type: none"> ■ ACOL has developed a Waste Management Plan (Document 35), that has not been revised since September 2003. Compliance of this plan with this condition was confirmed as part of previous audits. A brief review was undertaken for the audit and found that it was compliant with sub-conditions a) – g). ■ ACOL is in the process of developing a revised Waste Management Plan which was sighted by the auditors in an advanced stage. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>at the mine site through the implementation of operational and management measures;</p> <p>e) details of the potential reuse and recycling avenues for waste materials produced at the mine site, including collection and handling procedures;</p> <p>f) details of appropriate disposal routes in the event that reuse and recycling avenues are not available or are not practicable; and</p> <p>g) programs for involving and encouraging employees and contractors to minimise waste production at the mine site and reuse / recycling where appropriate.</p>			
5.4	<p>The Applicant must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a license under the Protection of the Environment Operations Act 1997. This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection license under the Protection of the Environment Operations Act 1997.</p>	<ul style="list-style-type: none"> No indication that any waste was being received by ACOL from off-site sources was found during the audit. 		C
5.5	<p>The Applicant shall dispose of all solid waste and putrescible matter from the site to the satisfaction of SSC or EPA, as relevant.</p>	<ul style="list-style-type: none"> Section 2.6 of each AEMR reports on waste disposal activities occurring at the mine. As required under Condition 9.2, ACOL are required to provide these reports to SSC and the EPA for comment (and were found to have done so during the audit period). Transpacific are contracted to provide solid and putrescible waste services at ACOL. The auditors sighted a weekly report from Transpacific that provided a highly detailed breakdown of waste streams being generated on-site. The main waste streams are reported in Section 2.6 of each AEMR. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A																							
6	AIR QUALITY, BLAST, NOISE AND LIGHT MANAGEMENT																										
	Air Quality Management and Monitoring																										
	Air Quality Criteria																										
6.1	<p>The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not exceed the criteria listed in Tables 4, 5 or 6 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.</p> <p>Table 4: Long term criteria for particulate matter</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Total Suspended Particulate (TSP) Matte</td> <td>Annual</td> <td>a 90 µg/m³</td> </tr> <tr> <td>articulate matter < 10 µm (PM10)</td> <td>Annual</td> <td>a 30 µg/m³</td> </tr> </tbody> </table> <p>Table 5: Short term criterion for particulate matter</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM10)</td> <td>24 hour</td> <td>a 50 µg/m³</td> </tr> </tbody> </table> <p>Table 6: Long term criteria for deposited dust</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Maximum Increase in Deposit Dust Level</th> <th>Maximum Total Deposited Dust Level</th> </tr> </thead> <tbody> <tr> <td>Annual</td> <td>b 2 g/m²/month</td> <td>a 4 g/m²/month</td> <td>c Deposited dust</td> </tr> </tbody> </table> <p>Notes to Tables 4-6:</p>	Pollutant	Averaging Period	Criterion	Total Suspended Particulate (TSP) Matte	Annual	a 90 µg/m ³	articulate matter < 10 µm (PM10)	Annual	a 30 µg/m ³	Pollutant	Averaging Period	Criterion	Particulate matter < 10 µm (PM10)	24 hour	a 50 µg/m ³	Pollutant	Averaging Period	Maximum Increase in Deposit Dust Level	Maximum Total Deposited Dust Level	Annual	b 2 g/m ² /month	a 4 g/m ² /month	c Deposited dust	<ul style="list-style-type: none"> ■ A review of the AEMRs (Documents 8-10) and Annual Returns (Documents 16-18) relevant to the audit period found that: <ul style="list-style-type: none"> ▶ TSP – the annual average for TSP measured at Site 1 – Camberwell Village exceeded the criterion of 90 µg/m³ in 2010, but complied with annual criteria in 2011 and 2012. ▶ Non-compliance. PM10 – exceedances of the 24-hour cumulative average criteria occurred on 23 occasions at off-site locations and on 52 occasions at on-site monitoring locations. ACOL state in the 2011-12 AEMR that these exceedances ‘<i>were not attributed to ACOL as the NEOC was no longer operating and all of the available overburden dump had been reshaped and rehabilitated by the end of May 2012</i>’. It is noted that the criteria for 24hr PM10 was reduced from 150ug/m³ to 50 ug/m³ following approval of MOD7 in 2011. ▶ Non-compliance. Deposited dust – exceedances of annual average criteria occurred during 2010 at sites D6, D7 and D13; and during 2012 at gauges D2, D4 and D5. It was noted that as open cut mining at ACOL ceased in September 2011, the exceedances at D2, D4 and D5 during 2012 are likely to have been influenced by a source outside Ashton Mine. ▶ It was noted in each AEMR that dust monitoring results were affected by regional events, such as dust storms. 	<ul style="list-style-type: none"> ■ ACOL should continue to implement best practice measures to mitigate dust generation from on-site operations. 	NC
Pollutant	Averaging Period	Criterion																									
Total Suspended Particulate (TSP) Matte	Annual	a 90 µg/m ³																									
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	Condition	Findings	Recommendation	Rating: C N/C N/A
	<ul style="list-style-type: none"> ■ a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources); ■ b Incremental impact (i.e. incremental increase in concentrations due to the development on its own); ■ c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method. ■ d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Director-General in consultation with EPA. 			
6.2	The Applicant shall ensure the prompt and effective rehabilitation of all disturbed areas of the DA area following the completion of mining and associated activities in that area to minimise the generation of wind blown dust.	<ul style="list-style-type: none"> ■ Disturbed areas observed during the audit site inspection, such as the overburden emplacement area associated with the former open cut operations were observed to have been effectively revegetated. ■ Effective dust control measures were observed to be implemented on-site during the audit, such as water carts and sprays on stockpiles. It was noted that the water cart operating at the site is designed for use in an open cut mine, and is operating within the CHPP and underground portal areas. The water cart therefore was seen to provide a very effective cover. 		C
6.3	Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises.	<ul style="list-style-type: none"> ■ ACOL have an established Air Quality Management Plan that was observed to be effectively operating during the audit. ■ Controls used on-site for air quality management are reported in Section 3.1 of each AEMR. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
6.4	Raw coal dump hoppers must be fitted with: a) an automatically activated dust suppression water spray system; and b) windshields. The windshields must be full walls on three sides with a height of not less than two metres above the dump grate.	<ul style="list-style-type: none"> Raw coal hoppers were observed to be fitted with automatically triggered spray systems at the CHPP during audit site inspection (refer to Appendix D – photographs). The sprays are triggered when a loader approaches the hopper to unload coal. The hoppers were also observed to be shielded on three sides with shields over two metres in height. 		C
6.5	Belt conveyors, other than those whose functions preclude it, must be enclosed on the top and at least one side. Belt scrapers must be installed to effectively remove material from the underside of each belt.	<ul style="list-style-type: none"> Belt scrapers were observed to be installed on the return side of coal conveyor belts. All conveyors were observed to be enclosed on top and at least on one side during audit site inspections. 		C
6.6	Air pollution control equipment must be fitted to all drilling rigs to prevent fines generated during drilling being discharged to the atmosphere.	<ul style="list-style-type: none"> Drilling rigs operating during the audit were observed to be fitted with dust curtains. No dust was observed to be generated from drilling during audit site inspections. 		C
6.7	An effective water spray system must be installed at open coal stockpiles and operated at sufficient frequency to maintain the entire surface of the stockpile and related coal handling areas in a condition that will minimise the emission of wind blown or traffic generated dust.	<ul style="list-style-type: none"> Water sprays were observed to be operating on coal stockpiles during the audit. It was stated by the CHPP manager (Peter Grey) that the sprays operate automatically when wind sensors are triggered by windy conditions. 		C
6.8	Mobile tankers equipped with a pump and sprays must be provided to suppress dust from unsealed roads when in use.	<ul style="list-style-type: none"> The site operates three watercarts. Watercarts were observed to be operating a number of times during the audit site inspection (refer to Appendix D - photographs). 		C
6.9	Roads for coal or overburden haulage must be surfaced in selected hard, nonfriable material. Soft mudstone, clay stone and shale must not be used.	<ul style="list-style-type: none"> No overburden haulage was occurring during the audit. Former overburden haulage roads had generally been rehabilitated. Haul roads within the pit area were observed to be hard surfaced. 		C
Air Quality Management Plans				
6.10	The Applicant shall prepare a Construction Air Quality Management Plan (CAQMP), and an Operations Air Quality Management Plan (OAQMP), detailing air quality safeguards and procedures for dealing with dust and other air emissions from the ACP mine to the satisfaction of the Director-General. The CAQMP shall be prepared in consultation with SSC. The OAQMP shall be prepared following consultation	<ul style="list-style-type: none"> ACOL has implemented an Air Quality Management Plan (AQMP) (Document 29) that was last amended in August 2006. A review of this plan was undertaken as part of the 2010 independent audit and found it to be compliant with each sub-condition under this plan. The AQMP amalgamates the requirements for a 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>with SSC and other nearby mines with the aim of achieving a consistent approach in the preparation of the ACP OAQMP. The Plans shall include, but not be limited to:</p> <p>a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent;</p> <p>b) the identification of adversely impacted properties in accordance with the criteria detailed in Tables 1, 2, and 3 of condition 6.1;</p> <p>c) specifications of procedures that will be used for monitoring dust deposition, PM10, and TSP for the purpose of undertaking independent investigations, including any joint investigations with nearby mines;</p> <p>d) a mine operating plan that will allow dust emissions from the mine to be progressively reduced should real-time ambient measurements of PM10 concentrations and/or meteorological observations or forecasts indicate that emissions from ACP are likely to exceed the 24-hour average PM10 standards in Table 2 of condition 6.1. The plan is to be updated as the mine develops and at least on an annual basis and should indicate specific measures that will be used to reduce dust emissions and the threshold conditions under which each control measure will be triggered;</p> <p>e) an outline of the procedure used to notify property owners and occupiers as identified in the EIS or by monitoring that are likely to be adversely impacted by emissions from the mine in excess of criteria detailed in Tables 1, 2, and 3 of condition 6.1;</p> <p>f) a procedure to address potential dust impacts on residential tenants at mine-owned residences and at residences where an agreement has been made between a mining company and the landholder relating to exceedences of dust criteria, which is to be prepared in consultation with DEC, NSW Health, landowners of any residences potentially affected by dust levels exceeding the criteria in condition 6.1 as a result of the development, and the operators of other mining/industrial operations contributing to the impacts.</p>	<p>CAQMP and OAQMP.</p> <ul style="list-style-type: none"> ■ A review of the plan against this condition was also undertaken for the audit, and found that each requirement of this plan was covered by the AQMP. ■ The auditors sighted emails between Peter Barton and Mark Ihlein of SSC regarding the original OAQMP which resulted in SSC endorsing the plan (Document 75). ■ The auditors sighted approval from DP&I for the original OAQMP (Document 74). A letter approving the revised AQMP was also sighted (Document 72). 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>This procedure shall:</p> <ul style="list-style-type: none"> i) ensure that all existing tenants of identified properties are advised in writing of the increase to fine particulate levels likely to occur at those locations during the operational life of the mine and that these increases are likely to result in exceedences of the criteria in condition 6.1. Information shall also be provided to the residents on the available research relating to the health effects of fine particulate matter; ii) ensure that all potential tenants are advised in writing of the increase to the fine particulate matter likely to occur at that location during the operational life of the mine prior to signing a residential tenancy agreement to occupy the residence. This advice must ensure that such tenants are aware that increases in emissions are likely to result in exceedences of the criteria in condition 6.1. Information shall also be provided to the residents on the available research relating to the health effects of fine particulate matter; iii) ensure that the advice provided to current and future tenants is based on current knowledge of ambient air quality monitoring, dispersion modelling results and air quality criteria; and, iv) provide a mechanism for providing current ambient air quality monitoring data, dispersion modelling results and air quality criteria to the residents of these affected residences. g) measures to reduce the potential for wind erosion from exposed surfaces, particularly the use of techniques that increase the surface roughness and reduce the potential for dust entrainment; h) methods and frequency of making dust monitoring data publicly available, such as the placement of monitoring details and results on the internet; i) details of an investigation program aimed at improving short-term modelling techniques, by better 			

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>characterising dust source variations and focusing on the feasibility of developing shorter-term amenity indicators;</p> <p>j) details of an investigation program aimed at improving modelling of real-time dust control strategies such as that employed at ACP;</p> <p>k) the establishment of a protocol for handling dust complaints that include recording, reporting and acting on complaints;</p> <p>l) appropriate mechanisms for community consultation;</p> <p>m) outline of response and/or management measures to be undertaken in the event of complaints from a landowner where dust levels are demonstrated to be below the criteria in condition 6.1;</p> <p>n) outlining proactive/predictive and reactive mitigation measures to be employed to minimize dust emissions including visible dust emanating from the site;</p> <p>o) equipment to be available and used to control dust generation;</p> <p>p) methods to determine when and how the mine operation is to be modified to minimise the potential for dust emissions, particularly from surface activities;</p> <p>q) identification of longer term strategies directed towards mitigating dust levels;</p> <p>r) details of locations and frequency of ambient TSP and PM10 monitors and dust deposition gauges at the residential areas as agreed by the Director-General; and</p> <p>s) a program to continue baseline monitoring undertaken prior to development consent.</p> <p>The CAQMP and OAQMP shall be submitted for the approval of the Director-General, no later than one month prior to the commencement of construction and operation of the development, respectively, or within such period otherwise agreed by the Director-General. Construction or operation, as appropriate, shall not commence until written</p>			

	Condition	Findings	Recommendation	Rating: C N/C N/A
	approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply copies of the CAQMP and OAQMP to Council, EPA, and DRE, within 14 days. The Applicant shall make the CAQMP and OAQMP available for public inspection on request.			
Greenhouse Gas Emissions				
6.10A	<p>The Applicant shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Director-General.</p> <p>Note: This condition does not extend to Scope 3 emissions, as defined in the National Greenhouse Energy Reporting Guidelines.</p>	<ul style="list-style-type: none"> ■ The Environment and Community Coordinator (Scotney Moore) reported that ACOL employed Advitech consultants to analyse and provide recommendations for energy efficiency. ■ It was also reported that LEAN is being implemented at the site, although this is in an early stage. ■ No measures, programs or commitments to reducing greenhouse gas emissions or implementing energy efficiency were identified in relevant documents such as the MOP, AEMRs or air quality management plan. 	<ul style="list-style-type: none"> ■ Ensure commitments to implementing greenhouse gas emission reduction or energy efficiency programs are reflected in relevant documents, such as a relevant management plan. 	C
6.10B	<p>The Applicant shall prepare and implement a Greenhouse Gas Abatement Investigation Report to the satisfaction of the Director-General. The report must:</p> <p>a) be submitted to the Director-General for approval by 31 December 2011; and</p> <p>b) examine opportunities to flare or reuse methane drained from the mine, including goaf gas drainage, to the satisfaction of the Director-General.</p>	<ul style="list-style-type: none"> ■ The auditors sighted an email from DP&I approving a Greenhouse Gas Abatement Investigation Report for the site (Document 76), on the basis that it be revised to reflect the outcomes of Modification 9. ■ Non-compliance. No evidence was found to show that the Greenhouse Gas Abatement Plan had been revised as requested by DP&I in response to the outcomes of Modification 9. 	<ul style="list-style-type: none"> ■ Ensure the Greenhouse Gas Abatement Investigation Report is modified as required by DP&I. 	NC
Air Quality and Dust Monitoring				
6.11	<p>The Applicant shall submit to the EPA with a licence application a draft air monitoring program for long term PM10, TSP and deposited matter emissions. The program must specify the data to be collected at regular intervals, continuously and during episodic periods relevant to specific operational and/or ambient conditions such that a representative picture of PM10 TSP and deposited matter impacts at all receivers can be established. The monitoring</p>	<ul style="list-style-type: none"> ■ Section 7 of the AQMP (Document 29) outlines an air quality monitoring program. This program specifies monitoring frequency, for PM10, TSP and deposited matter. ■ Figures 1 and 2 of the plan shows monitoring locations. ■ Section 5 of the AQMP states that the <i>Approved Methods for the Sampling and Analysis of Air Pollutants</i> 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>must be conducted at a sufficient number of points to represent the wider area and account for possible weather (such as seasonal wind direction) and operational effects. The EPA will use the submitted draft monitoring program to include detailed licence conditions covering air monitoring locations, frequencies and methods. Monitoring locations for the mine operations, including sites for monitoring impacts of dust at the nearest non-mine owned residences and locations as may be determined to be necessary by the Director-General are to be decided in consultation with DEPA.</p> <p>The sampling method, units of measure, interval and frequency of monitoring will be as set out in the Approved Methods for Sampling and Analysis of Air Pollutants in NSW</p>	<p><i>in NSW applies to air quality management at the site.</i></p> <ul style="list-style-type: none"> The site's EPL states that dust monitoring locations are 'shown on Figure 1 titled 'Air Quality Monitoring Locations for EPL' dated 19/10/06. 		
Approved Methods for the Sampling and Analysis of Air Pollutants in NSW.				
6.12	<p>The Applicant shall:</p> <ol style="list-style-type: none"> establish real-time ambient monitoring stations to provide continuous measurements of PM10 concentrations at the closest residences for which no agreements have been negotiated. provide quarterly reporting during operation and rehabilitation of the open cut mine on the performance of the control measures and results of the ambient air quality monitoring system, unless otherwise agreed by the Director-General. The reports shall be provided to the Director-General, CCC and SSC within seven days of completion of the report; and provide all results and analysis of air quality monitoring in the AEMR. 	<ul style="list-style-type: none"> Figure 1 of the AQMP shows the location of TEOM monitors. Monitor 1 is located at the residence nearest to the mine. In September 2013 DP&I approved a request from ACOL to reduce quarterly monitoring for air quality to that reported in the AEMR (Document 77). DP&I stated that the intent of this condition was to monitor dust at Camberwell Village during operation of the North-East Open Cut, which has now ceased. Each AEMR (Documents 8-10) were found to provide results and analysis of all air quality monitoring undertaken. 		C
6.13	<p>³¹The following points (to be each of or representative of a defined group of all potentially affected properties) referred to in the table below are identified for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.</p> <p>Refer to Table - Air Monitoring in 6.13</p>	<ul style="list-style-type: none"> Figures 1 and 2 of the AQMP identify locations for air quality monitoring. These match the sites nominated in the EPL, refer to Condition 6.11. 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
6.14	<p>³²For each monitoring point determined by the EPA at the license application stage the applicant must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1 of the following table. The applicant must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:</p> <p>Refer to Table – Air Monitoring in 6.14</p>	<ul style="list-style-type: none"> ■ The AQMP and results provided in each AEMR show that: <ul style="list-style-type: none"> ▶ PM10 is monitored continuously at 6 sites within and around the ACOL site and reported in ug/m³. ▶ TSP is monitored at 4 sites within and around the ACOL site and is reported in ug/m³. ▶ Dust deposition is monitored at 7 locations within or around the ACOL site and is reported in g/m²/month. ▶ Air quality sampling methods are specified in Quarterly Monitoring Reports (e.g. Document 149) that were undertaken prior to DP&I approval to cease (refer to Condition 6.12). A commitment to undertaking monitoring in accordance to this condition is not provided in the AQMP or reported in the AEMRs. 	<ul style="list-style-type: none"> ■ Amend the AQMP to provide a commitment to undertaking air quality monitoring in accordance with the standards listed under this condition. 	C
6.15	<p>Monitoring for the concentration of a pollutant emitted to the air required to be conducted under this consent, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development or in order to comply with a relevant local calculation protocol must be done in accordance with:</p> <ul style="list-style-type: none"> ■ any methodology which is required by or under the POEO Act 1997 to be used for the testing of the concentration of the pollutant; or ■ if no such requirement is imposed by or under the POEO Act 1997, any methodology which the general terms of approval or a condition of the licence or the protocol (as the case may be) requires to be used for that testing; or ■ if no such requirement is imposed by or under the POEO Act 1997 or by the general terms of approval or a condition of the licence or the protocol (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place. 	<ul style="list-style-type: none"> ■ Section 7 of the AQMP states that air quality monitoring and management is undertaken in accordance with Approved Methods for the Sampling and Analysis of Air Pollutants in NSW, which is endorsed by the EPA as the relevant standard for air quality monitoring in NSW (http://www.epa.nsw.gov.au/air/faqamsampling.htm) ■ The 2007 independent audit found that the EPA had approved the AQMP. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
Exceedence of Dust Criteria/Goals				
6.16	<p>In the event that:</p> <ol style="list-style-type: none"> 1. a landowner or occupier considers that dust from the project at his/her dwelling is in excess of the criteria detailed in Tables 1, 2, and 3 of condition 6.1 above; or, 2. a landowner, having selected a suitable site for a dwelling on his/her vacant land, considers that dust from the project at his/her future dwelling would be in excess of the criteria detailed in Tables 1, 2, and 3 of condition 6.1 above, and the Director-General is satisfied that an investigation is required, the Applicant shall, upon the receipt of a written request: <ol style="list-style-type: none"> a) consult with the landowner or occupant affected to determine his/her concerns; b) make arrangements for, and bear the costs of, following consultation with other nearby mines, appropriate independent dust investigations in accordance with the OAQMP, and to the satisfaction of the Director-General, to quantify the impact and determine the source of the effect and contribution of the ACP mine; c) modify the mining activity or take other steps in accordance with the OAQMP if exceedences are demonstrated to result from ACP related activity. This shall include: <ol style="list-style-type: none"> i) introduction of additional dust controls, on individual sources or on all sources on the site, or modify operations to ensure that the dust criteria are achieved; and/or; ii) enter into an agreement with the landowner or provide such forms of benefit or amelioration of the impact of dust as may be agreed between the parties as providing acceptable compensation for the dust levels experienced. The agreement may also be made following consultation with other 	<ul style="list-style-type: none"> ■ No requests were received from landholders for an independent review of air quality during the audit period. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>nearby mines.</p> <p>d) conduct follow up investigation(s) to the satisfaction of the Director-General, where necessary.</p> <p>Note: Vacant land in this condition means the whole of the lot in a current plan registered at the Land Titles Office as at the date of this consent that does not have a dwelling situated on the lot and is permitted to have a dwelling on that lot.</p>			
6.17	<p>If the independent dust investigations in condition 6.16 above confirm that ambient dust levels at the residence or proposed residence are in excess of the relevant criteria detailed in Tables 1 and 3 of condition 6.1 above, and if the measures in condition 6.16 c) (i) above do not reduce the dust levels below the criteria in Tables 1 and 3 of condition 6.1, or if agreement in accordance with condition 6.16 (c)(ii) above cannot be reached, the Applicant shall, at the written request of the owner, acquire the relevant property. Acquisition shall be in accordance with the procedures set out in conditions 11.5-11.11. In the case of cumulative dust levels in excess of the criteria in Table 1 and 3 of condition 6.1, should the Applicant form an agreement with the relevant contributing parties under a Joint Acquisition Management Plan pursuant to Condition 11.12, the Applicant shall purchase an affected property in accordance with this Plan. Should a Joint Acquisition Management Plan not be prepared between the relevant contributing parties, the Applicant shall acquire the property in accordance with conditions 11.5-11.11.</p>	<ul style="list-style-type: none"> No independent reviews of air quality impacts were requested or undertaken during the audit period. 		N/A
6.18	<p>If the independent dust investigations in condition 6.16 above confirm that ambient dust levels at the residence or proposed residence are in excess of the relevant criteria detailed in Table 2 of condition 6.1 above, and if the measures in condition 6.16 c) (i) above do not reduce the dust levels below the criteria in Table 2 of condition 6.1, or if agreement in accordance with condition 6.16 (c)(ii) above cannot be reached, the Applicant shall, assess ambient dust levels and the incremental contribution of ACP to ambient dust levels as set out in Tables 7,8 or 9 below:</p>	<ul style="list-style-type: none"> No independent reviews of air quality impacts were requested or undertaken during the audit period. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A																										
	<p>Table 7: Long term acquisition criteria for particulate matter</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>d Criterion</th> </tr> </thead> <tbody> <tr> <td>Total Suspended Particulate (TSP) Matter</td> <td>Annual</td> <td>a 90 µg/m³</td> </tr> <tr> <td>articulate matter < 10 µm (PM10)</td> <td>Annual</td> <td>a 30 µg/m³</td> </tr> </tbody> </table> <p>Table 8: Short term acquisition criteria for particulate matter</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>d Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM10)</td> <td>24 hour</td> <td>a 150 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM10)</td> <td>24 hour</td> <td>b 50 µg/m³</td> </tr> </tbody> </table> <p>Table 9: Long term acquisition criteria for deposited dust</p> <table border="1"> <thead> <tr> <th>Condition</th> <th>Findings</th> <th>Recommen dation</th> <th>Rating: C N/C N/A</th> </tr> </thead> <tbody> <tr> <td>c Deposited dust</td> <td>Annual</td> <td>b 2 g/m²/month</td> <td>a 4 g/m²/month</td> </tr> </tbody> </table> <p>Notes to Tables 7-9:</p> <ul style="list-style-type: none"> ■ a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources); ■ b Incremental impact (i.e. incremental increase in concentrations due to the development on its own); ■ c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - 	Pollutant	Averaging Period	d Criterion	Total Suspended Particulate (TSP) Matter	Annual	a 90 µg/m ³	articulate matter < 10 µm (PM10)	Annual	a 30 µg/m ³	Pollutant	Averaging Period	d Criterion	Particulate matter < 10 µm (PM10)	24 hour	a 150 µg/m ³	Particulate matter < 10 µm (PM10)	24 hour	b 50 µg/m ³	Condition	Findings	Recommen dation	Rating: C N/C N/A	c Deposited dust	Annual	b 2 g/m ² /month	a 4 g/m ² /month			
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c Deposited dust	Annual	b 2 g/m ² /month	a 4 g/m ² /month																											

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>Gravimetric Method.</p> <ul style="list-style-type: none"> Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Director-General in consultation with OEH. If the independent dust investigations in condition 6.16 above confirm that ambient dust levels at the residence or proposed residence are in excess of either of the relevant criteria detailed in Tables 7, 8 or 9 above the Applicant shall, at the written request of the owner, acquire the relevant property. Acquisition shall be in accordance with the procedures set out in conditions 11-5-11.11. <p>In the case of cumulative dust levels in excess of the criteria in Tables 7 to 9 should the Applicant form an agreement with the relevant contributing parties under a Joint Acquisition Management Plan pursuant to Condition 11.12, the Applicant shall purchase an affected property in accordance with this Plan. Should a Joint Acquisition Management Plan not be prepared between the relevant contributing parties, the Applicant shall acquire the property in accordance with conditions 11-5-11.11.</p>			
6.19	<p>If continued complaints and dust investigations confirm that ambient air quality criteria in Table 2 of condition 6.1 are being exceeded, but are less than the ambient dust levels in Table 4 of condition 6.18, the Applicant shall continue to negotiate with the landowner, and other nearby mines where relevant, until a resolution to the satisfaction of the Director General is reached.</p>	<ul style="list-style-type: none"> No independent reviews of air quality impacts were requested or undertaken during the audit period. 		N/A
6.20	<p>If a landowner disputes any dust mitigation or other measures proposed by the Applicant in accordance with condition 6.16 above, the matter shall be referred by either the Applicant or landowner to the Director-General in consultation with SSC. If the matter cannot be resolved within 21 days, the matter shall be referred to the Independent Dispute Resolution Process.</p>	<ul style="list-style-type: none"> No independent reviews of air quality impacts were requested or undertaken during the audit period. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
6.21	Further independent investigation(s) shall cease if the Director-General is satisfied that the relevant criteria in Tables 1, 2, and 3 of condition 6.1 are not being exceeded and are unlikely to be exceeded in the future.	<ul style="list-style-type: none"> No independent reviews of air quality impacts were requested or undertaken during the audit period. 		N/A
Blast Management and Monitoring				
Airblast Overpressure Criteria				
6.22	The Airblast overpressure level from blasting operations carried out in or on the premises must not exceed: (i) 115 dB (Linear Peak) for more than 5% of the total number of blasts over a period of 12 months; and (ii) Exceed 120dB (linear Peak) at any time, at any residence or other noise sensitive receiver such as the St Clements Church and Camberwell Community Hall.	<ul style="list-style-type: none"> The last blasting undertaken for open cut operations was on 14 September 2011. 136 blasts occurred during the audit period and no exceedances of blasting limits were reported Non-compliance. The 5% overall limit for 115-120 dBL blasts was also exceeded at St Clements Church and Camberwell Village. Open cut operations have now ceased and are not planned to recommence within the north open cut pit. 	<ul style="list-style-type: none"> Ensure effective blast planning and controls are implemented if open cut operations recommence in the future. 	NC
Ground vibration (ppv) Criteria				
6.23	The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: i) 2mm/s for more than 5% of the total number of blasts over a period of 12 months; and ii) Exceed 10mm/s at any time, at any residence or other noise sensitive receiver such as the St Clements Church and Camberwell Community Hall.	<ul style="list-style-type: none"> Ground vibration criteria was not exceeded for the 2009-2010 or 2010-2011 reporting period. No blasting was undertaken following cessation of open cut mining in 2011. 		C
Time of blasting				
6.24	Blasting operations on the premises may only take place between 9.00am and 5.00pm Monday to Saturday inclusive.	<ul style="list-style-type: none"> Blasting records were sighted by the auditors during the audit for the audit period (Document 150) and it was found that all blasts were undertaken within the required times. 		C
6.25	The Applicant shall, as a minimum, advise residents of Camberwell village and occupiers of buildings within two (2)	<ul style="list-style-type: none"> ACOL pre-blast notification list was sighted for the only blast undertaken during 2011 (Document 151). The form 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	kilometres of blasting locations of future blasting events on at least a monthly basis, and of any changes to the proposed blast schedules. Such program shall also be available on the internet.	<p>notes whether phone contact was made or a message left and whether further attempts to contact should be made.</p> <ul style="list-style-type: none"> ■ ACOL post all blast results and notifications to their website: http://www.ashtoncoal.com.au/Environment-Community/Environment-Monitoring-Results/Blasting-Results.aspx 		
Blasting/Vibration Management Plans				
6.26	<p>The Applicant shall prepare and implement a Blasting/Vibration Management Plan (BVMP) in consultation with SSC, and to the satisfaction of the Director-General. The Plan shall include, but not be limited to, the following matters:</p> <ol style="list-style-type: none"> a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent; b) demonstration of compliance blasting criteria; c) proposed mitigation measures; d) remedial action; e) monitoring methods and program in accordance with blast monitoring and inspection conditions; f) monitoring program for fly rock distribution; g) measures to be undertaken to demonstrate that ACP is achieving best practice in minimising air blast overpressure, ground vibration levels, fumes and odours from blasting activities; h) measures to protect underground utilities (e.g.: subsurface telecommunication and electric cables, irrigation lines) and livestock on non-mine owned land; i) measures to consider the blasting activities from other neighbouring mines. This shall include details of the proposed measures to ensure that cumulative blast related impacts are managed, such as through consultation with the other mines to coordinate blasting activities; 	<ul style="list-style-type: none"> ■ ACOL has implemented a Blasting and Vibration Management Plan (BVMP) (Document 29) that was last amended in August 2006. A review of this plan was undertaken as part of the 2010 independent audit and found it to be compliant with each sub-condition under this plan. ■ A review of the plan against this condition was also undertaken for the audit, and found that each requirement of this plan was covered by the BVMP. ■ The auditors sighted emails between Peter Barton and Mark Ihlein of SSC regarding the original BVMP which resulted in SSC endorsing the plan (Document 75). ■ The auditors sighted approval from DP&I for the original BVMP (Document 74). A letter approving the revised BVMP was also sighted (Document 72). 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>j) measures to monitor and mitigate impacts of blasting on rail and road infrastructure;</p> <p>k) measures to manage and mitigate dust generation from blasting;</p> <p>l) procedures for the investigation of blast related complaints from ACP, in consultation with other mines in the event of cumulative related impacts</p> <p>m) procedures for the notification of occupiers of buildings and residents prior to detonation of each blast; and</p> <p>n) measures to ensure no damage by fly rock to people, property, livestock and powerlines.</p> <p>The BVMP shall be submitted for the approval of the Director-General, no later than one month prior to the commencement of blasting, or within such period otherwise agreed by the Director-General. Blasting shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the BVMP to Council, EPA, and DRE within 14 days. The Applicant shall make the BVMP available for public inspection on request.</p>			
6.27	<p>The Applicant shall, in consultation with SSC, RMS and RIC, prepare and implement a Road and Rail Closure Management Plan (RRCMP) to the satisfaction of the Director-General. The Plan shall include, but not be limited to, the following matters:</p> <p>a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent;</p> <p>b) details of the proposed safety management measures during the period of the road closure and blast;</p> <p>c) details of the procedures for closing Glennies Creek Road the railway and the New England Highway, and the period which they will be closed during blasting activities;</p> <p>d) methods for ensuring the safety of road and rail users and the general public during the blast period;</p>	<ul style="list-style-type: none"> ■ ACOL has implemented a Rail and Road Closure Plan (Document 26) that was last amended in January 2004. A review of this plan was undertaken as part of the 2010 independent audit and found it to be compliant with each sub-condition under this plan. ■ A review of the plan against this condition was also undertaken for the audit, and found that each requirement of this plan was covered by the plan. ■ The auditors sighted emails between Peter Barton and Mark Ihlein of SSC regarding the original BVMP which resulted in SSC endorsing the plan (Document 75). ■ The auditors sighted approval from DP&I for the BVMP (Document 74). 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>e) strategies for informing road and rail users and the local community of the proposed closures;</p> <p>f) details of the procedures for permitting the passage of emergency vehicles during the road closure. This shall also include details of the proposed methods for sufficiently notifying emergency service providers of the proposed times and period of the road closures;</p> <p>g) methods for clearing any debris resulting from a blast; and</p> <p>h) details of the disruptions that are likely to occur during the closure period.</p> <p>The RRCMP shall be submitted for the approval of the Director-General, no later than one month prior to the commencement of blasting, or within such period otherwise agreed by the Director-General. Blasting shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the RRCMP to Council, RIC, RMS, EPA, and DRE within 14 days. The Applicant shall make the RRCMP available for public inspection on request.</p>			
Blast Monitoring and Inspection				
6.28	<p>To determine compliance with airblast overpressure and ground vibration criteria:</p> <p>a) Airblast overpressure and ground vibration levels must be measured at the most potentially affected residence or other noise sensitive receiver for all blasts carried out at the development;</p> <p>b) Instrumentation used to monitor compliance must meet the requirements of Australian Standard 2187.2 of 1993.</p> <p>The results of the blast monitoring must be submitted to EPA at the end of each reporting period and be summarised and interpreted in the AEMR.</p>	<ul style="list-style-type: none"> ■ Figure 1 of the BVMP shows the location of blast monitors at; <ul style="list-style-type: none"> ▶ the nearest residence to the mine within Camberwell village ▶ St Clements Church ▶ A mine owned residence to the south-east of the NEOC pit. ▶ The Main Northern Railway Line to the north of the NEOC bit. ■ Blast monitoring is reported in Section 3.9 of each AEMR (Documents 8-10) and evidence was found to show each AEMR was submitted to the EPA (refer to Condition 9.2). ■ AS 2187.2 1993 has been superceeded by AS 2187.2-2006. Condition J3.1.2(b) of this standard states that 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
		<p>monitoring instruments should be calibrated at least every 12 months.</p> <ul style="list-style-type: none"> ■ Calibration certificates were sighted for blast monitors used during the audit period (Documents 81-84). It was noted that no calibration was undertaken during 2012 or 2013, as no blasting occurred during these years. 		
6.29	<p>The Applicant shall investigate any vibration problem(s) associated with above ground floor level of residential buildings which occur as a result of blasting at the mine in relation to the criteria in Conditions 6.22 and 6.23 above. Should such an investigation be necessary the Applicant shall advise the Director-General the result of such investigation and any proposed preventive/remedial measures.</p>	<ul style="list-style-type: none"> ■ Blast vibration limits at St Clements Church and Camberwell village were not exceeded during the audit period (refer to Documents 8-10). No vibration damage to residential buildings was identified during the audit period. 		C
6.30	<p>Upon written request of the owner of any dwellings located in Camberwell Village or within two (2) kilometres of the blasting locations, the Applicant shall arrange at its own costs, for the inspection by a technically qualified person agreed to by both parties, to record the material condition of any structure on such property within 14 days of receipt of the request. The Applicant shall supply a copy of any inspection report, certified by the person who undertook the inspection, to the relevant property owner within fourteen (14) days of receipt of the report.</p>	<ul style="list-style-type: none"> ■ No requests for independent inspections of any dwellings were received during the audit period. 		N/A
6.31	<p>The Applicant shall arrange at its own costs, for the inspection by a technically qualified person agreed to by the Director-General, to record the material condition of the St Clements Anglican Church and Camberwell Community Hall prior to the commencement of blasting. The Applicant shall supply a copy of any inspection report, certified by the person who undertook the inspection, to the relevant property owner and the Director-General within fourteen (14) days of receipt of the report.</p>	<ul style="list-style-type: none"> ■ No requests for independent inspections of any dwellings were received during the audit period. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
6.32	Upon receipt of a written request from the relevant property owner or manager, the Applicant shall investigate any blasting impacts or exceedances of blast criteria associated with the development at the St Clements Anglican Church or Camberwell Community Hall. Should such an investigation be necessary the Applicant shall advise the Director-General the result of such investigation and any proposed preventive/remedial measures.	<ul style="list-style-type: none"> No requests for independent inspections of any dwellings were received during the audit period. ACOL commissioned a structural condition survey of private properties in the Camberwell Village area in 2003 and of St Clement's Church in 2005, in response to concerns raised by local residents. Structural issues identified at the church were not found to be associated with blasting activities. 		N/A
6.33	The Applicant shall incur the costs for any damage to Glennies Creek Road, the Railway, and the New England Highway resulting from any blast related activities. The repairs shall be undertaken to a standard acceptable to SSC, RMS and RIC.	<ul style="list-style-type: none"> No damage to public roads and highways, and railways was identified as being associated with blasting operations at ACOL during the audit period. 		N/A
Noise Control				
Noise Criteria				
6.34	Except as may be expressly provided by an EPA license, noise generated by the development must not exceed the limits specified in Table 10 below. Refer to Table 10 Noise Limits (dB(A))	<ul style="list-style-type: none"> Quarterly operational noise monitoring was undertaken by Spectrum Acoustics for the 2009-2010, 2010-2011 and 2011-2012 AEMR periods and no exceedances against the criteria listed in this condition were observed. 		C
6.35	The Applicant shall ensure that the design, construction and operation of the ACP shall not create amenity problem(s) associated with low frequency vibration. In the event of a problem arising the Applicant shall, in consultation with the DEC, investigate the cause of any low frequency vibration associated with the ACP and report to the Director-General the result of any such investigation and practical mitigation measures that can be adopted to eliminate such problem.	<ul style="list-style-type: none"> No complaints regarding low frequency vibration were received during the audit period (complaints record were sighted by the auditors – refer to Document 152) 		C
Noise Acquisition Criteria				
6.36	The acquisition zone for noise is defined by predicted or demonstrated exceedance of the noise levels shown in Table 11 below: Refer to Table 11 Acquisition Noise Limits (dB(A)).	<ul style="list-style-type: none"> No requests for acquisition were received during the audit period. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
Interpretation of Noise Levels				
6.37	<p>For the purpose of Conditions 6.34 and 6.36:</p> <ul style="list-style-type: none"> ■ Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays, ■ Evening is defined as the period from 6pm to 10pm ■ Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays. 	<ul style="list-style-type: none"> ■ Noted 		N/A
6.38	<p>Noise from the premises is to be measured at the most affected point on or within the residential boundary or at the most affected point within 30m of the dwelling where the dwelling is more than 30m from boundary to determine compliance with the LAeq(15 minute) noise limits in condition 6.34. Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy. The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.</p>	<ul style="list-style-type: none"> ■ Section 6 of the NMP (Document 34) states that all noise monitoring undertaken for ACOL will comply with the NSW Industrial Noise Policy (EPA 2000), which aligns with the requirements of this condition. ■ It was noted that the noise monitor at the Stapleton property was moved to be approximately 150 metres from the residence (closer to ACOL) and that the 2007 audit found evidence that this had been approved by DP&I and EPA. 		C
6.39	<p>Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with the LA1(1 minute) noise limits in condition 6.34.</p>	<ul style="list-style-type: none"> ■ Section 6 of the NMP (Document 34) states that all noise monitoring undertaken for ACOL will comply with the NSW Industrial Noise Policy (EPA 2000), which aligns with the requirements of this condition. 		C
6.40	<p>The noise emission limits identified in condition 6.34 apply under the following meteorological conditions;</p> <ol style="list-style-type: none"> a) wind speeds up to 3m/s at 10 metres above ground level; and b) temperature inversion conditions of up to 3oC/100m. 	<ul style="list-style-type: none"> ■ The AEMRs relevant to the audit period (Documents 8-10) show that some noise measurements were undertaken when wind speed exceeded 3m/s eg.: <ul style="list-style-type: none"> ▶ 15 November 2011 at Stapleton, Clark and Horadam residences (max windspeed 4.4m/s). ▶ 15 February 2012 at Richards, Stapleton, Clark, Horadam and Moss residences (max windspeed 3.7m/s). ■ The Spectrum Acoustics Quarterly Noise Monitoring Report 15 November 2011 states <i>Meteorological data used in this report was supplied by the mine from their</i> 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
		<p><i>automatic weather stations. Wind speed and direction have been interpreted from graphical representations of 10 minute intervals'.</i></p> <ul style="list-style-type: none"> ■ Temperature inversion limits were complied with. ■ As no noise exceedances occurred during the audit period, ACOL are considered to be in compliance with this condition. 		
Hours of Operation				
6.41	<p>Open cut mining activities must only be conducted between 7am to 10pm Monday to Saturday and 8am to 10pm Sundays and Public Holidays.</p>	<ul style="list-style-type: none"> ■ Interviews with Environment coordinator (Scotney Moore) and Safety and Training Manager (Mark Cook) confirmed that working hours are monitored for all staff on-site. Controls to monitor and limit working hours include: <ul style="list-style-type: none"> ▶ Employees are required to log on and off at the start and end of each shift. ▶ Supervisors review log in and log-off times for OH&S and compliance purposes. ▶ Contractors are required to log on- and off at the sites administration office via an automated system that will not allow log in out of hours (i.e. standard construction hours). This system automatically alerts relevant management staff if a contractor works past their required log off time. ■ Non-compliance. On 14 November 2010, a complaint was made to the DP&I compliance branch regarding a dozer commencing operation at 7.45 am (15 minutes prior to its approved start time). This complaint resulted in an infringement notice being issued to ACOL by DP&I. ACOL responded to this incident by implementing the following procedures: <ul style="list-style-type: none"> ▶ Open Cut Examiner calls a start time over the radio and note this time on the shift report. ▶ No open cut machinery is to move from the go line until this is called. 	<ul style="list-style-type: none"> ■ Refer to Condition 2.8 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
Noise Management Plans				
6.42	<p>The Applicant shall prepare and implement, a Construction Noise Management Plan (CNMP) in consultation with SSC, to the satisfaction of the Director-General. The Plan shall include, but not be limited to the following matters:</p> <ul style="list-style-type: none"> a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent; b) compliance standards; c) community consultation; d) complaints handling monitoring/system; e) site contact person to follow up complaints; f) methods for the management of construction related traffic noise impacts; g) mitigation measures; h) the design/orientation of the proposed mitigation methods demonstrating best practice; i) construction times; j) contingency measures where noise complaints are received; and k) monitoring methods and program to comply with requirements of conditions 6.44-6.48. <p>The CNMP shall be submitted for the approval of the Director-General, no later than one month prior to the commencement of construction, or within such period otherwise agreed by the Director-General. Construction shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the CNMP to Council, EPA, and DRE within 14 days. The Applicant shall make the CNMP available for public inspection on request.</p>	<ul style="list-style-type: none"> ■ The CNMP has been superceded by the current NMP, as approved by DP&I (refer to Condition 6.42). 		C
6.43	<p>The Applicant shall prepare and implement a Noise Management Plan (NMP) for the ACP mine, to the satisfaction of the Director-General. The EPA SSC, and nearby mines shall be consulted prior to the finalisation of the Noise Management Plan. The Plan shall include:</p> <ul style="list-style-type: none"> a) demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with 	<ul style="list-style-type: none"> ■ ACOL has implemented a Noise Management Plan (NMP) (Document 34) that was last amended in August 2006. A review of this plan was undertaken as part of the 2010 independent audit and found it to be compliant with each sub-condition under this plan. ■ A review of the plan against this condition was also undertaken for the audit, and found that each 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>the conditions of this consent;</p> <p>b) details of the methods to comply with requirements of conditions 6.44-6.48;</p> <p>c) details regarding operating configuration; determining survey intervals; weather conditions and seasonal variations; selecting variations, locations, periods and times of measurements;</p> <p>d) detail management measures where the target criteria in condition 6.34 of this consent are predicted to be exceeded, or are exceeded during mining operations;</p> <p>e) redefine both the acquisition and management zones on a yearly basis in the AEMR, unless otherwise agreed by the Director-General. This review shall draw upon the noise monitoring results obtained during the previous year and incorporate noise modelling to provide a forward plan of predicted noise levels for the year ahead;</p> <p>f) specify the procedures for a noise monitoring program for the purpose of undertaking independent noise investigations;</p> <p>g) outline the procedure to notify property owners and occupiers likely to be affected by noise from the operations;</p> <p>h) establish a protocol for handling noise complaints that include recording, reporting and acting on complaints, particularly where complaints are received and it is demonstrated noise levels are in excess of the criteria contained in this consent;</p> <p>i) record appropriate mechanisms for community consultation;</p> <p>j) outline proactive/predictive and reactive mitigation measures to be employed on the site to limit noise emissions;</p> <p>k) identify longer term strategies directed towards mitigating noise levels that exceed the noise target levels in condition 6.34;</p>	<p>requirement of this plan was covered by the NMP.</p> <ul style="list-style-type: none"> ■ The auditors sighted emails between Peter Barton and Mark Ihlein of SSC regarding the original NMP which resulted in SSC endorsing the plan (Document 75). ■ The auditors sighted approval from DP&I for the original NMP (Document 74). A letter approving the revised NMP was also sighted (Document 72). 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>l) outline measures to reduce the impact of intermittent, low frequency and tonal noise (including truck reversing alarms);</p> <p>m) survey and investigate noise reduction measures from plant and equipment annually, subject to noise monitoring results and/or complaints received, and report in the AEMR at the conclusion of the first 12 months of operations and set targets for noise reduction taking into consideration valid noise complaints in the previous year; and</p> <p>n) include details of the inter-relationship of this plan with Noise Management Plans of other mines in the area.</p> <p>The NMP shall be submitted for the approval of the Director-General, no later than one month prior to the commencement of mining operations, or within such period otherwise agreed by the Director-General. Mining operations shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the NMP to Council, EPA, and DRE within 14 days. The Applicant shall make the NMP available for public inspection on request.</p>			
6.43A	<p>Within 1 month of placing overburden on the eastern emplacement area above RL 125 metres, the Applicant shall revise the Noise Management Plan to include a dumping strategy for the eastern emplacement area to minimise noise impacts and ensure compliance with the noise criteria in the consent, to the satisfaction of the Director-General.</p>	<ul style="list-style-type: none"> ■ Overburden emplacement was finalised prior to the audit period. ■ Compliance with this condition was verified as part of the 2010 independent audit. 		N/A
Noise Monitoring				
6.44	<p>The Applicant shall conduct detailed noise monitoring surveys at potentially affected residences (including potentially affected residences to the east of the mine prior to the cessation of overburden emplacement activities on the eastern emplacement area), on a 3-monthly basis</p>	<ul style="list-style-type: none"> ■ Quarterly operational noise monitoring was undertaken by Spectrum Acoustics for the 2009-2010, 2010-2011 and 2011-2012 AEMR periods and no exceedances against the criteria listed in this condition were observed. ■ ACOL has continued monitoring noise at locations to the east of the mine following cessation of overburden emplacement and rehabilitation on the eastern emplacement area. 	<ul style="list-style-type: none"> ■ Consider reviewing noise monitoring requirements for locations east of the eastern emplacement area in consultation with DP&I now that noise generating activities associated with the NEOC have ceased. 	C

	Condition	Findings	Recommendation	Rating: C N/C N/A
6.45	A noise compliance assessment report shall be submitted to EPA and the Director-General within three months of commencement of normal operations at the premises and on an annual basis thereafter. The report shall be prepared by an accredited acoustical consultant and shall determine compliance with the noise limits in condition 6.34. Annual noise compliance reports may be incorporated into the AEMR.	<ul style="list-style-type: none"> ■ This requirement applied prior to the audit period. ■ Compliance with this condition was verified as part of the 2007 independent compliance audit. 		C
6.46	Noise from the premises is to be measured at the most affected point on or within the residential boundary or at the most affected point within 30m of the dwelling where the dwelling is more than 30m from boundary to determine compliance with the LAeq _(15 minute) noise limits in condition 6.34. Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy. The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.	<ul style="list-style-type: none"> ■ This condition is generally identical to Condition 6.38. ■ Section 6 of the NMP (Document 34) states that all noise monitoring undertaken for ACOL will comply with the NSW Industrial Noise Policy (EPA 2000), which aligns with the requirements of this condition. ■ It was noted that the noise monitor at the Stapleton property was moved to be approximately 150 metres from the residence (closer to ACOL) and that the 2007 audit found evidence that this had been approved by DP&I and EPA. 		C
6.47	Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with the LA1 _(1 minute) noise limits in condition 6.34.	<ul style="list-style-type: none"> ■ This condition is identical to Condition 6.39. ■ Section 6 of the NMP (Document 34) states that all noise monitoring undertaken for ACOL will comply with the NSW Industrial Noise Policy (EPA 2000), which aligns with the requirements of this condition. 		C
6.48	Noise monitoring results shall be of sufficient detail to assess whether ACP noise contains low-frequency, tonal or impulsive components as defined in Section 4 of the INP.	<ul style="list-style-type: none"> ■ Noise monitoring results presented in the AEMRs (Documents 8-10) and Quarterly Monitoring Reports do not provide any analysis on frequency, tonality or impulsive components of noise monitored. ■ Non-compliance. The NMP does not specify measures to analyse noise results for these characteristics. 	<ul style="list-style-type: none"> ■ Ensure noise monitoring reporting includes an analysis of low-frequencies, tonality and impulsive sounds. 	NC
Exceedence of Noise Criteria				
6.49	In the event that: a) a landowner or occupier considers that noise from the project at his/her dwelling is in excess of the criteria	<ul style="list-style-type: none"> ■ One request was received from a private resident for an independent review of noise generated from the site. The request was made to DP&I who passed it on to 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>detailed in Table 5 of condition 6.34 above; or,</p> <p>a landowner, having selected a suitable site for a dwelling on his/her vacant land, considers that noise from the project at his/her future dwelling would be excess of the criteria detailed in Table 5 of condition 6.34 above,</p> <p>and the Director-General is satisfied that an investigation is required, the Applicant shall, upon the receipt of a written request:</p> <p>a) consult with the landowner or occupant affected to determine his/her concerns;</p> <p>b) make arrangements for, and bear the costs of, following consultation with other mine operations in the vicinity where necessary, appropriate independent noise investigations in accordance with the Noise Management Plan, and to the satisfaction of the Director-General, to quantify the impact and determine the source of the effect and the contribution of ACP to the effect</p> <p>c) take steps in accordance with a noise reduction plan prepared as part of the Noise Management Plan, if exceedances are demonstrated to result from ACP. This shall include:</p> <p>i) introduction of additional controls, either on noise emission from individual sources on the site or on site operations or modify operations, to ensure that the criteria in the Table 5 of condition 6.34 above are achieved, as far as possible; or</p> <p>ii) with the agreement of the landowner, and in the case of cumulative impacts the other relevant mining operations, undertaking of noise control at the dwelling to achieve internal noise levels due to ACP alone or due to all mining activities, as relevant, which are at least 10dBA below the relevant external noise criterion in Table 5 of condition 6.34. Internal noise levels should be measured at the centre of any habitable room; or</p> <p>iii) entering into an agreement with the landowner, and in the case of cumulative impacts the other</p>	<p>ACOL (refer to Document 87).</p> <ul style="list-style-type: none"> ■ The request related to potential noise exceedances at the property and the source of noise received there. ■ ACOL commissioned an independent noise consultant (Bridges Acoustics) who prepared a study for the resident, for the period of August to November 2011. This study was provided to DP&I in July 2012. A copy of the study was also provided to the resident (refer to Document 88). ■ DP&I provided a response to this study on 31 July 2012 (Document 154), accepting the study as finalised and noting that the findings indicate that ACOL did not produce audible noise at the residence during the review period. ■ The letter from DP&I (Document 151) stated that DP&I are generally satisfied that the requirements of this condition were satisfied for the incident. 		

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>relevant mining operations in the area and the landowner, to provide such other forms of benefit or amelioration of the impacts of noise as may be agreed between the parties, as providing acceptable compensation for the noise levels experienced;</p> <p>d) conduct follow up investigation(s) to the satisfaction of the Director-General, where necessary.</p> <p>Note: Vacant land in this condition means the whole of the lot in a current plan registered at the Land Titles Office as at the date of this consent that does not have a dwelling situated on the lot and is permitted to have a dwelling on that lot.</p>			
6.50	<p>If the independent noise investigation(s) in condition 6.49 above confirms that noise criteria in condition 6.36 are being exceeded, and the measures in condition 6.49(c) do not reduce the noise levels below the criteria in Table 5 of condition 6.34, or establish an agreement acceptable to the relevant parties, the Applicant shall, at the written request of the landowner, acquire the relevant property. Acquisition shall be in accordance with the procedures set out in conditions 11.5-11.11.</p> <p>In the case of cumulative levels in excess of the criteria in Table 6 of condition 6.36, should the Applicant form an agreement with the relevant contributing parties under a Joint Acquisition Management Plan pursuant to Condition 11.12, the Applicant shall purchase an affected property in accordance with this Plan. Should a Joint Acquisition Management Plan not be prepared between the relevant contributing parties, the Applicant shall acquire the property in accordance with conditions 11.5-11.11.</p>	<ul style="list-style-type: none"> One independent review was undertaken during the audit period (refer to Condition 6.49). This review concluded that the noise criterion listed under Condition 6.36 were not being exceeded. 		C
6.51	<p>If continued complaints and noise investigations confirm that noise criteria in Table 5 of condition 6.34 are being exceeded, but are less than the noise levels in condition 6.36, the Applicant shall continue to negotiate with the landowner, and other mines in the vicinity where relevant, until a resolution to the satisfaction of the Director General is reached.</p>	<ul style="list-style-type: none"> Only one request for an independent noise review was received in the audit period. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
6.52	If a landowner disputes any noise mitigation or other measures proposed by the Applicant in accordance with condition 6.49 above, the matter shall be referred by either the Applicant or landowner to the Director-General in consultation with SSC. If the matter cannot be resolved within 21 days, the matter shall be referred to the Independent Dispute Resolution Process.	<ul style="list-style-type: none"> No disputes regarding noise mitigation occurred during the audit period. 		N/A
6.53	Further independent investigations shall cease if the Director-General is satisfied that the relevant criteria in Table 5 of condition 6.34 are not being exceeded and are unlikely to be exceeded in the future.	<ul style="list-style-type: none"> Refer to condition 6.49. 		C
Lighting Emissions				
6.54	All external lighting associated with the development shall comply with Australian Standard AS4282(INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting. Prior to the commencement of mining operations, the Applicant shall certify in writing, to the satisfaction of the Director-General, that all relevant lighting associated with the development will meet the requirements of this condition, and has generally been designed and installed to minimise lighting impacts outside the site.	<ul style="list-style-type: none"> ACOL has implemented a Lighting Management Plan (Document 33). Section 8 of the LMP makes the Open Cut Mining/CHPP contractor and Mine/CPP Supervisors responsible to 'Ensure that all external lighting complies to AS4282'. The 2007 independent audit found that ACOL provided DP&I with a letter certifying that all lighting will comply with AS4282 in November 2003. 		C
6.55	The Applicant shall design and construct all roads and areas where mobile equipment and vehicles move on the site to minimise off-site lighting impacts from equipment lighting and headlights. Lighting from equipment and vehicles shall not shine directly on residences or vehicles moving along public roads at any time.	<ul style="list-style-type: none"> The audit site inspection found that lighting at the mine is generally restricted to the administration facilities, underground portals and CHPP area. Major portable lighting plant are generally restricted to areas within the former open cut pit and as such are shielded from surrounding areas by topography and features such as the visual bund located along the New England Highway and eastern emplacement area. 		C
6.56	The Applicant shall prepare a Lighting Management Plan (LMP) in consultation with SSC, and to the satisfaction of the Director-General. The Plan shall include, but not be limited to: <ol style="list-style-type: none"> demonstration of consistency with commitments made in documents listed in condition 1.2 and compliance with the conditions of this consent; 	<ul style="list-style-type: none"> ACOL has implemented a LMP (Document 33) that was last amended in January 2004. A review of this plan was undertaken as part of the 2010 independent audit and found it to be compliant with each sub-condition under this plan. A review of the plan against this condition was also undertaken for the audit, and found that each 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>b) details of the implementation of visual controls to screen, direct or manage all on-site lighting from mine related activities in respect of residences and roadways;</p> <p>c) details of the planting of vegetation screens along the mine boundary and around surface facilities and infrastructure;</p> <p>d) details of technical measures and work practices necessary to minimise the spillage of light from areas to be illuminated, and to minimise the total night time glow from the mine;</p> <p>e) details of the construction of mine facilities roads, and work areas, or placement of visual screens and/or overburden emplacements to screen lighting impacts;</p> <p>f) details of the proposed process and measures to address complaints that may be received from residents or road users impacted by lighting from the mine site; and,</p> <p>g) details of any other effective operating practices to manage potential lighting impacts.</p> <p>The LMP shall be submitted for the approval of the Director-General, no later than one month prior to the commencement of mining operations, or within such period otherwise agreed by the Director-General. Mining operations shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the LMP to Council, EPA, and DRE within 14 days. The Applicant shall make the LMP available for public inspection on request.</p>	<p>requirement of this plan was covered by the LMP.</p> <ul style="list-style-type: none"> ■ The auditors sighted emails between Peter Barton and Mark Ihlein of SSC regarding the LMP which resulted in SSC endorsing the plan (Document 75). ■ The auditors sighted approval from DP&I for the LMP (Document 74). 		
6.57	<p>The Applicant shall report on the effectiveness of the lighting emission controls in the AEMR.</p>	<ul style="list-style-type: none"> ■ Section 3.11 of each AEMR (refer to Documents 8-10) provide discussion of lighting and visual impacts. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
7	TRANSPORT AND UTILITIES			
	Road Construction			
	Road Transport			
7.1	No coal shall be hauled from the mine site on public roads, except under emergency circumstances and with the prior written approval of the Director-General and SSC.	<ul style="list-style-type: none"> ■ Open cut operations ceased at the site in September 2011. During open cut operations, ROM coal was hauled from the pit to the CHPP which is located on the edge of the pit. No public roads were crossed or used during this operation, as confirmed by the audit site inspection. ■ ROM coal produced at the underground mine is transported by conveyor to the CHPP. Product coal is transported by the CHPP to the adjacent rail loader via conveyor. No public roads are crossed or used for coal transport. ■ No emergency circumstances occurred during the audit period that necessitated that use of public roads for coal transport. 		C
7.2	The Applicant shall ensure that all employees and contractors travelling to and from the mine site utilise the designated mine access road off Glennies Creek Road.	<ul style="list-style-type: none"> ■ The mine access road located off Glennies Creek Road is the only way the site can be accessed via a public road. 		C
7.3	Any damage caused to the New England Highway pavement and shoulder caused by the movement of heavy vehicles for oversize equipment deliveries to the site shall be repaired at the Applicant's expense.	<ul style="list-style-type: none"> ■ The Environment and Community Coordinator (Scotney Moore) to his knowledge indicated that no requests have been received from RMS regarding repair of road damage on the New England Highway. 		C
7.4	No coal shall be transported via any internal haul road to the Macquarie Generation conveyor as indicated in the EIS. Note: Condition 1.19 prohibits the construction of the private coal haul road.	<ul style="list-style-type: none"> ■ The Environment and Community Coordinator (Scotney Moore) stated that a conveyor was not built to Macquarie Generation. This was confirmed by the audit site inspection. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
Local Roads				
7.5	<p>The Applicant shall design and construct the following works in accordance with Council's Development Design and Construction Specifications:</p> <p>a) widen the radius of Glennies Creek Road at the New England Highway intersection to overcome the acute intersection angle;</p> <p>b) reseal the Glennies Creek Road surface from the New England Highway to the proposed mine entry road;</p> <p>c) construct an AUSTRROADS type B intersection incorporating a left turn speed reducing lane to the new entry, and widen the eastern side of Glennies Creek Road to allow a right turn ingress lane from the intersection and an external slip lane for Glennies Creek Road; and,</p> <p>d) build a new realigned section of road to accommodate the new open cut mine.</p> <p>Plans for all works shall be submitted and approved by Council prior to commencement of works.</p>	<ul style="list-style-type: none"> ■ This condition relates to activities that occurred prior to the audit period. ■ The Glennies Creek Road upgrade was completed prior to 2007 and compliance with this condition was verified as part of the 2007 independent compliance audit. 		C
7.6	<p>The Applicant will construct upgrade works on Glennies Creek Road in accordance with the conceptual design provided in supplementary information referred to in condition 1.2, with the exception that the design standard is to be upgraded to 80kph. All works to be to the satisfaction of SSC.</p>	<ul style="list-style-type: none"> ■ Refer to condition 7.5 		C
State Roads				
7.7	<p>The Applicant shall obtain approval from the RMS for the upgrade of the intersection at Glennies Creek Road and the New England Highway, which shall be generally in accordance with the conceptual design provided in supplementary information referred to in condition 1.2.</p>	<ul style="list-style-type: none"> ■ The 2010 independent audit found evidence that plans for the Glennies Creek Road upgrade had been approved by the RTA (now RMS). ■ Refer to condition 7.5 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
7.8	The Applicant shall obtain RMS approval under Section 138 of the Roads Act for all works within the New England Highway road reserve.	<ul style="list-style-type: none"> ■ The 2010 independent audit found evidence Section 138 approvals had been obtained for works within the New England Highway corridor, including underground mine workings. ■ Refer to condition 7.5 		C
7.9	The Applicant shall execute a Works Authorisation Deed with the RMS for the proposed road works on State Highway No. 9 New England Highway and proposed activities relating to the construction, operation and maintenance of a private haul road crossing of the Highway. The Works Authorisation Deed must be executed prior to commencement of any activity within the Highway road reserve.	<ul style="list-style-type: none"> ■ The Environment and Community Coordinator (Scotney Moore) stated that the private haul road crossing of the New England Highway was not constructed. This was confirmed by the audit site inspection. 		N/A
7.10	The Applicant shall bear all costs associated with the design, survey, approval, construction, maintenance, monitoring, rehabilitation and removal of all mine related infrastructure and works affecting the New England Highway road reserve.	<ul style="list-style-type: none"> ■ ACOL has developed an Asset Management Plan for Roads and Maritime Services (Document 50). 		C
7.11	The Applicant shall pay to the RMS the cost incurred by the RMS of making good any damage to the New England Highway, and its associated structures, caused by activities associated with this consent. Provided however that the amount to be paid by the Applicant as aforesaid shall be reduced by such sum of money, if any, as may be paid to the RMS from the Mine Subsidence Compensation Fund constituted under the Mine Subsidence Compensation Act, 1961, in the form of a claim for compensation for the same damage.	<ul style="list-style-type: none"> ■ The Environment and Community Coordinator (Scotney Moore) to his knowledge indicated that no requests have been received from RMS regarding repair of road damage on the New England Highway. 		N/A
7.12	Activities associated with this consent shall not restrict in any way the ability of the RMS and its contractors to access and/or undertake works to Bowmans Creek Bridge and its underside.	<ul style="list-style-type: none"> ■ The Environment and Community Coordinator (Scotney Moore) to his knowledge indicated that no directions or complaints were received from RMS during the audit period with regards to the Bowmans Creek Bridge on the New England HWY. 		C
7.13	Any adjustments or alterations to activities associated with this consent resulting from improvements/upgrade of the New England Highway shall be the responsibility of the Applicant and at no cost to the RMS.	<ul style="list-style-type: none"> ■ Refer to condition 7.11. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
Lemington Road Alignment				
7.14	<p>The Applicant shall, together with the owner of the Ravensworth Operations Project, commission and implement a detailed report on a final alignment for Lemington Road, to the satisfaction of the Director-General. The report shall be prepared by an independent person/s whose appointment has been approved by the Director-General, and must:</p> <p>a) be commissioned by 30 June 2011 and be finalised by 31 March 2012;</p> <p>b) be prepared in consultation with Council, the RMS, MSB and Macquarie Generation;</p> <p>c) consider predicted subsidence impacts associated with the proposed extraction by the Applicant of each seam that it is permitted to extract within the underground mining area (including as to whether a stacked or offset panel alignment is employed), and proposed management of these subsidence impacts (including the safety of the public and other road users);</p> <p>d) assess any need for the final realignment to vary from the interim realignment, including consideration of the most appropriate status for the final alignment (i.e. public or private road) and most appropriate timing of construction;</p> <p>e) identify a preferred option for the final alignment of Lemington Road;</p> <p>f) assess the environmental, social and economic impacts associated with the realignment options, particularly the preferred option;</p> <p>g) determine the most appropriate responsibility for funding ongoing maintenance of the realigned roadway, including costs associated with repair of any future subsidence-related impacts on the roadway; and</p> <p>h) include an action plan for implementation of its recommendations, including any variation to the interim alignment and the funding of monitoring and management costs.</p>	<ul style="list-style-type: none"> ■ ACOL and Ravensworth Operations commissioned GHD to prepare an independent review of Lemington Road (refer to Document 92). Compliance with each sub section of this condition is outlined below: <ul style="list-style-type: none"> a) ACOL/Ravensworth Operations submitted a request to extend the required timeframe for this report and provide the report in 2 stages. Stage 1 of the report was provided to DP&I on 23 August 2012. The full report was provided on 16 August 2013. b) Section 4 of the report details consultation activities undertaken during preparation of the report (including meetings with MSB, RMS, SSC and Macquarie Generation). c) Subsidence impacts, in terms of management and costs are considered throughout the report. d) Section 2.1 and 3 of the report consider two options for the final alignment of the road. e) Covered by Sections 3, 4 and 7 of the report. f) Covered by Section 3 of the report. g) Covered by Section 5.3 of the report. h) Actions for implementation of findings are provided throughout the report. ■ No requests for additional reports were received from DP&I under this condition during the audit period. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>If so directed by the Director-General, the Applicant shall, together with the owner of the Ravensworth Operations Project, commission and implement additional reports following extraction of each seam that the Applicant is permitted to extract. Each such additional report shall review the impacts of previous subsidence on Lemington Road/Brunkers Lane, review existing measures to monitor and manage subsidence impacts, and recommend appropriate monitoring and management measures to address future subsidence impacts (including any continuing need to realign Lemington Road), to the satisfaction of the Director-General.</p> <p>The Applicant shall fund 50% of the costs of reports prepared under this condition and shall implement the recommendations of such reports, to the satisfaction of the Director-General.</p> <p>Any dispute over the interpretation or implementation of reports prepared under this condition shall be determined by the Director-General, whose decision shall be final.</p> <p>Notes: 1) The interim realignment of Lemington Road is intended to be constructed by the owner of the Ravensworth Operations Project, partly on the current alignment of Brunkers Lane, prior to full extraction of the Pikes Gully Seam by the Applicant.</p> <p>2) The owner of the Ravensworth Operations Project will be expected to fund the other 50 percent of report costs and to have similar responsibilities regarding implementation.</p> <p>3) Stacked or offset panel alignments for the Upper Liddell, Upper Lower Liddell and Lower Barrett seams are shown in the plans in Schedule B.</p>			

	Condition	Findings	Recommendation	Rating: C N/C N/A
7.15	<p>The Applicant shall be responsible for implementing controls to ensure road traffic safety (including monitoring, maintenance and repairs of subsidence impacts) during any longwall extraction which may cause subsidence impacts to Brunkers Lane/Lemington Road.</p> <p>Note: This responsibility for implementing controls exists notwithstanding that funding of these controls may come from other parties, such as the owner of the Ravensworth Operations Project or the MSB.</p>	<ul style="list-style-type: none"> ■ Undermining of Lemington Road was occurring during the audit. The auditors sighted warning signs and traffic controls (reduced speed limit) that had been established by ACOL during this period. ■ ACOL employs an extensive subsidence monitoring regime. During the audit, cracks were observed in Lemington Road. The auditors sighted communications between ACOL and Ravensworth Operations immediately following this incident (Document 112), with ACOL taking responsibility for remediating the damage. Ultimately, no action was taken as the cracks closed within 24 hours of being observed due to the movement of heavy vehicles. 		C
7.16	<i>(Deleted)</i>			N/A
7.17	<i>(Deleted)</i>			N/A
7.18	<i>(Deleted)</i>			N/A
7.19	<i>(Deleted)</i>			N/A
7.20	<i>(Deleted)</i>			N/A
7.21	<i>(Deleted)</i>			N/A
Road Closures				
7.22	<p>The Applicant shall maintain signs on Glennies Creek Road and in Camberwell Village to provide at least 24 hours notice of temporary road closures. The location and wording of the signs are to be approved by SSC. Timetables for road closures are also to be available on the internet. A protocol is to be established in consultation with the emergency services during road closures. Notification shall also be provided to relevant emergency services via fax or other written means seven (7) days prior to the road closure.</p>	<ul style="list-style-type: none"> ■ The auditors sighted a blast/road closure notification sign on Glennies Creek Road during the site inspection. Figure 1 of the Rail and Road Closure Management Plan (Document 26) also shows the location of required signage and road closure points on Glennies Creek Road and the New England Highway. This plan was approved by SSC (refer to Condition 6.27). ■ These signs have not been used since open cut mining ceased in September 2011. ■ A blast notification form for the last blast occurring at the site (14 September 2011). This form notes whether road closure is required. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
		<ul style="list-style-type: none"> Section 6 of the RRCMP provides measures for notifying emergency services prior to blasts occurring. 		
Relocation of Electrical Transmission Lines				
7.23	The Applicant shall, to the satisfaction of Energy Australia and at its own cost, undertake the relocation and/or construction of any electrical transmission lines which may be required as a result of the development. The Applicant shall also bear any costs associated with relocation of Registered Easements for relocated or new transmission lines required as a result of the development. Such work shall be completed prior to any existing line being affected by mining activity from ACP.	<ul style="list-style-type: none"> It was reported that during the audit period, ACOL replaced some timber power poles with concrete poles and upgraded a 132 kV transmission line during the audit period. Some powerlines within underground mining areas were also fitted with rolling conductors to allow for movement. It was stated by the Senior Environmental Scientist assisting ACOL (Gabriel Wardenburg) that approval for these activities was received from Energy Australia during extraction of LW101. 		C
Utility Services				
7.24	The Applicant shall, to the satisfaction of telecommunications providers and at its own cost, or by agreement with relevant parties, undertake the relocation of any telecommunications cables which may be required as a result of the development.	<ul style="list-style-type: none"> No telecommunication lines were relocated during the audit period. 		C
Rail Construction				
7.25	The Applicant shall construct the proposed railway siding to the satisfaction of RIC and at its own costs.	<ul style="list-style-type: none"> Railway siding works were completed in 2004, prior to the audit period. Compliance with this condition was verified as part of the 2007 independent audit. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
8	MONITORING / AUDITING			
8.1	In addition to the requirements contained elsewhere in this consent, the Director-General may, at any time in consultation with the relevant government authorities and Applicant, require the monitoring programs under this consent to be revised or updated to reflect changing environmental circumstances or changes in technology/operational practices. Changes shall be made and approved in the same manner as the initial monitoring programs. All monitoring programs shall also be made publicly available at SSC and on the internet within two weeks of approval by the relevant government authority.	<ul style="list-style-type: none"> No direction has been received from any agencies to change the approved monitoring programs described under the site's management plans. 		N/A
8.2	All sampling strategies and protocols undertaken as part of any monitoring program shall include a quality assurance/quality control plan and shall be included in the relevant environmental management plan. Only accredited laboratories shall be used for laboratory analysis.	<ul style="list-style-type: none"> Non-compliance. The AQMP (Document 29) and Water Management Plan (Document 36) do not specify quality control or assurance measures for their monitoring programs. The WMP specifies that NATA accredited laboratory analysis of samples is required. Non-compliance. The AQMP does not specify how laboratory analysis of dust samples should occur. 	<ul style="list-style-type: none"> Amend management plans to include quality control/assurance measures for sampling and analysis activities, and specify how laboratory analysis should be undertaken. 	NC
Third Party Monitoring / Auditing				
Independent Expert Review				
8.3	The Director-General may, in consultation with OEHL, EPA, DRE, SSC, and other relevant agencies, direct the Applicant to, at the Applicant's own costs, provide ongoing funding for Independent Expert Review of documents, plans, and monitoring programs required by this consent. Independent expert(s) may be required provide independent advice to the Director-General, and through the Director-General to other regulatory authorities. The payments shall be paid according to a schedule specified by the Director-General, should Independent Expert Review be required.	<ul style="list-style-type: none"> No requests for independent expert reviews of any plans, documents or monitoring plans have been received to date. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
8.4	Independent Expert Review shall be carried out by one or more independent experts in relevant disciplines and may include experts in subsidence, water quality / quantity, ecology, groundwater, air quality, noise, or cultural heritage. The Director- General shall select the relevant discipline(s) and appoint the expert(s) in consultation with relevant Government agencies and the Applicant.	<ul style="list-style-type: none"> Refer to condition 8.3 		N/A
8.5	The functions of any Independent Expert Review may include, but not be limited to, assessing and evaluating the following documents required under this consent: a) Environmental Management Plans; b) Monitoring programs and compliance reports; c) End of Panel Reports ; and, d) Annual Environmental Management Reports.	<ul style="list-style-type: none"> Refer to condition 8.3 		N/A
8.6	The results of any review, including any specific recommendations, shall be submitted to the Director-General, OEH, EPA, DRE, and other relevant agencies to be determined by the Director-General. Reports produced by a review shall be made public.	<ul style="list-style-type: none"> Refer to condition 8.3 		N/A
8.7	The Director-General may, after considering any submission made as a result of an Independent Expert Review, notify the Applicant of any requirements with regard to any recommendations made in the submission. The Applicant shall comply with those requirements within such time as the Director-General may require.	<ul style="list-style-type: none"> Refer to condition 8.3 		N/A
Independent Environmental Auditing				
8.8	One year after commencement of construction and every three years thereafter until five years after completion of mining in the DA area, or as otherwise directed by the Director-General, the Applicant shall conduct an environmental audit of the mining and infrastructure areas of the development in accordance with ISO 14010 - Guidelines and General Principles for Environmental Auditing, and ISO 14011 - Procedures for Environmental Auditing (or the current versions), and in accordance with any specifications required by the Director-General. Copies of the report shall	<ul style="list-style-type: none"> ACOL commissioned independent audits in 2004, 2007, 2010 (Documents 11 – 13) and 2013 (this audit). Evidence that the previous independent audit (2010) had been submitted to all required agencies on 29 November 2010 was sighted during the audit (Document 94). The 2010 audit report is dated 'August 2010', however, this appears to relate to the timing of the audit and not its publication or finalisation. Compliance with the 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	be submitted by the Applicant to the Director-General, SSC, OEH, ERS, NoW, DRE, RMS, MSB, and the CCC within two weeks of the report's completion for comment.	required 2 week timeframe for submission to the required agencies therefore cannot be demonstrated.		
8.9	<p>The independent environmental audit shall:</p> <p>a) assess compliance with the requirements of this consent, licenses, and approvals;</p> <p>b) assess the development against the predictions made in the EIS and the predictions and commitments made in the documents listed in condition 1.2;</p> <p>c) (Deleted);</p> <p>d) review the effectiveness of the environmental management of the mine, including any mitigation works;</p> <p>e) be carried out at the Applicant's expense; and</p> <p>f) be conducted by a duly qualified independent person or team approved by the Director-General in consultation with SSC and other relevant agencies.</p>	<ul style="list-style-type: none"> ■ The 2010 audit was found to comply with this condition as follows: <ul style="list-style-type: none"> ▶ Covered by Section 3 of the audit report. ▶ Covered by Section 6 of the audit report. ▶ Covered by Section 7 of the audit report. ▶ Covered by Section 6 of the audit report. ▶ Confirmed by ACOL ▶ Approval from DP&I sighted (refer to Document 155). ■ This audit complies with this condition as follows: <ul style="list-style-type: none"> a) Refer to Section 3 of main report b) Refer to Section 3.3 of main report c) Refer to Section 3 and 4 of main report d) Purchase order from ACOL sighted. e) Approval from DP&I sighted (refer to Document 95). 		C
8.10	The Director-General may, after considering any submission made by the relevant government agencies, SSC and the CCC on the report, notify the Applicant of any requirements with regard to any recommendations in the report. The Applicant shall comply with those reasonable requirements within such time as the Director- General may require.	<ul style="list-style-type: none"> ■ The Environment and Community Coordinator (Scotney Moore) to his knowledge indicated that no directions were received from DP&I following submission of the 2010 audit. 		C
Meteorological Station(s)				
8.11	The Applicant shall establish a meteorological station(s) at a relevant location(s) in accordance with the requirements of AS 2922 1987 "Ambient Air Guide for Siting of Sampling Units" or its updated version or as directed by the EPA. The Meteorological station(s) must be capable of recording wind direction and speed, temperature and sigma theta and be operated in accordance with the requirements of AS 2923-1987 "Ambient Air Guide Horizontal Wind for Air Quality Application", or subsequent relevant standards.	<ul style="list-style-type: none"> ■ ACOL has established meteorological stations at Camberwell Village and on ACOL land near, Camberwell Village. ■ The station located in Camberwell village was sighted during audit site inspections. ■ The 2007 audit sighted a confirmation from the supplier of these stations that they comply with relevant standards. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
8.12	<p>The Applicant must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The applicant must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns:</p> <p>Refer to table in condition 8.12</p>	<ul style="list-style-type: none"> ■ Rainfall is monitored as required and reported in Section 3.12 of each AEMR (Documents 8-10). Wind, rainfall and temperature are also provided on the ACOL website. ■ Non-compliance. The audit did not find evidence to show that the site is recording Sigma-Theta. 	<ul style="list-style-type: none"> ■ Ensure sigma theta is recorded at monitoring stations and provide evidence that this is occurring in a relevant report such as the AEMR. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
9	REPORTING			
	Reports on Operations			
9.1	The Applicant shall report on mine operations in accordance with the mine operations plan (refer to Condition 2.1).	<p>Section 8.5 of the 2013-2017 MOP (Document 7) outlines reporting requirements. This section only requires an AEMR to be prepared, including the following:</p> <ul style="list-style-type: none"> ■ Describe any works carried out in the calendar year and proposed works to be done in the coming year. ■ Previous activities are discussed in Section 2 of each AEMR and future activities are discussed in Section 7. ■ Include a comprehensive review of monitoring results, and any received complaints. ■ Section 3 of the AEMRs provides a comprehensive review of environmental monitoring. Section 4 analyses complaints. ■ Any non-compliances over the previous calendar year and describe what actions were taken against these. ■ A statement of compliance against relevant approval condition is provided for each relevant monitoring parameter and non-compliances identified through internal audits are described. ■ Any trends in monitoring data over the life of the project. ■ The AEMRs provide analysis of long-term trends for key aspects of the operation such as air quality, complaints, rehabilitation and groundwater. ■ An analysis of any discrepancies between the predicted and actual impacts of the project. ■ The AEMRs provide comparison of predicted vs. actual impacts for key issues such as subsidence and groundwater. ■ What measures will be implemented over the current calendar year to improve the environmental performance of the project. ■ Environmental management activities planned for the coming year are described in Section 7 of the AEMRs. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
Annual Environmental Management Report (AEMR)				
9.2	<p>The Applicant shall, throughout the life of the mine and for five years after completion of mining in the DA area, prepare and submit an Annual Environmental Management Report (AEMR) to the satisfaction of the Director-General and DPI Minerals. The AEMR shall review the performance of the mine against the Environmental Management Strategy and the relevant Mining Operations Plans, the conditions of this consent, and other licenses and approvals relating to the mine. To enable ready comparison with the predictions made in the EIS, diagrams and tables, the report shall include, but not be limited to, the following matters:</p> <p>a) an annual compliance audit of the performance of the project against conditions of this consent and statutory approval;</p> <p>b) assess the development against the predictions made in the EIS and the terms and commitments made in the documents listed in condition 1.2;</p> <p>c) (Deleted);</p> <p>d) 34a Groundwater Management Report prepared by an independent expert to the satisfaction of NoW, addressing:</p> <p>i) work done under and the level of compliance with, the groundwater management measures defined in the Groundwater Management Plan; and</p> <p>ii) identification of trends in groundwater monitoring data and comparison with predictions, in documents referred to in condition 1.2 and any previous SMPs, over the life of mining operations.</p> <p>e) a review of the effectiveness of the environmental management of the mine in terms of OEH, EPA, NoW, DRE, and SSC requirements;</p> <p>f) results of all environmental monitoring required under this consent or other approvals, including interpretations and discussion by a suitably qualified person;</p>	<ul style="list-style-type: none"> ■ AEMRs for the reporting periods 2009-2010, 2010-2011 and 2011-2012 were sighted for the audit (refer to Documents 8-10). ■ Evidence was sighted to show that each AEMR was provided to DRE and DP&I for review (refer to Documents 96-98). Letters were received from DP&I (Documents 99-101) approving these reports. ■ A review of each requirement was undertaken against the AEMRs and this found: <ul style="list-style-type: none"> ▶ Internal compliance audits are undertaken against the project approval and MOP each year and reported in Section 1.4 of the AEMRs. ▶ Comparison of key aspects such of the operation such as subsidence and groundwater against predicted impacts are described throughout each AEMR. ■ RPS Aquaterra have prepared annual independent groundwater assessments which are appended to each AEMR. Section 1.1 of these assessments state how they comply with this condition. Evidence was found to show the AEMR was submitted to NOW for comment (refer to Documents 96-98). ■ This requirement is covered by Section 1.4 of the AEMRs. ■ Section 3 of each AEMR provides results of environmental monitoring undertaken for the project. ■ Non-compliance. The results of cultural heritage surveys are not included in the 2012 AEMR (refer to condition 3.31). ■ The AEMRs provide analysis of long-term trends for key aspects of the operation such as air quality, complaints, rehabilitation and groundwater. ■ Non-compliance. The AEMRs do not discuss changes to agricultural land or land suitability as a result of mining operations. 	<ul style="list-style-type: none"> ■ Ensure future AEMRs discuss any impacts to agricultural land, including potential changes to land suitability. 	NC

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>g) reporting requirements under condition 3.31;</p> <p>h) identify trends in monitoring results over the life of the mine;</p> <p>i) an assessment of any changes to agricultural land suitability resulting from the mining operations, including cumulative changes</p> <p>j) a listing of any variations obtained to approvals applicable to the DA area during the previous year;</p> <p>k) the outcome of the mine water balance for the year;</p> <p>l) status of rehabilitation and revegetation works; and</p> <p>m) environmental management targets and strategies for the next year, taking into account identified trends in monitoring results.</p>	<ul style="list-style-type: none"> ■ Approvals relevant to the project are described in Table 1 of each AEMR. ■ Mine water balance results are provided in Tables 10 and 11 of each AEMR. ■ Rehabilitation is discussed in Section 5 of each AEMR. ■ Environmental management activities for the coming year are described in Section 7 of each AEMR. 		
9.3	<p>In preparing the AEMR, the Applicant shall:</p> <p>a) consult with the Director-General during preparation of each report;</p> <p>b) comply with any reasonable requirements of the Director-General or other relevant government agency; and</p> <p>c) ensure that the first report is completed and submitted within twelve months of this consent, or at a date determined by the Director-General in consultation with the DRE and the EPA.</p>	<ul style="list-style-type: none"> ■ The audit found evidence that ACOL liaises with DP&I throughout the year regarding a number of issues and therefore are considered to have met the requirement for consultation during preparation of the AEMR. ■ The audit found that ACOL have complied with all directions received from agencies that were sighted during the audit. 		C
9.4	<p>The Applicant shall ensure that copies of each AEMR are submitted at the same time to the Director-General, DRE, OEH, EPA, NoW, SSC and the CCC, and made available for public information at SSC within fourteen days of submission to these authorities.</p>	<ul style="list-style-type: none"> ■ Evidence was sighted to show that each AEMR was provided to DRE and DP&I for review (refer to Documents 96-98). For each AEMR, these reports were submitted on the same day. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
10	COMMUNITY CONSULTATION / OBLIGATIONS			
	Community Consultative Committee			
10.1	<p>The Applicant shall:</p> <p>a) Establish a Community Consultative Committee (CCC) and aim to hold the first meeting prior to submission of the Environmental Management Strategy. Should the CCC not be formed at the preparation of the Environmental Management Strategy or environmental management plans, the Applicant shall consult the CCC, once formed, on the Strategy and any management plans. The Applicant shall provide a report to the Director-General on the issues raised as a result of these consultations and the Director-General may require the Environmental Management Strategy or environmental management plans be revised in light of this report. Selection of representatives shall be to the satisfaction of the Director-General in consultation with the Applicant and SSC. The CCC shall comprise two (2) representatives of the Applicant (including the Environmental Officer), one (1) representative of SSC, and four (4) community representatives. The CCC shall be chaired by SSC.</p> <p>b) Representatives from relevant government agencies, the local community, the local Aboriginal community, or other individuals may be invited to attend meetings as required by the Chairperson. The CCC may make comments and recommendations about the preparation and implementation of environmental management plans, monitor compliance with conditions of this consent relevant to the operation of the mine during the term of the consent. The Applicant shall ensure that the CCC has reasonable access to the necessary plans for such purposes. The Applicant shall consider the recommendations and comments of the CCC and provide a response to the CCC and Director-General.</p>	<ul style="list-style-type: none"> ■ The CCC is described in Section 4.2.1 of the 2012 AEMR. The committee was formed prior to commencement of the open cut operation. ■ CCC meeting minutes are provided on the ACOL website. ■ CCC meeting minutes were sighted for the audit period. It was noted that the CCC undertook a site inspection on 24 September 2013. ■ According the ACOL website, the CCC includes: <ul style="list-style-type: none"> ▶ A Singleton Council Councillor ▶ Three community representatives ▶ ACOL's General Manager and Environment and Community Manager. ■ The September 2013 CCC minutes confirm that the CCC has a vacant community member position and that ACOL are waiting on SSC for endorsement for a nominated candidate for this position. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
10.2	<p>The Applicant shall, at its own expense:</p> <ul style="list-style-type: none"> a) nominate two (2) representatives (including the Environmental Officer) to attend all meetings of the CCC; b) provide to the CCC regular information on the progress of work and monitoring results; c) promptly provide to the CCC such other information as the Chair of the CCC may reasonably request concerning the environmental performance of the development; d) provide access for site inspections by the CCC; and e) provide meeting facilities for the CCC, and take minutes of CCC meetings. These minutes shall be available for public inspection at SSC within 14 days of the meeting, or as agreed by the CCC. 	<ul style="list-style-type: none"> ■ A review of CCC meeting minutes and presentations found that at least two representatives of ACOL, including the Environment and Community Manager, attended meetings during the audit period. ■ The CCC are provided with a presentation on activities at the site at each meeting and these are provided on the ACOL website. ■ The CCC undertook an inspection of the site as part of the 24 September 2013 meeting. ■ Meeting minutes are provided on the ACOL website. 		C
Complaint Handling Procedures				
10.3	<p>The Environmental Officer(s) employed by the mine (refer condition 3.1) shall be responsible for:</p> <ul style="list-style-type: none"> a) establishing and maintaining a system for recording complaints with respect to construction works and mine operations on a dedicated and publicly advertised telephone line, 24 hours per day 7 days per week, entering complaints or comments in an up to date log book, or other suitable data base, and ensuring that an initial response is provided to the complainant within 24 hours; b) for providing a report of complaints received with respect to the construction and operation of the mine, every six months throughout the life of the project to the Director-General, SSC, OEH, EPA, DRE and the CCC, or as otherwise agreed by the Director-General. A summary of this report shall be included in the AEMR (conditions 9.2-9.4); c) maintaining access to documents on the ACP internet site, as required by this consent, and publicizing the 	<ul style="list-style-type: none"> ■ ACOL have established a phone hotline (1800 657 639). ■ Complaint handling procedures are prescribed in Section 14 of the sites Environmental Management Strategy (Document 32). ■ Details of complaints received during the year are reported in the AEMR, which is provided to regulators annually (refer to Condition 9.2). ■ The auditors sighted approval from DP&I (Document 78) to report complaints in the AEMRs rather than provide 6 monthly reports, as required under this condition. This approval was received in 2013 – Biannual complaints reports were sighted for the periods prior to this (Documents 14, 15). ■ The auditors sighted complaints/enquiry forms for complaints received during the audit period, (e.g. 4 September 2013 for complaint 1380). A complaints database was also sighted (Document 152). 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>address to the site to the public and regulatory authorities;</p> <p>d) consult with the environmental officer(s) employed by other mines in the vicinity to seek to co-ordinate a response to any complaints received regarding the operations of ACP and other mines.</p>	<ul style="list-style-type: none"> The Environment and Community Coordinator (Scotney Moore) indicated there were no complaints received directly to site which required joint investigation with other sites. 		
10.4	<p>The Applicant must nominate at least two persons (and their telephone numbers) who will be available to the EPA on a 24 hours basis, and who have authority to provide information and to implement such measures as may be necessary from time to time to address a pollution incident or to prevent pollution from continuing as directed by an authorised officer of the EPA.</p>	<ul style="list-style-type: none"> ACOL provided the EPA with a letter on 16 April advising of the Environment team's details and providing contact details (refer to Document 148). 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
11	APPLICANT'S OBLIGATIONS			
	Cumulative Impact Management			
11.1	In the event that the cumulative impact of noise or dust contributed to by the operation of the ACP mine and other nearby mining activities and any future mining/industrial operations, at dwellings, or proposed dwellings on vacant land (as described in Condition 6), in the vicinity of the operation, exceeds the noise or dust criteria contained in condition 6, the Applicant shall negotiate with the other mines and landowner(s) to determine appropriate arrangements to reasonably contribute to the management of the identified cumulative impacts or acquisition of the property to the satisfaction of the Director-General in proportion to their contributions to the impact.	<ul style="list-style-type: none"> ■ Exceedance of deposited dust limits imposed by the development consent were identified during the audit (refer to Condition 6.1). ■ The 2012 AEMR states that '<i>it is likely that these exceedances are not due to ACOLs operations</i>'. ■ It was stated during the audit that investigations into cumulative impacts have not been initiated by ACOL regarding potential cumulative impacts and therefore this condition was not satisfied. However; the auditors understand that investigations into cumulative dust impacts in the Upper Hunter Valley are extremely complex, due to the close proximity of a number of mining operations. The auditors also understand that ACOL was included in the Independent Camberwell Cumulative Impacts Study, which examined cumulative impacts of ACOL and surrounding mines in 2011. It is understood that ACOL currently participate in the Upper Hunter Air Quality Monitoring Network, which collates air quality data from a number of sources. It is therefore considered that ACOL have not triggered this requirement. ■ Due to the difficulty with identifying individual sites as the source of dust in regional impact studies done to date and the fact that open cut mining ceased at ACOL in 2011, the auditors consider any action taken by ACOL to determine its specific contribution to regional dust issues to be unlikely to be achievable or to provide a beneficial environmental outcome. 	<ul style="list-style-type: none"> ■ It is recommended that ACOL liaise with DP&I to determine an appropriate path of action in regard to satisfying this condition. 	N/A
11.2	If it is identified that total industrial noise levels at any point exceed the criteria set out in Condition 6.34, and that an industrial source from within the mine contributes significantly to this total, the Applicant shall prepare a report to the Director-General outlining the contribution from sources within the mine to the total measured noise level.	<ul style="list-style-type: none"> ■ No noise exceedances occurred during the audit period. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
11.3	If agreement on appropriate contributions towards mitigation measures/acquisition cannot be reached from negotiations undertaken in accordance with condition 11.1, then the matter shall be referred to the Director-General in consultation with SSC by either the Applicant or landowner. If the matter is not resolved within 21 days of the referral, the matter will be referred to an Independent Dispute Resolution Process as determined by the Director-General, and resolved as agreed by the Director-General. The Independent Dispute Resolution Process shall determine the responsibilities of each of the mining companies in accordance with condition 11.1 above and actions to be undertaken. The decision of the Independent Dispute Resolution Process shall be final and binding on all parties, as agreed by the Director-General.	<ul style="list-style-type: none"> No negotiations occurred with other sites. 		N/A
11.4	Prior to referral to the Independent Dispute Resolution Process, the Applicant shall provide the Director-General a report detailing the Applicant's reasons for being unable to reach agreement with the other parties, and the reasons for the criteria exceedences with demonstration that ACP's activities are not the sole cause of the exceedences.	<ul style="list-style-type: none"> No negotiations occurred with other sites. 		N/A
Area of Affection – Land Acquisition				
	Note: In Conditions 11.5-11.11 "land" means the whole of a lot in a current plan registered at the Land Titles Office as at the date of this consent.	<ul style="list-style-type: none"> Noted. 		
11.5	The Applicant shall negotiate and purchase property No. 115 as identified within the EIS (Volume 3 Figure 3.13), within six (6) months of a written request from the affected land owner. The owner of any dwelling, or vacant land where a dwelling is proposed (as described in Condition 6), located in areas that exceed noise and/or air quality criteria established in accordance with conditions 6.17, 6.18, and 6.50 of this consent, and at any time after the granting of development consent, may request the Applicant in writing to purchase the whole of that property.	<ul style="list-style-type: none"> Purchases under this condition were finalised in 2003 and were subject to previous audits. 		N/A
11.6	In respect of a request to purchase land arising under condition 11.5, the Applicant shall pay the owner the	<ul style="list-style-type: none"> Refer to Condition 11.5. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>acquisition price which shall take into account and provide payment for:</p> <p>a) a sum not less than the current market value of the owner's interest in the land at the date of this consent, as if the land was unaffected by the ACP the subject of this DA, having regard to:</p> <p>i) the existing use and permissible use of the land in accordance with the applicable planning instruments at the date of the written request; and</p> <p>ii) the presence of improvements on the land and/or any Council approved building or structure which although substantially commenced at the date of request is completed subsequent to that date.</p> <p>b) the owner's reasonable compensation for disturbance allowance and relocation costs within the Singleton or Muswellbrook Local Government Area, or within such other location as may be determined by the Director-General in exceptional circumstances; and</p> <p>c) the owner's reasonable costs for obtaining legal advice and expert witnesses for the purposes of determining the acquisition price of the land and the terms upon which it is to be acquired</p> <p>Notwithstanding any other condition of this consent, the Applicant may, upon request of the landowner, acquire any property affected by the project during the course of this consent on terms agreed to between the Applicant and the landowner.</p>			
11.7	<p>In the event that the Applicant and any owner referred to in this condition cannot agree within the time limit upon the acquisition price of the land and/or the terms upon which it is to be acquired, then:</p> <p>a) either party may refer the matter to the Director-General, who shall request the President of the Australian Institute of Valuers and Land Economists to appoint a qualified independent valuer or Fellow of the Institute, who shall determine, after consideration of any submissions from the owners, a fair and reasonable</p>	<ul style="list-style-type: none"> ■ Refer to Condition 11.5. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>acquisition price for the land as described in condition 11.6 and/or terms upon which it is to be acquired;</p> <p>b) in the event of a dispute regarding outstanding matters that cannot be resolved, the independent valuer shall refer the matter to the Director-General, recommending the appointment of a qualified panel. The Director-General, if satisfied that there is need for a qualified panel, shall arrange for the constitution of the panel. The panel shall consist of:</p> <p>i) the appointed independent valuer, ii) the Director-General or nominee, and iii) the President of the Law Society of NSW or nominee.</p> <p>The qualified panel shall determine a fair and reasonable acquisition price as described in condition 11.6 above and/or the terms upon which the property is to be acquired.</p>			
11.8	The Applicant shall bear the costs of any valuation or survey assessment requested by the independent valuer, panel, or the Director-General and the costs of determination referred to in conditions 11.6 and 11.7.	<ul style="list-style-type: none"> Refer to Condition 11.5. 		N/A
11.9	Upon receipt of a determination pursuant to conditions 11.6 and 11.7, the Applicant shall, within 14 days, offer in writing to acquire the relevant land at a price not less than the determination. Should the Applicant's offer to acquire not be accepted by the owner within six (6) months of the date of such offer, the Applicant's obligations to purchase the property shall cease, unless otherwise agreed by the Director-General.	<ul style="list-style-type: none"> Refer to Condition 11.5. 		N/A
11.10	In the event that the Applicant and the land owner agree that only part of the land is to be transferred to the Applicant, the Applicant shall pay all reasonable costs associated with obtaining Council approval to any plan of subdivision and registration of the plan at the Office of the Registrar-General.	<ul style="list-style-type: none"> Refer to Condition 11.5. 		N/A
11.11	The provisions of conditions 11.5-11.10 do not apply to a land owner who is the holder of an authority under the Mining Act, 1992.	<ul style="list-style-type: none"> Refer to Condition 11.5. 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
Joint Acquisition Management Plan				
11.12	<p>The Applicant shall, prior to commencement of mining operations of the ACP or as agreed in writing by the Director General, prepare a Joint Acquisition Management Plan as far as practical, with the agreement of surrounding existing and approved mines, to the satisfaction of the Director-General. The plan shall:</p> <p>a) provide details of a joint approach to be adopted by the Applicant, and surrounding existing and approved mines in regard to meeting the acquisition procedure requirements outlined in conditions 11.5-11.11 of this consent relating to the cumulative impacts of the ACP mine, and the surrounding existing and approved mines, should acquisition be required.</p>	<ul style="list-style-type: none"> ■ This requirement applied prior to the audit period. ■ Compliance with this condition was verified as part of the 2007 independent audit. 		N/A
Contributions to Council				
11.13	<p>Prior to the commencement of construction, the Applicant shall enter into a legally binding agreement with SSC for financial and/or in kind contribution to SSC for the purpose of community enhancement to address the social, amenity and associated community infrastructure requirements arising from the operation of the development. The financial and/or in kind contribution shall be generally in accordance with the SSC Section 94 Contribution Plan No 1 (1993) and as agreed between the applicant and SSC. A copy of the agreement is to be forwarded to the Director-General.</p>	<ul style="list-style-type: none"> ■ This requirement applied prior to the audit period. ■ Compliance with this condition was verified as part of the 2007 and 2010 independent audits. 		N/A
Responsibility for the Costs of Remediation				
11.14	<p>The Applicant shall be responsible for the costs of all impact management measures (including measures to minimise, mitigate, offset or remediate impacts of the development which are not recoverable by a third party through the Mine Subsidence Compensation Act 1961 or the Mining Act 1992) including but not limited to remediation of natural features, rehabilitation of ecological systems, monitoring of the effectiveness of the works and provision of supplementary water flows, as determined by the Director-General. Note: The Applicant is not responsible under this condition</p>	<ul style="list-style-type: none"> ■ No claims for subsidence repair or remediation have come through a third party. ■ ACOL monitor subsidence and remediate any damage as it occurs (refer to Section 5 of the development consent). 		N/A

	Condition	Findings	Recommendation	Rating: C N/C N/A
	for costs of impact management measures associated with impacts of the development on built features which are constructed or upgraded following approval of a Subsidence Management Plan which manages subsidence impacts at the affected location.			

	Condition	Findings	Recommendation	Rating: C N/C N/A
12	FURTHER APPROVALS AND AGREEMENTS			
	Statutory Requirements			
12.1	The Applicant shall ensure that all statutory requirements including but not restricted to those set down by the Environmental Planning and Assessment Act 1979, Local Government Act 1993, Protection of the Environment Administration Act 1991, Protection of the Environment Operations Act 1997, Rivers and Foreshores Improvement Act 1948, Water Act 1912, National Parks and Wildlife Act 1974, and all other relevant legislation, Regulations, Australian Standards, Codes, Guidelines and Notices, Conditions, Directions, Notices and Requirements issued pursuant to statutory powers by the SSC, OEH, EPA, DRE, NoW, RMA, and other Government agencies, are fully met.	<ul style="list-style-type: none"> ■ ACOL monitor compliance against statutory requirements through internal and external audits. ■ Relevant compliance documents are listed in the MOP and relevant management plans. 		C
	Structural Adequacy			
12.2	Detailed plans and specifications relating to the design and construction of each structural element associated with the proposed development are to be submitted to the Principal Certifying Authority prior to the construction of each particular building or structure. Such plans and specifications must be accompanied by certification provided by a practicing professional structural engineer or an accredited certifier certifying the structural adequacy of the proposed building design and compliance with the Building Code of Australia.	<ul style="list-style-type: none"> ■ Construction certificates and fire safety compliance reports were sighted for buildings and structures built prior to 2006 (the majority of structures on-site) during the 2010 independent audit. ■ A gas drainage processing plant was the only structures built during the audit period. As construction of this structure was not complete at the time of the inspection, construction certificates had not been obtained. ■ It was stated by the Gas Drainage Plant Project Manager (Hugh Drummond) that the certifying authority for the plant was Acrocert. 		C
	Verification of Construction			
12.3	All new buildings and structures, and alterations or additions to buildings and structures, shall be carried out in accordance with the relevant requirements of the BCA.	<ul style="list-style-type: none"> ■ Refer to condition 12.2. 		C
12.4	The Applicant shall provide to the Director-General and Council with copies of all Construction Certificates issued for buildings or structures and copies of all Occupation	<ul style="list-style-type: none"> ■ Refer to condition 12.2. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<p>Certificates issued for the development.</p> <p>Note: Part 4A of the Environmental Planning and Assessment Act 1979 provides specific certification requirements.</p>			
12.5	<p>The applicant shall ensure that arrangements are made for the Principal Certifying Authority to carry out INSPECTIONS of the building at the following stages of construction, as applicable:</p> <p>a) The PIER HOLES before they are filled with concrete.</p> <p>b) The FOOTING TRENCHES with reinforcing steel in position before concrete is placed.</p> <p>c) The REINFORCING STEEL when in position prior to placing concrete for slab/s, swimming pools or walls.</p> <p>d) The FRAMEWORK including roof members, wall ties, vermin wire, flashings and cavities where applicable, prior to fixing of any internal sheets. Note: All plumbing and electrical work shall be completed.</p> <p>e) The WET AREAS damp-proofing and flashing before lining or covering.</p> <p>f) The building or structure when COMPLETED, prior to occupation/use.</p>	<ul style="list-style-type: none"> ■ Refer to condition 12.2. 		C
12.6	<p>The applicant shall ensure that arrangements are made for Council to carry out INSPECTIONS at the following stages as applicable:</p> <p>a) INTERNAL DRAINAGE LINES before the floor is laid, or concrete placed.</p> <p>b) EXTERNAL DRAINAGE LINES before backfilling of the trenches.</p> <p>c) Information on booking inspections with Council may be obtained either by telephone on (02) 65 787 290 or in person at the CUSTOMER SERVICE Counter</p> <p>i) Applicants are required to nominate the relevant development application number and location prior to the inspection request being granted.</p>	<ul style="list-style-type: none"> ■ Refer to condition 12.2. 		C

	Condition	Findings	Recommendation	Rating: C N/C N/A
	<ul style="list-style-type: none"> ii) Clerical staff only will receive all requests for inspections. iii) Where building work is not prepared, ready for inspection, applicants will be required to re-book inspections through the Customer Service Centre for the next available day and a reinspection fee may be charged. iv) Requests for inspections must be received prior to 9.30am on the working day the inspection is required. v) Inspections within the township of Singleton will be conducted as AM inspections (10.00am to 1.00pm) and PM inspections (2.00pm to 4.00pm). Inspections for all other areas will be carried out at some stage during the day nominated. 			
12.7	All demolition work shall be carried out in accordance with AS2601-1991 The Demolition of Structures.	<ul style="list-style-type: none"> ■ No demolition activities were undertaken during the audit period. 		N/A
Approvals within a Mine Subsidence District				
12.8	The Applicant shall seek the approval of the Mine Subsidence Board for the construction of any improvements, including those related to the mine buildings and associated works, any relocation or diversion of infrastructure or existing improvements, prior to undertaking the works. The Applicant shall submit a copy of the final plans to MSB prior to commencement of construction.	<ul style="list-style-type: none"> ■ MSB approval for the Gas Drainage Plant was sighted by the auditors (Document 154). 		C



Appendix C

EPL 11879 checklist



Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
1.	Administrative Conditions			
A1.	What the licence authorises and regulates			
A1.1	This license authorises the carrying out of the scheduled development work listed below at the premises listed in A2. Coal mine and coal washery.	<ul style="list-style-type: none"> ■ The site was found to be operating as an underground coal mine with associated washery and rail loading facility. 		C
A1.2	This license 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 license, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition. Coal Works Scale > 5000000 - T loaded. Mining for Coal Scale > 5000000 - T produced	<ul style="list-style-type: none"> ■ ACOL reports annual production figures in each AEMR. ROM coal production during the audit period was found to be as follows: <ul style="list-style-type: none"> ▶ 2009/10 – 4.3 Mt ROM ▶ 2010/11 – 2.6 Mt ROM ▶ 2011/12 – 3.1 Mt ROM 		C
A2	Premises or plant to which this licence applies			
A2.1	The license applies to the following premises: ASHTON COAL MINE GLENNIES CREEK ROAD AND NEW ENGLAND HIGHWAY CAMBERWELL NSW 2330	<ul style="list-style-type: none"> ■ No activities associated with ACOLs operations were found to be occurring at a different location to that listed. ACOL do dispose of tailings within the adjacent Ravensworth Operations Complex and the audit found that appropriate approvals had been obtained for this activity. 		C
A3	Information supplied to the EPA			
A3.1	Works and activities must be carried out in accordance with the proposal contained in the license application, except as expressly provided by a condition of this license. In this condition the reference to "the license application" includes a reference to: <ol style="list-style-type: none"> the applications for any licenses (including former pollution control approvals) which this license replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and the license information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this license. 	<ul style="list-style-type: none"> ■ All works observed during the audit were found to be undertaken generally in accordance with relevant environmental assessments and approval applications (refer to Section 3.3 of main report). 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A								
2	Discharges to Air and Water and Applications to Land											
P1	Location of monitoring/discharge points and areas											
P1.1	<p>The following points referred to in the table below are identified in this license for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.</p> <table border="1"> <thead> <tr> <th>EPA identification no.</th> <th>Type of Monitoring Point</th> <th>Type of Discharge</th> <th>Point Location Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Dust monitoring</td> <td>-</td> <td>Locations shown on Figure 1 titled "Air Quality Monitoring Locations for EPL" dated 19/10/06</td> </tr> </tbody> </table>	EPA identification no.	Type of Monitoring Point	Type of Discharge	Point Location Description	1	Dust monitoring	-	Locations shown on Figure 1 titled "Air Quality Monitoring Locations for EPL" dated 19/10/06	<ul style="list-style-type: none"> ■ Air quality monitoring stations were not sighted in-situ as part of the audit. ■ The air quality monitoring points provided on Figure 1 of the AQMP were found to be consistent with the points listed on 'Figure 1 titled Air Quality Monitoring Locations for EPL dated 19/10/06'. 		C
EPA identification no.	Type of Monitoring Point	Type of Discharge	Point Location Description									
1	Dust monitoring	-	Locations shown on Figure 1 titled "Air Quality Monitoring Locations for EPL" dated 19/10/06									
P1.2	<p>The following points referred to in the table are identified in this license for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.</p>	<ul style="list-style-type: none"> ■ Water quality monitoring points were found to be identified in the WMP. 		C								
P1.3	<p>The following utilisation areas referred to in the table below are identified in this license for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.</p>	<ul style="list-style-type: none"> ■ Water quality monitoring points were found to be identified in the WMP. 		C								
3	Limit Conditions											
L1	Pollution of waters											
L1.1	<p>Except as may be expressly provided in any other condition of this license, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.</p>	<ul style="list-style-type: none"> ■ AEMRs and annual returns were sighted for the audit period (Documents 8-10 and 16-18 respectively). ■ No discharges of water occurred from the site during the audit period. It was found that the site is a net importer of water and has never discharged water off-site. 		C								

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
L2	Noise limits			
L2.1	Noise from the premises must not exceed the limits specified in the table below: <i>See table on page 9 for details</i>	<ul style="list-style-type: none"> ■ AEMRs and annual returns were sighted for the audit period (Documents 8-10 and 16-18 respectively). ■ No exceedances of noise limits prescribed in the EPL or any other approval document occurred during the audit period. 		C
L2.2	For the purpose of Condition 2.1: a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays, b) Evening is defined as the period from 6pm to 10pm c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.	<ul style="list-style-type: none"> ■ Noise monitoring activities were found to be consistent with the INP (refer to Section 6 of Appendix B). 		C
L2.3	Noise from the premises is to be measured at the most affected point on or within the residential boundary or at the most affected point within 30m of the dwelling where the dwelling is more than 30m from boundary to determine compliance with the L Aeq(15 minute) noise limits in condition L2.1. Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy. The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.	<ul style="list-style-type: none"> ■ Noise monitoring activities were found to be consistent with the INP (refer to Section 6 of Appendix B). 		C
L2.4	Noise from the premises is to be measured or computed at 1m from the dwelling facade to determine compliance with condition L2.1 (LA1 (1 minute) noise limit)..	<ul style="list-style-type: none"> ■ Noise monitoring activities were found to be consistent with the INP (refer to Section 6 of Appendix B). 		C
L2.5	The noise emission limits identified in condition L2.1 apply under the following meteorological conditions: a) wind speeds up to 3m/s at 10m above ground level; and b) temperature inversion conditions up to 3° C/100m.	<ul style="list-style-type: none"> ■ Noise monitoring activities were found to be consistent with the INP (refer to Section 6 of Appendix B). 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
L2.6	Open cut mining activities must only be carried out between the hours of 0700 and 2200 Monday to Saturday, and 0800 and 2200 on Sundays and Public Holidays.	<ul style="list-style-type: none"> ■ Non-compliance. On 14 November 2010, a complaint was made to the DP&I compliance branch regarding a dozer commencing operation at 7.45 am (15 minutes prior to its approved start time). This complaint resulted in an infringement notice being issued to ACOL by DP&I. ACOL responded to this incident by implementing the following procedures: <ul style="list-style-type: none"> ▶ Open Cut Examiner calls a start time over the radio and note this time on the shift report. ▶ No open cut machinery is to move from the go line until this is called. ■ Open cut mining ceased at the site in September 2011. 	<ul style="list-style-type: none"> ■ Ensure approved operational hours are adhered to. ■ If a breach of operational hours occurs it should be investigated and the outcomes of the investigation reported to the relevant workforce. 	NC
L3	Blasting limits			
L3.1	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.	<ul style="list-style-type: none"> ■ Blast records were sighted for the audit period and showed that all blasts occurred within the required times. 		C
L3.2	<p>The overpressure level from blasting operations carried out in or on the premises must not:</p> <ol style="list-style-type: none"> a) exceed 115 dB(L) for more than 5% of the total number of blasts carried out on the premises within the 12 months annual reporting period; and b) exceed 120 dB(L) at any time at any residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee as to an alternative overpressure level. 	<ul style="list-style-type: none"> ■ The last blasting undertaken for open cut operations was on 14 September 2011. ■ 136 blasts occurred during the audit period, none of which exceeded allowable limits ■ Non-compliance. The 5% overall limit for 115-120 dBL blasts was also exceeded at St Clements Church and Camberwell Village. ■ Open cut operations have now ceased and are not planned to recommence within the north open cut pit. 	<ul style="list-style-type: none"> ■ Ensure effective blast planning and controls are implemented if open cut operations recommence in the future. 	NC

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
L3.3	<p>The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not:</p> <p>a) exceed 5mm/second for more than 5% of the total number of blasts carried out on the premises within the 12 months annual reporting period; and</p> <p>b) exceed 10mm/second at any time at any residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee as to an alternative ground vibration level.</p>	<ul style="list-style-type: none"> ■ Ground vibration criteria was not exceeded for the 2009-2010 or 2010-2011 reporting period. ■ No blasting was undertaken following cessation of open cut mining in 2011. 		C
4	Processes and Management			
O1	Activities must be carried out in a competent manner			
O1.1	<p>Licensed activities must be carried out in a competent manner. This includes:</p> <p>a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and</p> <p>b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.</p>	<ul style="list-style-type: none"> ■ Inspections undertaken during the audit found the site to be maintained to a high standard. Coal handling areas such as the CHPP were observed to be well maintained, clean and site operations were functioning well. 		C
O2	Maintenance of plant and equipment			
O2.1	<p>All plant and equipment installed at the premises or used in connection with the licensed activity:</p> <p>a) must be maintained in a proper and efficient condition; and</p> <p>b) must be operated in a proper and efficient manner.</p>	<ul style="list-style-type: none"> ■ The audit site inspection found all plant operating in association with the mine was well maintained and operated in an efficient manner. No equipment was observed to need repair or replacement. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
O3	Dust			
O3.1	All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.	<ul style="list-style-type: none"> Inspections undertaken during the audit observed that the site generates minimal visible dust emissions. The site is currently operating as an underground mine with the former open cut pit being the main area of disturbance. Dust controls such as water sprays on stockpiles and water carts operating in disturbed areas were observed to be implemented at the site. Visible dust was not observed to be generated from this area during a high wind area that occurred during the audit. 		C
O3.2	All trafficable areas, coal storage areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.	<ul style="list-style-type: none"> Dust controls such as water sprays on stockpiles and water carts operating in disturbed areas were observed to be implemented at the site. Visible dust was not observed to be generated from this area during a high wind area that occurred during the audit. 		C
O4	Processes and Management			
O4.1	<p>Stormwater Management Scheme.</p> <p>A Stormwater Management Scheme must be prepared for the development and must be implemented. Implementation of the Scheme must mitigate the impacts of stormwater runoff from and within the premises following the completion of construction activities. The Scheme should be consistent with the Stormwater Management Plan for the catchment. If a Stormwater Management Plan has not yet been prepared the Scheme should be consistent with the guidance contained in Managing Urban Stormwater: Council Handbook (available from the EPA).</p>	<ul style="list-style-type: none"> The site has prepared a Water Management Plan that includes an Erosion and Sedimentation Control Plan (refer to Section 5 of Appendix B). The plan was prepared to be consistent with the Managing Urban Stormwater Council Handbook. 		C
O4.2	Banks, channels and similar works must be constructed and maintained to divert stormwater away from disturbed or contaminated land surfaces such as mine workings, haul roads, overburden disposal areas, coal handling areas and wastewater treatment facilities. All diversion banks, channels and points of discharge must be constructed or stabilised so as to minimise erosion and scouring.	<ul style="list-style-type: none"> The site has prepared a Water Management Plan to specify how dirty water will be captured and treated from disturbance areas, and clean water will be diverted around disturbance areas. Water management structures such as diversion banks, sediment basins, sumps, etc. were observed to be installed throughout disturbed areas of the site. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
O5	Waste Management			
O5.1	A water management system must be constructed and utilised to manage the collection, storage, treatment, use and disposal of minewater, sewage effluent and other wastewater.	<ul style="list-style-type: none"> ■ A dirty water management system was observed to be capturing water from coal handling areas. ■ Sewage effluent is treated at three sewage treatment plants installed at the site. 		C
O5.2	<p>Bund(s) must be installed around areas in which fuels, oils and chemicals are stored. Bunds must:</p> <p>a) have walls and floors constructed of impervious materials; b) be of sufficient capacity to contain 110% of the volume of the tank (or 110% volume of the largest tank where a group of tanks are installed); c) have walls not be less than 250 millimetres high; d) have floors graded to a collection sump; and e) not have a drain valve incorporated in the bund structure.</p>	<ul style="list-style-type: none"> ■ Fuel and oil storage areas were observed to be appropriately bunded during audit site inspections. 		C
O5.3	A wastewater treatment facility with oil separator and sediment trap must be installed to treat drainage from the hardstand, vehicle servicing and general workshop areas.	<ul style="list-style-type: none"> ■ Oil and water separators were observed to be treating water collected in sumps within hardstand. Treated water was then observed to be transferred to a sedimentation pond. 		C
O5.4	An area must be provided for the use of effluent from the sewage treatment plant. The design of the system must be in accordance with the EPA's draft guideline "Utilisation of Treated Effluent by Irrigation".	<ul style="list-style-type: none"> ■ Effluent from the site's main sewage treatment plant (adjacent to the administration area) was observed being sprayed onto plantings on the visual bund adjacent to the New England Highway during the audit site inspection. 		C
O5.5	Wastewater utilisation areas must effectively utilise the wastewater applied to those areas. This includes the use for pasture or crop production, as well as ensuring the soil is able to absorb the nutrients, salts, hydraulic load and organic materials in the solids or liquids. Monitoring of land and receiving waters to determine the impact of wastewater application may be required by the EPA.	<ul style="list-style-type: none"> ■ Refer to Condition Q5.4. ■ No direction has been received from the EPA regarding wastewater application areas. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
O6	Other Operating Conditions			
O6.1	There must be no incineration or open burning of any material(s) on the premises, except as specifically authorised by the EPA.	<ul style="list-style-type: none"> No burning or incineration operations, or evidence of any occurrence of such operations, were observed during the audit. 		C
5	Monitoring and Recording Conditions			
M1	Monitoring records			
M1.1	The results of any monitoring required to be conducted by this license or a load calculation protocol must be recorded and retained as set out in this condition.	<ul style="list-style-type: none"> Environmental monitoring is undertaken by the environmental team and consultants. Environmental monitoring results are kept by the environmental team in electronic format. 		C
M1.2	All records required to be kept by this license must be: <ol style="list-style-type: none"> in a legible form, or in a form that can readily be reduced to a legible form; kept for at least 4 years after the monitoring or event to which they relate took place; and produced in a legible form to any authorised officer of the EPA who asks to see them. 	<ul style="list-style-type: none"> Environmental monitoring is undertaken by the environmental team and consultants. Environmental monitoring results are kept by the environmental team in electronic format. Monitoring results dating back to the commencement of operations were observed during the audit. 		C
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this license: <ol style="list-style-type: none"> the date(s) on which the sample was taken; the time(s) at which the sample was collected; the point at which the sample was taken; and the name of the person who collected the sample. 	<ul style="list-style-type: none"> Chain of custody and field sheets forms are used to capture the required information. 		C
M2	Requirement to monitor concentration of pollutants discharged			
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	<ul style="list-style-type: none"> Annual returns applicable to the audit period were observed to contain all required information (refer to Documents 16-18). 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
M2.2	Water and/or land monitoring requirements Point 2,3,4,5,6,7	<ul style="list-style-type: none"> ■ Annual returns applicable to the audit period were observed to contain all required information (refer to Documents 16-18), with the following exception: <ul style="list-style-type: none"> ▶ Total Suspended Solids were not analysed during October 2012 due to a laboratory error and therefore no results were received for any site for this month. It is understood that corrective actions were undertaken following this incident to ensure analysis of all collected samples occurs correctly. 	<ul style="list-style-type: none"> ■ Ensure required analyses are undertaken for all collected samples. 	NC
M2.3	Point 8	<ul style="list-style-type: none"> ■ Annual returns applicable to the audit period were observed to contain all required information (refer to Documents 16-18). 		C
M3	Testing methods – concentration limits			
M3.1	<p>Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this license must be done in accordance with:</p> <ol style="list-style-type: none"> 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 license 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 license, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place. <p>Note: The Protection of the Environment Operations (Clean Air) Regulation 2002 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>	<ul style="list-style-type: none"> ■ Air quality monitoring is undertaken in accordance with the site Air Quality Management Plan, which has been prepared to satisfy the requirements of 'Approved Methods for the Sampling and Analysis of Air Pollutants in NSW'. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A																														
M3.2	Subject to any express provision to the contrary in this license, 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.	<ul style="list-style-type: none"> Water Quality Monitoring is undertaken in accordance with the site's Water Quality Management Plan. 		C																														
M4	Weather Monitoring																																	
M4.1	<p>The licensee must collect and analyse meteorological data at an on-site monitoring station for the parameters, at a frequency, averaging period and using a method as specified in the table below.</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Units of measure</th> <th>Frequency</th> <th>Averaging period</th> <th>Sampling method</th> </tr> </thead> <tbody> <tr> <td>Atmospheric Inversion</td> <td>OC/100m</td> <td>Continuous</td> <td></td> <td>Instrumental</td> </tr> <tr> <td>Temperature @ 1.2m</td> <td>C</td> <td>Continuous</td> <td>1 hour</td> <td>AM-4</td> </tr> <tr> <td>Rainfall</td> <td>mm</td> <td></td> <td>24 Hrs</td> <td>Standard rain gauge</td> </tr> <tr> <td>Wind direction @ 10m</td> <td></td> <td>Continuous</td> <td>10 minute</td> <td>AM-2 & AM-4</td> </tr> <tr> <td>Wind Speed @ 10m</td> <td>m/sec</td> <td>Continuous</td> <td>10 minutes</td> <td>AM-2 & AM-4</td> </tr> </tbody> </table> <p>Note: All methods are specified in the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales and all monitoring must be conducted strictly in accordance with the requirements outlined in this document.</p>	Parameter	Units of measure	Frequency	Averaging period	Sampling method	Atmospheric Inversion	OC/100m	Continuous		Instrumental	Temperature @ 1.2m	C	Continuous	1 hour	AM-4	Rainfall	mm		24 Hrs	Standard rain gauge	Wind direction @ 10m		Continuous	10 minute	AM-2 & AM-4	Wind Speed @ 10m	m/sec	Continuous	10 minutes	AM-2 & AM-4	<ul style="list-style-type: none"> The site operates two meteorological stations. Key monitoring results are provided in the site's AEMR. 		C
Parameter	Units of measure	Frequency	Averaging period	Sampling method																														
Atmospheric Inversion	OC/100m	Continuous		Instrumental																														
Temperature @ 1.2m	C	Continuous	1 hour	AM-4																														
Rainfall	mm		24 Hrs	Standard rain gauge																														
Wind direction @ 10m		Continuous	10 minute	AM-2 & AM-4																														
Wind Speed @ 10m	m/sec	Continuous	10 minutes	AM-2 & AM-4																														

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
M5	Recording of pollution complaints			
M5.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this license applies.	<ul style="list-style-type: none"> The site maintains an electronic complaints register and reports on complaints in each AEMR. 		C
M5.2	The record must include details of the following: <ol style="list-style-type: none"> the date and time of the complaint; the method by which the complaint was made; any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; the nature of the complaint; the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and if no action was taken by the licensee, the reasons why no action was taken. 	<ul style="list-style-type: none"> The complaints register was sighted for the audit and was found to include all required information. 		C
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	<ul style="list-style-type: none"> The complaints register was found to include details of complaints taken since commencement of operation under DA 309-11-2001-i. 		C
M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.	<ul style="list-style-type: none"> No requests to view the complaints records were received from the EPA during the audit period. However; it is noted that details of complaints are available on the site's website. 		N/T
M6	Telephone complaints line			
M6.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the license.	<ul style="list-style-type: none"> ACOL have established a phone hotline (1800 657 639). Complaint handling procedures are prescribed in Section 14 of the sites Environmental Management Strategy (Document 32). 		C
M6.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	<ul style="list-style-type: none"> The ACOL phone hotline number is publicly listed and available on the site's website. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
M6.3	<p>Conditions M5.1 and M5.2 do not apply until 3 months after:</p> <p>a) the date of the issue of this license or b) if this license is a replacement license within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the license was served on the licensee under clause 10 of that regulation.</p>	<ul style="list-style-type: none"> ■ Noted 		N/T
M7	Requirement to monitor weather			
M7.1	<p>The licensee must collect and analyse meteorological data at an on-site monitoring station for the parameters, at a frequency, averaging period and using a method as specified in the table below.</p> <p>Note: All methods are specified in the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales and all monitoring must be conducted strictly in accordance with the requirements outlined in this document.</p> <p>See Table on page 15 for details</p>	<ul style="list-style-type: none"> ■ The site operates two meteorological stations and provides monitoring data in each AEMR. 		C
M8	Blasting			
M8.1	<p>In order to determine compliance with condition L3.2 & L3.3:</p> <p>a) Airblast overpressure and ground vibration levels must be measured at, or near, the nearest residence, or noise sensitive location, that is likely to be most affected by the blast and that is not owned by the licensee, or is the subject of a private agreement between the owner of the residence, or noise sensitive location, and the licensee, as to an alternative overpressure or ground vibration level for all blasts carried out in, or on, the premises; and</p> <p>b) Instrumentation used to measure the airblast overpressure and ground vibration levels meet the requirements of Australian Standard 2187.2 of 1993.</p>	<ul style="list-style-type: none"> ■ Figure 1 of the BVMP shows the location of blast monitors at; <ul style="list-style-type: none"> ▶ the nearest residence to the mine within Camberwell village ▶ St Clements Church ▶ A mine owned residence to the south-east of the NEOC pit. ▶ The Main Northern Railway Line to the north of the NEOC bit. ■ Blast monitoring is reported in Section 3.9 of each AEMR (Documents 8-10) and evidence was found to show each AEMR was submitted to the EPA (refer to Condition 9.2). ■ AS 2187.2 1993 has been superceded by AS 2187.2-2006. Condition J3.1.2(b) of this standard states that monitoring instruments should be calibrated at least 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
		<p>every 12 months.</p> <ul style="list-style-type: none"> Calibration certificates were sighted for blast monitors used during the audit period (Documents 81-84). It was noted that no calibration was undertaken during 2012 or 2013, as no blasting occurred during these years. 		
M9	Requirement to monitor noise			
M9.1	<p>A noise compliance assessment report must be submitted to EPA on an annual basis with the Annual Return as set out in Condition R1. The report must be prepared by an accredited acoustical consultant and determine compliance with the noise limits in Condition L6.1.</p>	<ul style="list-style-type: none"> Quarterly operational noise monitoring was undertaken by Spectrum Acoustics for the 2009-2010, 2010-2011 and 2011-2012 AEMR periods and no exceedances at the locations specified in the NMP, which were found to be consistent with the sites specified in the EPL. Evidence was found to show that each AEMR was submitted to the EPA (Documents 96-98). Evidence was also found to show noise monitoring was included in each annual return (Documents 16-18). 		C
6	Reporting Conditions			
R1	Annual return documents			
	<i>What documents must an Annual Return contain?</i>			
R1.1	<p>The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:</p> <p>a) a Statement of Compliance; and b) a Monitoring and Complaints Summary.</p> <p>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.</p>	<ul style="list-style-type: none"> Annual returns for each reporting year were sighted by the auditors (Documents 96-98). These were found to include a statement of compliance and a summary of monitoring and complaints. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
<i>Period covered by Annual Return</i>				
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below. Note: The term "reporting period" is defined in the dictionary at the end of this license. Do not complete the Annual Return until after the end of the reporting period.	<ul style="list-style-type: none"> ■ Annual returns (Documents 96-98) were prepared for: <ul style="list-style-type: none"> ▶ 2 Sept 2009 to 1 Sept 2010 ▶ 2 Sept 2010 to 1 Sept 2011 ▶ 2 Sept 2011 to 1 Sept 2012 ■ The 2012-13 annual return was in preparation at the time of the audit. 		C
R1.3	Where this license 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 license 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 license is granted and ending on the last day of the reporting period. Note: An application to transfer a license must be made in the approved form for this purpose.	<ul style="list-style-type: none"> ■ No transfers of licences occurred during the audit (online EPL records were sighted). 		C
R1.4	Where this license 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 license - the date when notice in writing of approval of the surrender is given; or b) in relation to the revocation of the license - the date from which notice revoking the license operates.	<ul style="list-style-type: none"> ■ The EPL was not surrendered or revoked during the audit period (online records were sighted). 		C
<i>Deadline for Annual Return</i>				
R1.5	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 license not later than 60 days after the date the transfer was granted (the 'due date').	<ul style="list-style-type: none"> ■ All annual returns were submitted by the end of November for each relevant reporting year (refer to Documents 96-98). 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	<ul style="list-style-type: none"> ■ Annual returns are stored electronically by ACOL. 		C
R1.7	<p>Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:</p> <p>a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.</p>	<ul style="list-style-type: none"> ■ Annual returns (Documents 96-98) were signed by: <ul style="list-style-type: none"> ▶ 2009-10 – Allan J McCarthy (ACOL Secretary) and Peter Barton (ACOL Director) ▶ 2010-11 – Terence Crawford (ACOL Director) and Murray Bailey (ACOL Managing Director) ▶ 2011-12 – Terence Crawford (ACOL Director) and Murray Bailey (ACOL CEO/Director). 		C
<i>Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary</i>				
R1.8	<p>Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:</p> <p>a) the license holder; or b) by a person approved in writing by the EPA to sign on behalf of the license holder.</p>	<ul style="list-style-type: none"> ■ Refer to requirement R1.8. 		C
R1.8	A person who has been given written approval to certify a certificate of compliance under a license issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this license.	<ul style="list-style-type: none"> ■ Refer to requirement R1.8. 		C
R2	Notification of environmental harm			
	Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	<ul style="list-style-type: none"> ■ The audit did not find any evidence of any incidents that could cause material harm to the environment during the audit. Several incidents occurred during the audit, as outlined below, however, ACOL determined that these did not pose a risk of material harm to the environment and these incidents were reported to DP&I as part of compliance reporting against the development consent: <ul style="list-style-type: none"> ▶ Two tailings pipeline leaks occurred (refer to Condition 3.62 of Appendix B). Both leaks were contained within bunds. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
		<ul style="list-style-type: none"> ▶ It was found that ACOL had commenced operations 15 minutes prior to its approved start time on a Sunday morning (refer to Condition 2.8 of Appendix B). ▶ It was also found that exceedances of dust criteria and blast overpressure limits had been observed during the audit period (refer to Conditions 6.1 and 6.22 of Appendix B). ▶ All reporting requirements were found to have been met for these exceedances. 		
R2.1	Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.	<ul style="list-style-type: none"> ■ No incidents occurred that required ACOL to contact the EPA's Pollution Line during the audit. 		C
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	<ul style="list-style-type: none"> ■ No reports were made to the EPA regarding environmental incidents on-site. 		C
R3	Written report			
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: <ul style="list-style-type: none"> a) where this license applies to premises, an event has occurred at the premises; or b) where this license applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this license, 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 license applies), the authorised officer may request a written report of the event. 	<ul style="list-style-type: none"> ■ It was stated by the Environmental Coordinator (Alan Tight) that no directions for ACOL to produce a written report were received from the EPA during the audit period. 		C
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	<ul style="list-style-type: none"> ■ Refer to condition R3.1. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
R3.3	<p>The request may require a report which includes any or all of the following information:</p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> ■ Refer to Condition R3.1. 		C
R3.4	<p>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.</p>	<ul style="list-style-type: none"> ■ Refer to Condition R3.1. 		C
R4	Other Reporting Conditions			
R4.1	<p>Noise Compliance Assessment Report</p> <p>A noise compliance assessment report must be submitted to the EPA on an annual basis with the Annual Return as set out in Condition R1. The report must be prepared by an accredited acoustical consultant and determine compliance with noise limits in Condition L2.1.</p>	<ul style="list-style-type: none"> ■ Each annual return (Documents 96-98) includes an Annual Noise Compliance Assessment prepared by Spectrum Acoustics specifically for the annual return. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
R4.2	<p>Reporting of blasting limit exceedance</p> <p>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.</p>	<ul style="list-style-type: none"> Exceedances of blast limits occurred in December 2009 and January 2010 and were reported to the EPA immediately according to the 2009-2010 annual return (Document 96). 		C
R4.3	<p>Blast monitoring report</p> <p>The licensee must supply annually a Blast Monitoring Report with the Annual Return, which must include the following information relating to each of the blasts carried out within the premises during the respective reporting period:</p> <p>a) the date and time of the blast; b) the location of the blast; c) the blast monitoring results at each blast monitoring station; and d) an explanation for any missing blast monitoring readings.</p>	<ul style="list-style-type: none"> The 2009-10 and 2010-11 annual returns (Documents 96 and 97) include detailed tables of blast monitoring results. 		C
R5	Blast monitoring reporting			
R5.1	<p>The licensee must supply annually a Blast Monitoring Report with the Annual Return, which must include the following information relating to each blast carried out within the premises during the respective reporting period:</p> <p>a) the date and time of the blast; b) the location of the blast; c) the blast monitoring results at each blast monitoring station; and d) an explanation for any missing blast monitoring readings.</p>	<ul style="list-style-type: none"> Refer to Condition R4.3. 		C
General Conditions				
G1	Copy of license kept at the premises			
G1.1	<p>A copy of this license must be kept at the premises to which the license applies.</p>	<ul style="list-style-type: none"> A copy of the EPL is available publicly on ACOL's website. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
G1.2	The license must be produced to any authorised officer of the EPA who asks to see it.	<ul style="list-style-type: none"> It was stated by the Environmental Coordinator (Alan Tight) that no directions for ACOL to provide an EPA officer with a copy of the EPL were received from the EPA during the audit period. 		C
G1.3	The license must be available for inspection by any employee or agent of the licensee working at the premises.	<ul style="list-style-type: none"> A copy of the EPL is available publicly on ACOL's website. 		C
G2	Contact number for incidents and responsible employees			
G2.1	<p>The licensee must operate one 24-hour telephone contact line for the purpose of enabling the EPA:</p> <p>a) to contact the licensee or a representative of the licensee who can respond at all times to incidents relating to individual premises, and</p> <p>b) to contact the licensee's senior employees or agents authorised at all times to:</p> <p>i) speak on behalf of the licensee, and</p> <p>ii) provide any information or document required under license.</p>	<ul style="list-style-type: none"> ACOL operate a 24 hour public phone hotline. A letter was sent to the EPA on 16 April 2013 providing details of the ACOL environment team and notifying of Lisa Richards temporary replacement with Julie McNaughton (Document 148). This letter provides contact details for the phone environment team. 		C
Pollution studies and reduction programs				
U1	Coal Mine Particulate Matter Control Best Practice			
U1	A comparison of actual measured noise levels generated by the Licensee with those predicted in the EIS under all conditions including inversions and noise enhancing winds; and	<ul style="list-style-type: none"> A report titled Comparison of Actual Noise Levels against EIS predictions was submitted to the EPA in July 2009, prior to the audit period. The 2010 independent audit verified compliance against the conditions in this section of the EPL. 		C
U1	A list of measures to be taken by the Licensee to ensure that noise generated by the mine is not in excess of the predicted levels or limits.	<ul style="list-style-type: none"> A report titled Comparison of Actual Noise Levels against EIS predictions was submitted to the EPA in July 2009, prior to the audit period. The 2010 independent audit verified compliance against the conditions in this section of the EPL. 		C

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
U1	The report must be submitted to the EPA's Regional Manager Hunter (Environment Protection and Regulation Division) by 10 July 2009	<ul style="list-style-type: none"> ■ A report titled Comparison of Actual Noise Levels against EIS predictions was submitted to the EPA in July 2009, prior to the audit period. ■ The 2010 independent audit verified compliance against the conditions in this section of the EPL. 		C
U1.1	The Licensee must conduct a site specific Best Management Practice (BMP) determination to identify the most practicable means to reduce particle emissions.	<ul style="list-style-type: none"> ■ ACOL Commissioned Todoroski Air Sciences to produce a report titled Particulate Matter Best Practice Pollution Reduction (4 July 2012). 		C
U1.2	<p>The Licensee must prepare a report which includes, but is not necessarily limited to, the following:</p> <ul style="list-style-type: none"> ■ identification, quantification and justification of existing measures that are being used to minimise particle emissions; ■ identification, quantification and justification of best practice measures that could be used to minimise particle emissions; ■ evaluation of the practicability of implementing these best practice measures; and ■ a proposed timeframe for implementing these best practice measures. <p>In preparing the report, the Licensee must utilise the document entitled Coal Mine Particulate Matter Control Best Practice – Site Specific Determination Guideline – November 2011.</p>	<ul style="list-style-type: none"> ■ Particulate Matter Best Management Practice Pollution Reduction Program Report (Document 155) contains all required information as follows: <ul style="list-style-type: none"> ▶ Section 3 identifies potential dust sources and control measures used on-site. ▶ Section 4 provides a pollution inventory that quantifies dust generation on-site. ▶ Section 4.3 provides an analysis of options for potential dust controls. ▶ The report concludes that ACOL is generally implementing best management practices in accordance with the required best practices guidelines and recommends that a review of current site watering practices is undertaken and a procedure developed. ▶ Non-compliance. The report does not include a timeframe for undertaking the review of current practices and developing a procedure for undertaking site watering practices and therefore full compliance with this condition cannot be demonstrated. 	<ul style="list-style-type: none"> ■ Outline and commit to timeframes or address the actions proposed in the Particulate Matter Best Management Practice Pollution Reduction Program within the AQMP revision. 	NC
U1.3	All cost related information is to be included as Appendix 1 of the Report required by condition U1.2 above	<ul style="list-style-type: none"> ■ Noted. 		

Approval No.	Condition	Finding	Recommendations	Rating: C N/C N/A
U1.4	The Report required by condition U1.2 must be submitted by the Licensee to the Office of Environment and Heritage's Regional Manager Hunter, at PO Box 488G, NEWCASTLE WEST 2302 by 29 June 2012.	<ul style="list-style-type: none"> ■ The report was finalised on 4 July 2012, 5 days after the deadline. 	<ul style="list-style-type: none"> ■ Ensure future compliance reports are submitted to the required agency by the required deadline. 	NC
U1.5	The report required by condition U1.2 above, except for cost related information contained in Appendix 1 of the Report, must be made publicly available by the Licensee on the Licensee's website by 6 July 2012.	<ul style="list-style-type: none"> ■ The report was found to be publicly available on the ACOL website. 		C



Appendix D

Site photographs





Photograph 1 – Air quality and meteorological monitoring site within Camberwell Village



Photograph 2 – Upcast Ventilation Shaft site



Photograph 3 – Large diameter gas drainage drill site on Dairy Lane



Photograph 4 – Signage at the Voluntary Conservation Area



Photograph 5 – Northern section of the Bowmans Creek diversion



Photograph 6 – Southern section of the Bowmans Creek diversion



Photograph 7 – Excised section of Bowmans Creek



Photograph 8 – Water cart operating on haul road into former NEOC pit



Photograph 9 – Automatically activated sprays over product coal stockpile



Photograph 10 – Rehabilitation on eastern emplacement area



Photograph 11 – Cracking on Lemington Road from mine subsidence



Photograph 12 – Cracking on unsealed road to the south of Lemington Road from subsidence