



**MANNERING COLLIERY**

# **INDEPENDENT ENVIRONMENTAL AUDIT REPORT**

for  
**LakeCoal Pty Ltd**  
July 2016

# **MANNERING COLLIERY**

## **INDEPENDENT ENVIRONMENTAL AUDIT REPORT**

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22 July 2016

*for:*

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## EXECUTIVE SUMMARY

Hansen Bailey was commissioned by LakeCoal Pty Limited to conduct an Independent Environmental Audit against Project Approval 06\_0331 (as modified) for the Mannering Colliery. This audit was undertaken for the Department of Planning & Environment for the period 10 April 2013 to 30 April 2016. The audit also assessed compliance with the conditions of Environment Protection Licence 191, key mining authorities and other licence documents.

This Independent Environmental Audit was conducted by Daniel Sullivan (Exemplar Global International Certified Auditor 113202) and Dorian Walsh from Hansen Bailey. The field visit component of the audit was completed over the period 30 – 31 May 2016.

The audit consisted of a detailed desktop review of documentation, interviews with key LakeCoal Pty Limited staff and a field inspection of the colliery pit top area and surrounds. The audit was conducted generally consistent with '*ISO 14010 - Guidelines and General Principles for Environmental Auditing*', '*ISO 14011 - Procedures for Environmental Auditing*' and the '*Independent Audit Guideline. Post-approval requirements for State significant developments* (Department of Planning and Environment, 2015)'.

Key actions and recommendations from the previous independent environmental compliance audit completed in 2013 have been responded to, as described in **Section 2**.

This Independent Environmental Audit has concluded that environmental management at Mannering Colliery is maintained to a generally high standard. During the audit period, a generally high level of compliance against conditions of Project Approval 06\_0331 and other licences and approvals held for Mannering Colliery was also maintained. Document control and management in relation to environmental compliance issues was also noted to be of a high standard and effectively implemented across the site.

For the duration of the audit period the site has been on care and maintenance and as such there has only been very limited operations undertaken within the audit period (maintenance to existing plant and dewatering activities). The field inspection confirmed environmental performance improvements in a number of areas around the pit top area had been implemented during the audit period for the management of key environmental issues for the site, particularly in relation to water management.

Non-compliances identified during this audit are summarised in **Section 3**. These confirm that the non-compliances that occurred during the audit period were largely administrative or low risk in nature however one medium risk non-compliance was identified. A series of recommendations arising from a review of environmental management documentation, the audit site inspections and identified non-compliances is provided in see **Section 6**.

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## LIMITATIONS OF REPORT

In preparing this regulatory compliance audit report, Hansen Bailey has assessed all activities appropriate and necessary to evaluate the environmental status of the site and operations on it. Hansen Bailey has addressed all technical matters which might reasonably be considered to be relevant to such an assessment conducted to standards which apply in NSW. Based on observations of the site, interviews with appropriate staff and a review of available documentation, it is Hansen Bailey's opinion that the potential critical environmental issues associated with the site and operations are those discussed in this report. However, Hansen Bailey can only advise on the basis of the information available to them and therefore cannot dismiss absolutely the possibility that parts of the site, or adjacent properties, may give rise to additional issues.

The conclusions presented in this report are professional opinions based solely upon Hansen Bailey's visual observations of the site and the immediate site vicinity, and upon Hansen Bailey's interpretations of the documentation reviewed, interviews and conversations with personnel knowledgeable about the site and other available information, as referenced in this report. These conclusions are intended exclusively for the purposes stated herein, at the site listed, and for the project indicated.

Opinions presented in this report apply to the site's conditions and features as they existed at the time of Hansen Bailey's site visit on 30 to 31 May 2016, and those reasonably foreseeable. They necessarily cannot apply to conditions and features which Hansen Bailey is unaware of and has not had the opportunity to evaluate.

This report does not, and does not purport to, give legal advice on the actual or potential environmental liabilities of any individual or organisation, or to draw conclusions as to whether any particular circumstances constitute a breach of relevant legislation.

**MANNERING COLLIERY**  
**INDEPENDENT ENVIRONMENTAL AUDIT**  
*for*  
**LakeCoal Pty Limited**

**1 INTRODUCTION**

**1.1 BACKGROUND**

Hansen Bailey has been commissioned by LakeCoal Pty Ltd (LC), to conduct an Independent Environmental Audit (IEA) against Project Approval (PA) 06\_0331 (as modified) for the Manning Colliery (Manning). The original supporting documentation of PA 06\_0331 is the *Manning Colliery Environmental Assessment, dated March 2007* (Manning EA) and the *Response to Submissions* dated 27 July 2007 (Manning RTS). Three modifications have subsequently been granted to PA 06\_0331, with a summary of the key components provided in **Section 1.4**.

The period to which the IEA applies is from 10 April 2013 to 30 April 2016 (the audit period). This IEA was conducted by Daniel Sullivan (DS) (Exemplar Global International Certified Auditor 113202) and Dorian Walsh (DW) from Hansen Bailey. The auditing team was approved by the Department of Planning and Environment (DP&E) on 28 January 2016 (see **Appendix B** for correspondence).

While LakeCoal was responsible for the commissioning and coordination of this audit for the period, it should be noted that Centennial Coal was the operator of Manning Colliery from 10 April 2013 to 17 October 2013 when LakeCoal took over as the operator of the Colliery under a commercial agreement with Centennial Coal.

The audit consisted of a detailed desktop review of documentation and interviews with key LC staff (predominantly Wade Covey (WC), LC Environmental and Community Coordinator, and with Ben Johnson (BJ), LDO HSEC Advisor.

The site review component of the Audit was held over the period 30 – 31 May 2016 (see **Appendix C** for the Audit itinerary). This included a field inspection of key surface infrastructure, coal processing and water management areas conducted in accordance with *ISO 14010 - Guidelines and General Principles for Environmental Auditing*, and *ISO 14011 - Procedures for Environmental Auditing*. The field inspection was conducted by DS and DW on 30 May 2016. Significant review of additional documentation and interviews with LC personnel also occurred prior to and following the site component of the audit.

The weather conditions during the site component of this IEA were generally mild and dry (average temperature of 20°C), with moderate humidity. Winds during the audit tended generally west and south easterly, with speeds between 4 - 19 km/h. In the week preceding

the audit conditions were relatively dry, with 1.2 mm of rainfall recorded at the Lake Macquarie BoM monitoring station (site: 061412).

An opening and closing meeting for the Audit was held on site, with LC Environment and Community staff and the mine manager in attendance.

## **1.2 DOCUMENTS REFERENCED IN AUDIT**

**Appendix D** provides a list of all information reviewed as part of this IEA.

## **1.3 SITE DESCRIPTION**

Manning is an underground coal mine located at the southern end of Lake Macquarie, approximately 60 km south of Newcastle, which is operated by LakeCoal under an agreement with Centennial Coal Company Limited.

Underground mining commenced at Manning in 1960, and since that time has extracted coal from the Great Northern and Fassifern Seams using both the bord and pillar and longwall mining methods.

Manning's operations are currently approved to extract up to 1.1 Million tonnes (Mt), and handle up to 1.3 Mt of Run of Mine (ROM) coal per annum using bord and pillar mining, up to 30 June 2022. During the audit period between April 2013 and April 2016 Manning was on care and maintenance. It is noted that on 18 May 2016 that development coaling commenced in conjunction with the construction of the Chain Valley Colliery link road. Miniwall coal from Chain Valley Colliery is anticipated to be processed through Manning from Q4 2016.

## **1.4 DEVELOPMENT CONSENT AND SUPPORTING DOCUMENTATION SUMMARY**

PA 06\_0331 is held for the operations of Manning. A summary of the Manning approval and its associated modifications are provided below.

The audit focussed on the PA 06\_0331 approval conditions and supporting documents relevant to the activities undertaken by LC during the audit period. PA 06\_0331 was modified twice during the audit period, with Modification 2 (MOD2) approved in November 2014 and Modification 3 (MOD3) approved in December 2015. The compliance status of relevant aspects of LC activities at Manning during the audit period were therefore reviewed against the version of the project approval that was in force at the time (see **Section 3**).

### **1.4.1 PA 06\_0331 Approval**

Manning was approved to operate generally in accordance with PA 06\_0331 and the supporting Manning EA (Hansen Bailey, 2007). The main elements of the activities approved under the Manning EA included:

- Extracting up to 1.1 Mt of ROM coal each year for a period of up to 10 years;
- Mining using bord and pillar underground mining techniques to extract the coal;

- Continuing to use existing surface facilities associated with underground mining activities;
- Transporting coal by conveyor to the Vales Point Power Station; and
- Constructing and using additional ventilation shafts, boreholes and emergency manholes that may be required to service the proposed underground mine workings.

#### **1.4.2 PA 06\_0331 Modification 1**

The Environmental Assessment titled *Manning Colliery – Extension of Mine Project Section 75W Modification to Project Approval 06\_0311* (GSSE, 2012) supports PA 06\_0331 (MOD1). The Modification was approved by DP&E in October 2012 for the following activities:

- An extension of underground mining operations within the Fassifern Seam beyond the 2008 project approval boundary using bord and pillar mining methods to recover approximately 3.2 Mt of ROM coal;
- An extension of underground mining operations into the Great Northern Seam using bord and pillar mining methods to recover approximately 1.4 Mt of ROM coal; and
- The provision of an additional 40 full-time employment positions.

#### **1.4.3 PA 06\_0331 Modification 2**

PA 06\_0331 (MOD2) was undertaken in accordance with the *Manning Colliery – Modification 2, Environmental Assessment, Section 75W Modification to MP 06\_0311* (EMM, 2014). The Modification was approved in November 2014 for the:

- Development and use of up to four first working headings within the Fassifern Seam to connect Manning and Chain Valley Colliery;
- Installation and use of an underground conveyor belt system and ancillary services, enabling ROM coal to be transferred between CVC's and the MC's conveyors; and
- Use of existing Manning infrastructure to transport coal from the Chain Valley underground workings to the Vales Point Power Station at a rate not greater than 1.1 Mtpa (as currently approved under MP06\_0311).

#### **1.4.4 PA 06\_0331 Modification 3**

PA 06\_0331 (MOD3) was undertaken in accordance with the *Manning Colliery – Modification 3 Environmental Assessment, Section 75W Modification to MP 06\_0311* (EMM, 2015). The Modification was approved in December 2015 for the following:

- An increase in the rate of ROM coal handling at, and transport from, MC from 1.1 Mtpa to a maximum of 1.3 Mtpa;
- An extension of the project approval period from 31 March 2018 to 30 June 2022; and
- Minor vegetation clearing/disturbance adjacent to some infrastructure at MC's pit top to enable the extension/establishment of asset protection zones (APZs) for bushfire protection purposes.

## 1.5 AUDIT REQUIREMENTS

### 1.5.1 Development Consent

This IEA has been compiled pursuant to Schedule 5, Condition 8 of PA 06\_0331 (MOD 3). The requirements of Condition 8 of PA 06\_0331 (MOD 3) are listed below in **Table 1**, along with where each is addressed in this report.

### 1.5.2 Audit Guidelines

This IEA report has also been prepared in accordance with the *Independent Audit Guideline. Post-approval requirements for State significant developments* (Audit Guidelines) (DP&E, 2015). The primary purpose of the Audit Guidelines is to ensure that independent audits of State significant developments in NSW are undertaken in a consistent manner and meet minimum standards expected by the NSW Government.

**Table 2** lists key requirements from the Audit Guidelines, the relevant Section of the Guidelines which references the requirement, and indicates where each is addressed in this report.

**Table 3** reproduces the “risk levels” from the Audit Guidelines which were attributed to the non-compliances identified during the audit period.

**Table 1**  
**Independent Environmental Audit Requirements**

Description	Where Addressed
<b>SSD-5465 (MOD 2) Consolidated Conditions</b>	
<b>Condition 8:</b> By the end of March 2013 and every three years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:	This IEA
(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;	<b>Appendix B</b>
(b) include consultation with the relevant agencies;	<b>Section 1.5.3</b>
(c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals); and	<b>Section 3, Appendix E</b>
(d) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.	<b>Section 6</b>
<i>Note: This audit team must be led by a suitably qualified auditor and include experts in any field specified by the Secretary.</i>	<b>N/A</b>

**Table 2**  
**Audit Guidelines Requirements**

<b>Section</b>	<b>Description</b>	<b>Where Addressed</b>
2	Assess the operator's compliance with the requirements of regulatory approvals, including (as applicable): <ul style="list-style-type: none"> <li>• The Development Consent;</li> <li>• The Environment Protection Licence;</li> <li>• The Mining Lease; and</li> <li>• Water licences and approvals.</li> </ul>	<b>Section 3, Appendix E</b>
2, 3	The scope of the audit and the audit team (including any technical specialists) to be determined by the lead regulator.	<b>Section 1, Appendix B</b>
3.3	The auditor team must be independent of the development being audited and audit findings must be based on verifiable evidence.	<b>Appendix A, Sections 1 - 6 and Appendix E</b>
4.1	The compliance status of each requirement or commitment should be assessed in accordance with the compliance assessment criteria and risk levels in the audit guidelines.	<b>Section 1, 3, Appendix E</b>
4.2	Consultation with key regulatory agencies prior to commencement of the audit site inspection.	<b>Section 1.5.3</b>
5.1	The audit outcomes to be documented in a thorough, accessible and accurate audit report that is written in a neutral tone reflecting facts gathered by the audit team.	This IEA
5.1	The audit report should include the following sections: <ul style="list-style-type: none"> <li>• Introduction, providing a brief overview of the development, audit scope and objectives;</li> <li>• Methodology, describing the audit team, methodology applied, document reviews, site inspections and interviews;</li> <li>• Audit findings, including documentation of consultation, response to actions from the previous audit, assessment of compliance status against the conditions and commitments in relevant documents and a discussion of environmental incidents and performance; and</li> <li>• Recommendations, identifying any opportunities for improvement identified in the audit.</li> </ul>	This IEA
5.2	Audit reports submitted to the lead regulator must be certified by the lead auditor on an attached 'Independent Audit Submission Form'	<b>Appendix A</b>
5.3	Copies of the final audit report to be distributed to regulatory agencies within two weeks of finalisation and placed on the development's website.	LC Responsibility
6	The operator of the development to respond to the lead regulator responding to the audit findings and recommendations with an action plan within four weeks of receiving the final audit report.	LC Responsibility

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

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

### 1.5.3 Consultation with Relevant Agencies

During the preparation for this IEA, input was sought from regulatory agencies to confirm any areas of compliance or environmental management at Mannering that should be a particular focus. The following agencies were approached for input as part of the scoping phase of this IEA:

- DP&E;
- Environment Protection Authority (EPA);
- NSW Trade and Investment, Department of Resources and Energy (DRE);
- Office of Environment & Heritage (OEH);
- Department of Primary Industries – Water (DPI – Water);
- WSC; and
- Mannering Community Consultative Committee (CCC) Chairperson.

Where issues were raised during consultation, these are listed in **Table 4** along with reference to where each is addressed in this report.

**Table 4**  
**Agency Requirements**

Ref	Requirement / Comment	Where Addressed
<b>DP&amp;E</b>		
1.	Expected the audit to be completed by 31 March 2016	This timing was not met. See <b>Section 1</b> for audit scope and timing. LakeCoal did however commission the audit prior to 31 March 2016 as per the requirement of the approval condition.
2.	The audit report should provide a detailed, comprehensive and rigorous assessment of all the requirements of the colliery's Project Approval.	<b>Section 3, Appendix E</b>
<b>EPA</b>		
3.	No additional requirements	-
<b>DRE</b>		
4.	No additional requirements	-
<b>OEH</b>		
5.	No additional requirements	-
<b>DPI – Water</b>		
6.	Do the relevant management plans adequately describe the water licensing requirements under the <i>Water Management Act 2000 / Water Act 1912</i> , and compliance with these requirements?	<b>Section 4, Appendix E</b>
7.	Are adequate records kept to enable determination of the volume and source of surface and groundwater taken?	<b>Section 3, 5, Appendix E</b>
8.	Is the operation capturing and/or harvesting any clean water?	<b>Section 5.4, 6</b>
9.	Has the proponent calculated its maximum harvestable right under the <i>Water Management Act 2000</i> ?	<b>Section 5.4, 6</b>
10.	Is the capture of water in excess of the harvestable right?	<b>Section 5.4, 6</b>
11.	Do any exemptions under the <i>Water Management (General) Regulation 2011</i> or Harvestable Rights Order (gazetted 31 March 2006) apply to the capture of water?	<b>Section 5.4, 6</b>
12.	If necessary, does the proponent hold water access licenses in the correct water sources under the relevant water sharing plan (for the take of surface water or alluvial groundwater), or licences under part 5 of the <i>Water Act 1912</i> (for the take of groundwater from non-alluvial aquifers), and do they hold sufficient quantity of entitlement under these licenses?	<b>Section 5.4, 6</b>
<b>WSC</b>		
13.	No additional requirements	-
<b>CVC CCC Chairperson</b>		
14.	No additional requirements	-

## 1.6 REPORT STRUCTURE

**Section 1** provides an introduction, background, site description and layout of Mannering, describes the requirement for this IEA and provides a guide to the structure of this report. This section also provides an overview of approved operations detailed in the EA and modification documents approved for the project approval held for LC activities;

**Section 2** of this report provides a tabular representation of key recommendations made during the previous independent audit and the status of their implementation;

**Section 3** outlines the identified non-compliances and the status against Mannering approvals and their supporting documents, modifications and other licences / approvals available for review at the time of the audit. This includes ranking of non-compliances risk levels in accordance with the Audit Guidelines;

**Section 4** provides a discussion on management plans, programs and strategies available for review at the time of the audit;

**Section 5** of this report discusses the effectiveness of the environmental management and mitigation strategies that are currently undertaken at Mannering. General environmental performance is also discussed including monitoring results, field inspections performed during the site component of the audit, complaints and incidents; and

**Section 6** provides a summary of key recommendations from the audit.

## 2 PREVIOUS AUDIT RECOMMENDATIONS & STATUS

The key recommendations made to address the non-compliances identified in the *Mannering Mine Independent Environmental Audit* (URS, 2013) (2013 audit) and the status of each as at May 2016 are summarised in **Table 5**.

**Table 5**  
**2013 Key Audit Recommendations & Status**

Ref	2013 Audit Recommendation (URS)	LC Response	Status
<b>PROJECT APPROVAL PA 06_0311</b>			
S2, C11	Ensure future improvements to the dirty storm water are implemented and that existing operational management processes are maintained to reduce the amount of water and sediment loads entering and passing through the treatment system prior to discharge.	Maintain servicing of diversion drains, sediment capture drains, sumps and oil water separators (ongoing).	Compliant. Viewed LC maintenance and inspection records from the audit period. Site inspection of the surface facilities confirmed water management structures well maintained at the time of audit.
S3, C2	When the Care and Maintenance program ceases and the site becomes operational, ensure a report on potential noise mitigation measures for noise equipment and activities undertaken on the site is prepared to the satisfaction of the Director-General. Include an action plan for the implementation of any reasonable and feasible recommendations of the report.	On recommencement of activities investigate noise mitigation measures and report findings to the Director-General.	Not triggered. Noise management requirements for recommencement of Mannering operations now appended to PA 06_0311.
S3, C6	It is recommended that an investigation be undertaken to determine the quality of the water discharging from the reclamation tunnels under the conveyor to the Vales Point Power Station.  Implement management controls of the water (such as redirecting to the water management system) if the water quality does not meet licence criteria.	Sample and analyse water discharged from the reclamation tunnel to confirm if EPL criteria are being met. Investigate management controls of water discharged from reclamation tunnel if EPL criteria are not met.	Compliant. LC undertook water sampling at the reclaim tunnel sumps on 28 March 2014. The results confirmed compliance with EPL limits.
S3, C12	It is recommended that either approval is sought from the Director-General that current monitoring is sufficient to meet the intent or and or requirements of this condition (3.12) or that a ground water monitoring program is developed and	Seek approval from the Director-General that the current monitoring is sufficient to meet the intent and or requirements of this condition.	<b>Not Compliant.</b> No evidence available at the time of audit to confirm DP&E approval of the groundwater monitoring program

Ref	2013 Audit Recommendation (URS)	LC Response	Status
	implemented in accordance with the condition. Alternatively the outputs of the hydrogeological model may provide information sufficient to meet the condition in the future.		under the current WMP.
S3, C18	The 31 March 2013 deadline has not been met for the submission of the Non Indigenous Heritage Plan. Submit the Non Indigenous Heritage Plan to the Director General once the internal review has been completed.	Received approval of Non Indigenous Cultural Heritage Management Plan dated 10 <sup>th</sup> September 2013.	Compliant.
<b>ENVIRONMENT PROTECTION LICENCE 191</b>			
L2.1	Ensure future planned improvements to the dirty stormwater treatment system are implemented and that existing operational management processes are maintained to reduce the amount of water and sediment loads entering and passing through the treatment system prior to discharge. Continue to monitor the performance of the system and address issues as they arise to ensure EPL limits are met.	Maintain servicing of diversion drains, sediment capture drains, sediment capture drains, sumps, turbidity meter, and oil water separators. Maintain weekly inspections of water management system. Monitoring continued as per EPL requirements (ongoing).	Compliant. Viewed LC maintenance and inspection records from the audit period. Site inspection of the surface facilities confirmed water management structures well maintained at the time of audit.
L3.1	Ensure the dirty wastewater treatment is managed so that sediment is not allowed to accumulate and impact the storage capacity of the dirty pond system. See other recommendations made throughout this report on water management.	Maintain servicing of diversion drains, sediment capture drains, sumps and oil water separators. Monthly public reporting of discharge volumes (ongoing).	Compliant. Viewed LC maintenance and monitoring records from the audit period. Monitoring results of site discharge are regularly reported as required. The site inspection of the site dams confirmed that sediment loads within the dams were being controlled at the time of audit.
O1.1	Ensure sediment loads capacities are maintained in the dirty water treatment system and that sediment loads are controlled at the source (i.e. the coal stockpile).	Maintain servicing of diversion drains, sediment capture drains, and sediment capture sumps (ongoing).	Compliant. Viewed LC maintenance and monitoring records from the audit period.
M2.4	Ensure daily monitoring of discharges are conducted. Monitoring equipment to be maintained in a condition to	Alarm set up on site Citect system to notify of flow meter failure. Noted as complete in LC	Compliant. Viewed site monitoring records and CITECT outputs. Alarms

Ref	2013 Audit Recommendation (URS)	LC Response	Status
	allow daily monitoring.	response to audit actions.	remain in place to ensure volumetric limits for daily discharge are not exceeded. WC (per comm) noted that LC had investigated the option of installing a solar powered discharge monitoring system at LDP01 to minimise future outages. WC advised that approval had been received internally for the new system and that it was expected to be operational by the end of the year.
R2.2	Ensure written details of a notification are provided to the EPA within seven days of the date on which an incident occurs.	Update Procedure EMS-P003 Environmental Incident Reporting to specifically state this requirement.	Compliant. LC has developed an Incident Response Duty Card includes reference to the timeframes required for the notification of incidents to relevant authorities.
<b>CONSOLIDATED COAL LEASE 721</b>			
721 #18	See recommendations in the main report regarding continuing improvements to the dirty water system.	Maintain servicing of diversion drains, sediment capture drains, sumps and oil water separators (ongoing).	Compliant. During the audit period LC maintained a high level of compliance with the requirement for maintenance of water management structures on site. This included the trial and implementation of 'flocculant blocks' used for the management of sediment loads within the Mannering control ponds.

### 3 NON-COMPLIANCES AGAINST APPROVALS & LICENCES

This section provides a discussion on the identified non-compliances and status against PA 06\_0331 (MOD3) and other licences approvals available for review at the time of the audit.

**Table A** of **Appendix E** provides a complete tabulated list of conditions of PA 06\_0331 (MOD 3), noting the compliance status and providing comments against each.

**Table B** of **Appendix E** provides a list of the other licences and approvals assessed as part of this IEA, with the compliance status and comments against each.

A summary of the identified non-compliances against each document is summarised below in **Table 6**. Included in **Table 6** is a ranking of the non-compliances risk levels in accordance with the requirements outlined in Table 2 of the Audit Guidelines. Further context around the identified non-compliances is included in **Appendix E**, with any recommendations arising from the non-compliances included in **Section 6**, if required.

**Table 6**  
**Non-Compliances Identified**

Ref	Non-Compliance	Risk Level
<b>PA 06_0331 (MOD 3)</b>		
Schedule 2, Condition 2A	A number of non-compliances with the conditions of PA 06_0311 and one with regard to the statement of commitments have been identified by the IEA.	Low
Schedule 2, Condition 8	Management plans have not been subject to regular review or revision. In most cases documents have been revised but not resubmitted to DP&E for approval.	Low
Schedule 3, Condition 6	There have been seven discharge related non-compliances reported against EPL 191 relating to water quality during the audit period.	Medium
Schedule 3, Condition 12	No evidence available at the time of audit to confirm DP&E approval of the groundwater monitoring program under the current WMP	Low
Schedule 5, Condition 2	Updates are required for a number of Mannering management plans to ensure that they reflect current status of operations and the requirements of contemporary statutory requirements, regulatory guidelines and management measures on site.	Low
Schedule 5, Condition 3	The 2013 Annual Review was not submitted by the required due date.	Administrative
Schedule 5, Condition 4	No evidence available of the required management plan reviews being undertaken in accordance with this this condition (i.e. following incident reports, Modifications, etc).	Low
Schedule 5, Condition 6	No evidence available at the time of audit to confirm that the reportable incidents under the EPL were reported to DP&E within 7 days from the date they occurred.	Low

Ref	Non-Compliance	Risk Level
Schedule 5, Condition 7	The monthly environmental monitoring reports and complaints registers are only available from October 2013. CCC meeting minutes are only available from August 2013. No records are maintained on the LC website for the site for the period prior to these dates.	Low
Schedule 5, Condition 8	The audit was completed in accordance with this condition however it was not completed by 31 March 2016 date as requested in the DP&E correspondence dated 28/01/16.	Administrative
Schedule 5, Condition 9	The 2013 audit report was not submitted within the required timeframe.	Administrative
Schedule 5, Condition 10	The monthly environmental monitoring reports and complaints registers are only available from October 2013. CCC meeting minutes are only available from August 2013. No records are maintained on the LC website for the site for the period prior to these dates.	Low
<b>Statement of Commitments</b>		
Water Management	A number of non-compliances were reported under EPL 191 during the audit period associated with discharges from LDP001	Low
<b>EPL 191</b>		
Condition L2.4	The following exceedances were identified against this condition: <ul style="list-style-type: none"> <li>Exceedance of TSS limits occurred at LDP001 on 30 June and 1 July 2013. Results of 77 mg/L and 88 mg/L were recorded against a limit of 50 mg/L.</li> <li>Exceedance of TSS limits occurred at LDP001 on the 17/11/13 – 18/11/13. Results of 112 mg/L and 105 mg/ recorded against limit of 50 mg/L;</li> <li>Exceedance of pH limit (8.5) at LDP001 (EPL ID#1) occurred on the 13/10/ 2014. Result of pH 8.6; and</li> <li>Exceedance of TSS criteria occurred at LDP001 (EPL ID#1) from the 28/2/14 – 1/3/14.</li> </ul>	Medium
Condition L2.1	The following exceedances were identified against this condition: <ul style="list-style-type: none"> <li>Exceedance of oil and grease limit at LDP001 on 30/3/15 (recorded result of 11mg/L against limit of 10mg/L)</li> <li>TSS exceedance at LDP001 on 5/4/15 (recorded result of 56mg/L against limit of 50 mg/L).</li> <li>Exceedance of TSS limit for Monitoring Point 1 on 20/4/15 and 21/4/15. Result of 58 mg/L against limit of 50 mg/L</li> </ul>	Low
Condition R1.5	Annual return for the 17 October 2013 – 31 December 2013 reporting period was submitted to the EPA via email on 10/03/14, outside of the 60 day timeframe required under the condition.	Administrative
Condition R2.2	The notification to the EPA for the TSS exceedance of 5/04/15 was provided to the EPA by LC via the EPA hotline on 10/04/15, with the incident report provided on 17/04/15. This was outside of the 7 day period from the occurrence of the incident required under the condition.	Administrative

Ref	Non-Compliance	Risk Level
Condition M7.1	Failure to monitor flow volume (continuously) at LDP001 on multiple occasions in 2015 as a result of loss of power to the discharge point, flow meter and data logger.	<b>Low</b>
<b>CCL 719</b>		
Condition 5	Notification and subsequent incident reports were not provided for breaches of the <i>Protection of the Environment Operations Act 1997</i> that occurred during the audit period to the Department of Resources and Energy	<b>Low</b>
<b>Water Licence 20BL172016</b>		
Condition 12	Evidence not available at the time of audit to confirm DPI-Water are satisfied with the arrangements put in place by LC to monitor the quantity of water extracted from the underground workings	<b>Low</b>

#### 4 MANAGEMENT PLANS, PROGRAMS AND STRATEGIES

The approvals for Mannering require preparation and implementation of a series of management plans, programs and strategies.

All currently approved management plans, programs and strategies developed for Mannering in accordance with the requirements of PA 06\_0331 were reviewed during this IEA.

Documents reviewed are provided in **Table 7** along with a summary of their current status of review and revision.

**Table 7**  
**Management Plans Status**

Plan	Document Date	Approval Date	Status
Environmental Management Strategy	June 2013	10 September 2013	Centennial Document. Document currently being updated by LakeCoal following Mod 3
Water Management Plan	January 2013	24 March 2010	Centennial Document. Original document approved in 2010, document has since been revised but not resubmitted or approved by DPE. Document currently being updated by LakeCoal following Mod 3
Land Management Plan	29 April 2016	27 May 2016	Approved. – LakeCoal Document
Air Quality Management Plan	December 2012	20 October 2008	Centennial Document. Original document approved in 2008, document has since been revised in 2012 but was not resubmitted or approved by DPE. Document currently being updated by LakeCoal following Mod 3
Noise Monitoring Plan	29 April 2016	20 October 2008	LakeCoal Document. Original document (Centennial) approved in 2008, document has since been revised and resubmitted for approved by DPE. Document was updated by LakeCoal following Mod 3
Environmental Monitoring Program	December 2012	20 October 2008	Centennial Document. Original document approved in 2008, document has since been revised in 2012 but was not resubmitted or approved by DPE. Document currently being updated by LakeCoal following Mod 3

Plan	Document Date	Approval Date	Status
Aboriginal Cultural Heritage Management Plan	August 2012	26 November 2012	Centennial Document. Document currently being updated by LakeCoal following Mod 3
Non Indigenous Heritage Management Plan	February 2013	10 September 2013	Centennial Document. Document currently being updated by LakeCoal following Mod 3
Energy Savings Action Plan	October 2008	20 October 2008	Centennial Document. LakeCoal propose to incorporate the requirements of this plan into the revision of the Air Quality Management Plan. It is recommended that LakeCoal consult with EPA and DP&E regarding this
Mining Operations Plan (Rehab Plan)	10 March 2015	27 March 2015	Approved LakeCoal Document. Combined document with Chain Valley Colliery

The status of each plan against the requirements of PA 06\_0331 is provided in **Table A** of **Appendix E**.

Identified non-compliances are discussed in **Section 3**, with any recommendations in relation to each included in **Section 6**.

## 5 ENVIRONMENTAL MANAGEMENT & MITIGATION EFFECTIVENESS

This section provides a general review of environmental management and mitigation effectiveness at the site. It provides a discussion on the key issues based on the findings of the documentation review and site visit including general environmental management, air quality and noise management, water management, complaints summary and environmental training.

### 5.1 SURFACE INFRASTRUCTURE AREAS

The site inspection component of the audit was conducted on 30 May 2016 and included a review of the Mannering surface facilities area and surrounds. WC was the main LC representative present during the site inspection. The inspections involved a walk-around of the administration, workshop, hardstand areas and water management system infrastructure.

During the inspection, the Mannering office complex, workshop area and pit top area were found to be generally well maintained. Hydrocarbon management measures were being implemented effectively, with spill and containment kits available for use as required and hydrocarbons viewed to be stored on bunded pallets (see Plate 1 and Plate 2 of **Appendix F**). The main fuel storage area adjacent to the workshop was appropriately bunded, with minimal accumulation of hydrocarbons within the bunded area (see Plate 3 of **Appendix F**).

During the inspection of the surface facilities area, several small areas requiring weed control were observed particularly within the coal stock pile area (see Plate 4 of **Appendix F**). It is recommended that these areas are reviewed by LC as part of the regular Environmental Inspection process and treated to minimise the potential for the spread of weeds from the site into adjacent areas.

Segregation of waste was also observed to be well managed and implemented across the site.

In general, a good standard of housekeeping was observed at the pit top area (see Plate 5 and Plate 6 of **Appendix F**). It is important that LC continue the process of regular internal inspections of the pit top area as the site prepares to recommence operations.

### 5.2 AIR QUALITY

The audit inspection of the surface facilities did not identify any air quality related issues as being present on the day. Further it is noted that for the duration of the audit period the operation has remained on care and maintenance and has not had any air quality related complaints or incidents. However, given that the site has now commenced coaling operations again (development only) and is scheduled to be receiving miniwall coal from Chain Valley Colliery in Quarter 4 2016 it is recommended that LC review all required air quality monitoring and mitigation measures and ensure that these are accurately captured within the revision of the Air Quality Management Plan and implemented as required.

### 5.3 NOISE

The audit inspection of the surface facilities did not identify any noise related issues as being present on the day. Further it is noted that for the duration of the audit period the operation has remained on care and maintenance and has not had any noise related complaints or incidents. However, given that the site has now commenced coaling operations again (development only) and is scheduled to be receiving miniwall coal from Chain Valley Colliery in Quarter 4 2016 it is recommended that LC review all required noise mitigation options to ensure that the requirements of PA 06\_0311 Appendices 4A and 4B are met. Additional noise mitigation controls for coal processing infrastructure should be implemented as required.

### 5.4 WATER MANAGEMENT

The water management system on site is predominately comprised of the 4 pollution control ponds and the EPL discharge point (LDP 001) for the water extracted from the underground workings. As part of the pit top area inspection, the dewatering infrastructure, ponds, drains and discharge point infrastructure were reviewed. This infrastructure was observed to be well maintained with water levels in all ponds kept at sufficient levels such that runoff from rainfall captured onsite could be captured and treated prior to discharge as required (see Plate 7 of **Appendix F**). It was noted however that only limited rock lining is present at the outlet point for LDP 001 (see Plate 8 of **Appendix F**). Given the high volume of water that is discharged from this site it is recommended that further works be undertaken to improve the rock lining at LDP 001.

In response to water management issues that were identified during the 2013 audit, WC explained that LC has implemented a maintenance and inspection regime of the site water management infrastructure and has undertaken upgrade works to Pond B in order to improve stormwater retention capacity. These improvements were observed in the field and were completed to ultimately improve the water quality that is discharged from site at LDP 001.

During the audit period LC have completed a trial using solid flocculent blocks within the sites water management system. WC explained that the intent of the flocculent blocks was to enable a more automated approach to be taken to the management of sediment laden water on site from storm events. The flocculent block stations are set up in key drainage lines upstream of the control ponds and allow flocculent to be dispersed into the water management system and ponds during periods of sufficient rainfall. WC noted that since the implementation of this system there have been no exceedances of the total suspended solids criteria. It is recommended that LC continue to investigate options for automation of flocculent controls for the sites control ponds to reduce the risk for future water quality exceedances.

During the site inspection a minor leak was observed in the potable water line near the onsite storage tanks. WC explained that LC were aware of this issue and plans were in place for it to be repaired.

As part of the pre-audit consultation described in **Section 1.5.3** DPI-Water asked if LC were capturing and/or harvesting any clean water in accordance with their harvestable rights under the *Water Management Act 2000*. No evidence was available at the time of the audit to verify this. As such it is recommended that LC review their harvestable rights against the sites catchment area and confirm this in writing to DPI-Water.

## **5.5 COMPLAINTS**

One community complaint was received during the audit period (March 2014). The complaint was related to a bush fire hazard at a remote former ventilation compound at Munmorah posed by long grass. The complaint was made to the RFS who subsequently notified LakeCoal. LakeCoal arranged for the site to be slashed in consultation with RFS.

A review of the community complaints response procedures during the audit confirmed that LC continue to implement a procedure to record and respond to complaints received.

A register of community complaints received during the audit period is also maintained on the Manning website, with contact details provided for a 24 hour complaints and enquiries line where concerns regarding site operations can be raised.

## **5.6 ENVIRONMENTAL TRAINING**

During the audit, WC provided an overview of the environmental training provided to LC employees and contractors. As part of this review, HB reviewed examples of training materials and attendance registers, including a '*General Environmental Awareness Training*' package from April 2016. WC (pers comm) confirmed that this training package was delivered to all relevant Manning staff and contractors and the presentation included details on relevant legislation, key environmental management issues, pre-clearance requirements and procedures to respond to incidents and community enquiries. WC (pers comm) also confirmed that the training is supported by a competency review completed by the attendees.

## 6 AUDIT RECOMMENDATIONS

**Table 8** includes a list of required actions arising from each of the non-compliances from this IEA, along with recommendations related to continuous improvement opportunities identified.

In accordance with the Audit Guidelines, **Table 8** also provides a risk assessment level to assist LC staff in responding to each recommendation.

**Table 8**  
**Audit Recommendations**

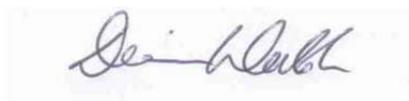
Ref	Description	Risk Level
<b>PA 06_0331 (MOD 3)</b>		
<b>Non-Compliances</b>		
Schedule 2, Condition 8	All relevant management plans should be reviewed, updated and submitted to DPE in consultation with the relevant regulators for review and approval.	Low
Schedule 3, Condition 12	Follow up with DP&E to gain confirmation over the adequacy of current groundwater monitoring arrangements.	Low
Schedule 5, Condition 2	Expedite the revision of all site management plans to reflect the current status of operations following MOD 3 and the recommencement of mining activities at Mannering.	Low
Schedule 5, Condition 4	Develop and implement a protocol to ensure that all strategies, plans and programs are regularly reviewed as required under this condition and provided to DPE for approval after each revision.	Low
Schedule 5, Condition 6	Develop a procedure that outlines the respective regulatory agencies and (if relevant) landholders to be notified in the event of environmental incidents on site.	Low
Schedule 5, Condition 7	All monitoring records and reports for the period prior to LC's operation of Mannering should be obtained from Centennial and made publicly available either on the Centennial or LC website.	Low
Schedule 5, Condition 10	All documentation required under this condition for the period prior to LC's operation of Mannering should be obtained from Centennial and made publicly available either on the Centennial or LC website.	Low
<b>Continual Improvement</b>		
Schedule 3, Condition 6	Further investigations should be undertaken with regard to improving the automation of the flocculent system on the water management system in order to prevent future water quality exceedances.	Low
Schedule 2, Condition 12	This condition should be updated as part of the next modification to make reference to the fact that Chain Valley Colliery coal coming to Mannering via the Link Road will not be subject to this condition as it is subject to a similar condition under SSD-5465.	Administrative
Schedule 3, Condition 1	The Q3 2013 noise monitoring records should be obtained from Centennial to confirm that there were no noise exceedances during this period. These should also be made publicly available either on the Centennial or LC website for Mannering Colliery.	Low

Ref	Description	Risk Level
Schedule 3, Condition 9	The GHD reports referenced in the EA (January, 2013) should be considered in the 2016 review of the WMP.	Low
Schedule 3, Condition 10	The recommendations from the 2013 independent compliance audit remain valid and should be considered in the 2016 review of the WMP.	Low
Schedule 3, Condition 18	The ACHMP and NIHMP should be updated to a LakeCoal document and address the management of heritage items at Mannering Colliery.	Low
Schedule 3, Condition 22	Consultation should be undertaken with EPA and DP&E regarding the proposal to include the GGEPP required under this condition as a component of the revised AQMP.	Low
Schedule 5, Condition 1	The EMS should be reviewed and updated by LC to reflect the current status of operations at Mannering.	Low
<b>EPL 191</b>		
Condition A1.2	Update the approved coal mining and coal handling volumes described in EPL 191 at the next variation of the licence for consistency with PA 06_0311.	Administrative
Condition M7.1	Install a solar powered discharge monitoring system at Mannering to reduce potential for missed data capture as a result of power outages.	Low
Condition O3	Update condition O3 describing measures to minimise dust emissions from haul trucks described in EPL 191 at the next variation of EPL191 for consistency with PA 06_0311.	Administrative
<b>Water Licence 20BL172016</b>		
Condition 12	The current monitoring arrangements should be approved by DPI-Water and described in the revised WMP document.	Low
General	Relevant conditions of the water licence should be considered and included in the revision of the WMP.	Administrative
<b>General Environment</b>		
Noise	Ensure that all required noise mitigation options are investigated and reported in accordance with the requirements of PA 06_0311 Appendices 4A and 4B. Additional noise mitigation controls for coal processing infrastructure should be implemented as required from the review.	Low
Air Quality	Prior to recommencement of full scale coaling activities at Mannering review all required air quality monitoring and mitigation measures and ensure that these are accurately captured within the revision of the Air Quality Management Plan and implemented as required.	Low
Water Management	Further works should be undertaken to improve the rock lining at LDP 001 discharge outlet	Low
Water Management	Review Mannering's harvestable rights against the sites catchment area and confirm this in writing to DPI-Water.	Administrative

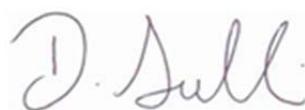
Ref	Description	Risk Level
Land Management	The regular Environmental Inspection process should include weed management as an inspection item. Areas where weeds have been identified such as the coal stockpile area should be treated to reduce the spread of weeds into surrounding areas.	Low

\* \* \*

for  
**HANSEN BAILEY**



Dorian Walsh  
Senior Environmental Scientist



Daniel Sullivan  
Senior Environmental Scientist

***APPENDIX A***  
***DP&E Certification Form***

<b>Independent Audit Certification Form</b>	
Development Name	Mannering Colliery
Development Consent No.	PA 06_0331 (as modified)
Description of Development	Mannering Colliery
Development Address	Rutleys Road, Mannering Park NSW 2333
<b>Independent Audit</b>	
Title of Audit	Independent Environmental Audit, Mannering Colliery
<p><i>I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report and to the best of my knowledge:</i></p> <ul style="list-style-type: none"> <li><i>The audit has been undertaken in accordance with relevant approval condition(s) and in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits</i></li> <li><i>The findings of the audit are reported truthfully, accurately and completely;</i></li> <li><i>I have exercised due diligence and professional judgement in conducting the audit;</i></li> <li><i>I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;</i></li> <li><i>I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;</i></li> <li><i>I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);</i></li> <li><i>Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and</i></li> <li><i>I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</i></li> </ul> <p>Note.</p> <p>a) <i>The Independent Audit is an ‘environmental audit’ for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p>b) <i>The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Signature	
Name of Lead / Principal Auditor	Daniel Sullivan
Address	PO Box 473, Singleton NSW 2330
Email Address	<a href="mailto:dsullivan@hansenbailey.com.au">dsullivan@hansenbailey.com.au</a>
Auditor Certification (if relevant)	Exemplar Global International Certified Auditor 113202
Date:	22 July 2016

***APPENDIX B***  
***Regulatory Correspondence***



Mr Wade Covey  
Environmental & Community Coordinator  
LakeCoal Pty Ltd  
PO BOX 7115  
MANNERING PARK NSW 2259

Dear Mr Covey

**Manning Colliery  
Independent Environmental Audit**

I refer to your email dated 23 January 2016 seeking approval to commission Hansen Bailey to undertake an independent environmental audit as required by the Manning Colliery Project Approval 06\_0311.

The Department considers that the proposed audit team consists of suitably qualified, experienced and independent experts. In accordance with condition 8 of Schedule 5 of the Project Approval, the Secretary endorses the appointment of Daniel Sullivan and Dorian Walsh of Hansen Bailey to undertake the audit.

The Department expects the audit to be completed by 31 March 2016, and the audit report should provide a detailed, comprehensive and rigorous assessment of all the requirements of the colliery's Project Approval, Environment Protection Licence and Mining Lease.

Should you have any enquiries in relation to the above, please contact Megan Dawson at the details above.

Yours sincerely

Howard Reed  
**Director**  
**Resource Assessments**  
as the Secretary's nominee

28-1-16

***APPENDIX C***  
***Audit Itinerary***

**Manning Colliery  
Department of Planning & Environment (DP&E)  
Independent Environmental Audit**

**ITINERARY**

**Site Component to be held Monday, 30 to Tuesday, 31 May 2016**

**Invitees**

David Walker (DW)	Manning Colliery	Mine Manager
Tim Chisholm (TC)	Manning Colliery	Surveyor
Wade Covey (WC)	Manning Colliery	Environmental and Community Coordinator
Ben Johnston (BJ)	Manning Colliery	Environmental Officer
Daniel Sullivan (DS)	Hansen Bailey	Lead Auditor
Dorian Walsh (DW)	Hansen Bailey	Auditor

**DAY 1 – Monday, 30 May 2016**

Time	Description	Location	Required Attendees
9:00am – 9:30am	<b>Opening Meeting</b> <ul style="list-style-type: none"> <li>• Introductions</li> <li>• Purpose of Audit</li> <li>• Confidentiality Arrangements</li> <li>• Audit Process and Timing</li> <li>• Confirmation of Meetings and Inspection/s</li> </ul>	Manning Colliery (MC) Boardroom	WC, DS & DW
9:30am – 10:00am	<b>Presentation on Manning Operations in Audit Period</b> <ul style="list-style-type: none"> <li>• Presentation on operations (WC)</li> </ul>	MC Boardroom	WC, BJ, DS & DW
10:00am – 12:00pm	<b>Documentation Compliance Review</b> <ul style="list-style-type: none"> <li>• Review of Project Approval (PA) 06_0311 (MOD3)</li> </ul>	MC Boardroom	WC, BJ, DS & DW
12:00pm – 12:30pm	<b>Lunch</b>	MC Boardroom	-
12:30pm – 4:00pm	<b>Documentation Compliance Review (cont.)</b> <ul style="list-style-type: none"> <li>• Continue review of PA 06_0311 (MOD3) and Statement of Commitments</li> <li>• Regulator Issues</li> <li>• Reportable Incidents and complaints</li> <li>• Training and Communications</li> </ul>	MC Boardroom	WC, BJ, DS & DW
4:00pm – 5:00pm	<b>Auditors Revision Day 1 and Preparation for Day 2</b>	MC Boardroom	DS & DW

**DAY 2 – Tuesday, 31 May 2016**

<b>Time</b>	<b>Description</b>	<b>Location</b>	<b>Required Attendees</b>
8:00am – 12:00pm	<b>Documentation Compliance Review (cont.)</b> <ul style="list-style-type: none"> <li>• EPL 191</li> <li>• Mining Authorities</li> <li>• Review of key EA Commitments</li> <li>• Review of Activities against EA and MOP</li> <li>• Management Plans commitments review</li> <li>• Water licences</li> <li>• Extraction Plan and Annual Reviews</li> <li>• Regulator Comments and other issues</li> </ul>	MC Boardroom	WC, BJ, DS & DW  WC (BFMP and MOP)
12:00pm – 12:15pm	<b>Lunch</b>	MC Boardroom	-
12:15 pm – 2:00pm	<b>Field Inspection</b> <ul style="list-style-type: none"> <li>• Operations inspection</li> <li>• Rehabilitation areas</li> <li>• Main infrastructure areas (workshop, waste segregation, oil, wash-down, storage, etc.)</li> <li>• Water &amp; waste systems.</li> </ul>	MC Surface Facilities	WC, DS & DW
2:00pm – 3:00pm	<b>Auditors Revision and Preparation for Closeout Meeting</b>	MC Boardroom	DS & DW
3:00pm – 4:00pm	<b>Close Out Meeting</b> <ul style="list-style-type: none"> <li>• Overview of findings (DS)</li> <li>• Confirmation of outstanding items or documents required</li> <li>• Confirm Audit Review and Completion Process</li> </ul>	MC Boardroom	All

***APPENDIX D***  
***Audited Documentation***

- Centennial Coal (2008) Mannering Energy Savings Action Plan
- Centennial Coal (2012) Mannering Air Quality Management Plan
- Centennial Coal (2012) Centennial Northern Holdings Aboriginal Cultural Heritage Management Plan
- Centennial Coal (2012) Mannering Environmental Monitoring Program
- Centennial Coal (2013) Mannering Environmental Management Strategy
- Centennial Coal (2013) Mannering Non-Indigenous Heritage Management Plan
- Centennial Coal (2013) Mannering Water Management Plan
- Centennial Coal (2013) Environment Protection Licence 191 Annual Return, 1 January 2013 to 16 October 2013
- Centennial Coal (2013) Mannering Colliery, Monthly Environmental Reports for the period May 2013 – October 2013
- EMM EMGA Mitchell McLennan (2014) Mannering Colliery – Modification 2, Environmental Assessment, Section 75W Modification to MP 06\_0311
- EMM EMGA Mitchell McLennan (2014) Mannering Colliery – Modification 3, Environmental Assessment, Section 75W Modification to MP 06\_0311
- GSSE (2012) Mannering Colliery – Extension of Mine Project Section 75W Modification to Project Approval 06\_0311 Environmental Assessment
- Hansen Bailey (2007) Mannering Colliery Environmental Assessment
- LakeCoal (2013) Environment Protection Licence 191 Annual Return, 17 October 2013 to 31 December 2013
- LakeCoal (2014) Environment Protection Licence 191 Annual Return, 1 January 2014 to 31 December 2014
- LakeCoal (2015) Environment Protection Licence 191 Annual Return, 1 January 2015 to 31 December 2015
- LakeCoal (2015) Chain Valley Colliery Mining Operations Plan 2015 – 2018 EMP-D-18187
- LakeCoal (2016) Mannering Land Management Plan
- LakeCoal (2016) Mannering Noise Monitoring Plan
- LakeCoal (2016) Complaint Register – 2013, LakeCoal – Mannering Colliery
- LakeCoal (2016) Complaint Register – 2014, LakeCoal – Mannering Colliery
- LakeCoal (2016) Complaint Register – 2015, LakeCoal – Mannering Colliery
- LakeCoal (2016) Mannering Colliery, Monthly Environmental Reports. Accessed reports for the period November 2013 – April 2016 from the Mannering Colliery website.
- LakeCoal (2016) Mannering Colliery, Annual Environmental Management Reports. Accessed reports for 2013, 2014 and 2015 from the Mannering Colliery website.
- NSW Department of Planning & Environment (2015) PA 06\_0331, as modified in December 2015
- NSW Department of Planning & Environment (2015) Independent Audit Guideline, Post-approval requirements for State significant developments
- NSW Department of Primary Industries (2015) Consolidated Coal Lease 719

- NSW Environment Protection Authority (2016) *Environment Protection Licence 191*. Licence Version date: 13-May-2015
- NSW Office of Water (2011) *Bore Licence 20BL172016*. Bore Licence Certificate under Section 115 of the *Water Act 1912*.
- URS (2013) *Mannering Mine Independent Environmental Audit*

***APPENDIX E***  
***Mannering Colliery Compliance Tables***

**Table A**  
**Development Consent PA 06\_0331 (MOD 3) Compliance**

**Key**

**Red – Modification 1 of October 2012 (06\_0311 MOD 1)**

**Blue –Modification 2 of November 2014 (06\_0311 MOD 2)**

**Green – Modification 3 of December 2015 (06\_0311 MOD 3)**

Section	Sub-section	Requirement	Status	Comments
<b>SCHEDULE 2</b>				
<b>ADMINISTRATIVE CONDITIONS</b>				
<b>Obligation to Minimise Harm to the Environment</b>				
	<b>1.0</b>	The Proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of the project.	Compliant	Generally, there were some minor reportable incidents during the period as described below, however no material harm was shown to occur to the environment.  WC provided a copy of the latest Manning General Environmental Awareness Training package and attendance register dated April 2016. This training package was delivered to all relevant Manning staff and contractors and includes details on relevant legislation, key environmental management issues, pre-clearance requirements and procedures to respond to incidents and community enquiries.
<b>Terms of Approval</b>				
	<b>2.0</b>	The Proponent shall carry out the project generally in accordance with the: (a) EA; (b) EA (Mod 1); (c) EA (Mod 2); (d) EA (Mod 3); and (e) Project Layout Plans. <i>Note:</i> • The Project Layout Plans are shown in Appendix 2.	Compliant	No mining was undertaken within the audit period. Manning has been on Care and Maintenance since November 2012.

Section	Sub-section	Requirement	Status	Comments
	<b>2.0A</b>	The Proponent shall carry out the development in accordance with the (a) Statement of Commitments; and (b) conditions of this approval.	<b>Not Compliant</b>	Compliance against each of the SOC's is provided below in this compliance table with a number of non-compliances identified.  <b>A number of non-compliances with the conditions of PA 06_0311 and one with regard to the statement of commitments have been identified in this table and in Section 3 of this audit report.</b>
	<b>3.0</b>	If there is any inconsistency between the documents in condition 2, the most recent document shall prevail to the extent of the inconsistency. The conditions of this approval shall prevail over the documents in conditions 2 and 2A(a) to the extent of any inconsistency.	Compliant	WC (pers comm) noted that no inconsistencies occurred during the audit period.
	<b>4.0</b>	The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: (a) any reports, plans, programs or correspondence that are submitted in accordance with the conditions of this approval; and (b) the implementation of any actions or measures contained in these reports, plans, programs or correspondence.	Compliant	DP&E request on 04/02/16 for management plans register for Manning Colliery. WC response to DP&E viewed dated 19/02/16 which provided the register as requested.  DRE and DP&E comments on 2014 Annual Review and inspections of site during 2015. 2015 AR includes a table of responses to issues raised (Appendix 4 of AR).  Table 1.3 of the 2015 AR closes out all previous issues raised from 2014 AR.  WC email dated 30/11/15 to DRE responding to spontaneous combustion inquiry with regard to the coal that is stockpiled onsite. LC confirmed that there was a low risk of this coal posing a spontaneous combustion risk and proposed that the coal would be removed from site once the Chain Valley Colliery Link Road is constructed.
<b>Limits on Approval</b>				
	<b>5.0</b>	Mining operations may take place until 30 June 2022. <i>Note: Under this approval, the Proponent is required to rehabilitate the site to the satisfaction of the Secretary and DRE. Consequently this approval will continue to apply in all other respects other than the right to conduct mining operations until the site has been rehabilitated to a satisfactory standard.</i>	Compliant	The audit period occurs within the approved period of operations.
	<b>6.0</b>	The Proponent shall not extract more than 1.1 million tonnes of ROM coal a year from the site.	Not Triggered	No mining was undertaken within the audit period. Manning has been on Care and Maintenance since November 2012.

Section	Sub-section	Requirement	Status	Comments
	6.0A	The Proponent shall not transport more than 1.3 million tonnes of ROM coal a year from the site.	Not Triggered	No mining was undertaken within the audit period. Manning has been on Care and Maintenance since November 2012.
	7.0	The Proponent shall ensure all coal produced and/or received on the site is transported by overland conveyor to Vales Point Power Station.	Not Triggered	No mining (or coal transport) was undertaken within the audit period. Manning has been on Care and Maintenance since November 2012.
<b>Updating and Staging Strategies, Plans or Programs</b>	<b>8.0</b>	<p>The Proponent must regularly review the strategies, plans and programs required under this approval and ensure that these documents are updated to incorporate measures to improve the environmental performance of the development and reflect current best practice in the mining industry. To facilitate these updates, the Proponent may at any time submit revised strategies, plans or programs for the approval of the Secretary. With the agreement of the Secretary, the Proponent may also submit any strategy, plan or program required by this approval on a staged basis.</p> <p>With the agreement of the Secretary, the Proponent may prepare a revision or stage of any strategy, plan or program required under this approval without undertaking consultation with all parties nominated under the applicable condition in this approval.</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>While any strategy, plan or program may be submitted on a staged basis, the Proponent must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.</li> <li>If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.</li> </ul>	<b>Not Compliant</b>	<p>Reviewed the Manning Environmental Management Plans Register (see Section 4 of the IEA). Document dates for approved management plans range from October 2008 to September 2013 with two recently resubmitted in April 2016. <b>Register indicates some documents were not subject to regular review during the audit period</b> (see relevant conditions below for comment on specific management plans).</p> <p><b>All relevant management plans should be reviewed, updated as relevant and submitted to DPE and relevant regulators for review and approval.</b></p>
<b>Structural Adequacy</b>	<b>9.0</b>	<p>The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>Under Part 4A of the EP&amp;A Act, the Proponent is required to obtain construction and occupation certificates for the proposed</li> </ul>	Not Triggered	No new buildings or structures constructed during the audit period, as reported in the Annual Reviews 2013 – 2015. WC (pers comm) confirmed no construction undertaken during the part of the audit period in 2016.

Section	Sub-section	Requirement	Status	Comments
		<ul style="list-style-type: none"> <li>building works. Part 8 of the EP&amp;A Regulation sets out the requirements for the certification of the project.</li> </ul>		
<b>Demolition</b>	<b>10.0</b>	The Proponent shall ensure that all demolition work is carried out in accordance with <i>Australian Standard AS 2601-2001: The Demolition of Structures</i> , or its latest version.	Not Triggered	No demolition works carried out during the audit period, as reported in the Annual Reviews 2013 – 2015. WC (pers comm) confirmed no construction undertaken during the part of the audit period in 2016.
<b>Operation of Plant and Equipment</b>	<b>11.0</b>	The Proponent shall ensure that all plant and equipment used on site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	Compliant	Viewed the LC Introduction to Site forms for new plant and equipment acquired by LC or brought to site by contractors. WC (pers comm) confirmed the Introduction to Site is used to verify that equipment is well maintained and able to operate effectively while on site.  Viewed example of ABB calibration certificates for monitoring equipment completed during the audit period, including for the Licenced Discharge Point (LDP)01 flow meter dated 26/02/14, 5/12/14 (ref: MCSDFM).  Viewed output from Pulse, including work orders raised and completed for environmental inspections, equipment servicing for oily water separators, licence applications and renewals.
<b>Community Enhancement Program</b>	<b>12.0</b>	The Proponent shall pay the affected councils \$0.02 for each tonne of ROM coal produced by the project for the purpose of improving water quality in the Lake Macquarie catchment. This payment shall be: (a) shared equally by the affected councils; (b) made by the end of March 2009, and at yearly intervals thereafter; (c) calculated on the ROM coal produced in the previous calendar year; and (d) subject to indexation by the Implicit Price Deflator, as published by the Australian Bureau of Statistics.	Not Triggered	No mining undertaken within the audit period so no requirement for contributions. Manning has been on Care and Maintenance since November 2012.  <b>It is recommended that this condition be updated as part of the next modification to make reference to the fact that Chain Valley Colliery coal coming to Manning via the Link Road will not be subject to this condition as it is subject to a similar condition under SSD-5465.</b>
<b>SCHEDULE 3</b>				
<b>SPECIFIC ENVIRONMENTAL CONDITIONS</b>				

Section	Sub-section	Requirement	Status	Comments																																																																										
<b>Noise Impact Criteria</b>	<b>1.0</b>	<p>The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 1 at any residence on privately owned land.</p> <p>Table 1: Noise limits dB(A)</p>	Not Verified	<p>Quarterly attended noise monitoring undertaken during audit period.</p> <p>Reviewed results reported in the Annual Reviews for 2013 – 2015 and Monthly reports for Jan – April 2016. No exceedances of noise criteria recorded in the results reviewed.</p> <p>The 2013 Annual Review did not include noise monitoring results for Q2 and Q3 2013 as previous owner of Manning (Centennial Coal) did not provide these to LC. WC provided 2013 Q2 results from Centennial following the site visit and this report by SLR dated 19 July 2013 confirmed no exceedances occurred in Q2 2013. No results were provided for Q3 2013 as they could not be found.</p> <p><b>It is recommended that the noise monitoring records for Q3 2013 be obtained to confirm that there were no noise exceedances during this period and made publicly available either on the Centennial or LC website for Manning.</b></p>																																																																										
<b>Noise Impact Criteria</b>	<b>1.0</b>	<p>Table 1: Noise limits dB(A)</p> <table border="1"> <thead> <tr> <th rowspan="2">Day <math>L_{Aeq}(15 \text{ min})</math></th> <th colspan="2">Evening <math>L_{Aeq}(15 \text{ min})</math></th> <th colspan="2">Night <math>L_{Aeq}(15 \text{ min})</math></th> <th rowspan="2"><math>L_{A1}(1 \text{ min})</math></th> <th rowspan="2">Location (as listed in Appendix 4)</th> </tr> <tr> <th>49</th> <th>47</th> <th>35</th> <th>49</th> </tr> </thead> <tbody> <tr> <td>47</td> <td>47</td> <td>35</td> <td>49</td> <td>49</td> <td>49</td> <td>4 – di Rocco</td> </tr> <tr> <td>44</td> <td>44</td> <td>35</td> <td>35</td> <td>49</td> <td>49</td> <td>5 – Keighran</td> </tr> <tr> <td>43</td> <td>43</td> <td>43</td> <td>43</td> <td>50</td> <td>50</td> <td>6 – Swan</td> </tr> <tr> <td>46</td> <td>46</td> <td>46</td> <td>46</td> <td>50</td> <td>50</td> <td>7 – Druitt</td> </tr> <tr> <td>45</td> <td>45</td> <td>45</td> <td>45</td> <td>52</td> <td>52</td> <td>8 – May</td> </tr> <tr> <td>40</td> <td>40</td> <td>40</td> <td>40</td> <td>52</td> <td>52</td> <td>9 – Jeans</td> </tr> <tr> <td>43</td> <td>43</td> <td>43</td> <td>43</td> <td>52</td> <td>52</td> <td>11 – Jeans</td> </tr> <tr> <td>44</td> <td>44</td> <td>44</td> <td>44</td> <td>52</td> <td>52</td> <td>18 – Jeans</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>20 – Knight and all other Chain Valley Bay residences</td> </tr> </tbody> </table> <p>Note: The location of the land referred to in Table 1 is shown on the figure in Appendix 4.</p>	Day $L_{Aeq}(15 \text{ min})$	Evening $L_{Aeq}(15 \text{ min})$		Night $L_{Aeq}(15 \text{ min})$		$L_{A1}(1 \text{ min})$	Location (as listed in Appendix 4)	49	47	35	49	47	47	35	49	49	49	4 – di Rocco	44	44	35	35	49	49	5 – Keighran	43	43	43	43	50	50	6 – Swan	46	46	46	46	50	50	7 – Druitt	45	45	45	45	52	52	8 – May	40	40	40	40	52	52	9 – Jeans	43	43	43	43	52	52	11 – Jeans	44	44	44	44	52	52	18 – Jeans							20 – Knight and all other Chain Valley Bay residences	Compliant	Reviewed the results reported in the Annual Reviews for 2013 – 2015 and Monthly Reports for Jan – April 2016. Reports indicate attended noise monitoring is undertaken generally in accordance with INP methods.
Day $L_{Aeq}(15 \text{ min})$	Evening $L_{Aeq}(15 \text{ min})$			Night $L_{Aeq}(15 \text{ min})$		$L_{A1}(1 \text{ min})$	Location (as listed in Appendix 4)																																																																							
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Section	Sub-section	Requirement	Status	Comments
		apply, and the requirements for evaluating compliance with these criteria. However, these criteria do not apply if the Proponent has an agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement. This condition only has effect prior to recommencement of underground coal extraction at Manning Colliery. At all other times, conditions 1 to 4 of Appendix 4B have effect in its place.		Previous audit found this to be non-compliant and recommended that once the site becomes operational again, ensure a noise mitigation report is prepared to the satisfaction of the Secretary.
<b>Noise Mitigation</b>	<b>2.0</b>	The Proponent shall prepare a report on potential noise mitigation measures for noisy equipment and activities undertaken on the site to the satisfaction of the Secretary. This report must be: (a) prepared by a suitably qualified acoustic expert; (b) submitted to the Secretary by the end of September 2008; and (c) accompanied by an action plan for the implementation of any reasonable and feasible recommendations of the report.	Not Triggered	Appendix 4 of PA 06_0311 provides a program from DP&E for noise monitoring and mitigation on the recommencement of operations at Manning.  WC (pers comm) confirmed LC was in the process of completing a preliminary noise mitigation review at the time of audit. The recommendations from the study will be reviewed following recommencement of Manning operations which is anticipated in June 2016.  <b>It is recommended that the noise mitigation report be completed and provided to DPE for approval in accordance with Schedule 4A and 4B</b>  Previous audit confirmed compliance with (a).
<b>Noise Monitoring</b>	<b>3.0</b>	The Proponent shall prepare a Noise Monitoring Program for the project to the satisfaction of the Secretary. This program must: (a) be submitted to the Secretary by the end of September 2008; (a1) be revised in consultation with the EPA and be submitted to the Secretary by the end of April 2016; and (b) include the use of continuous and attended noise monitoring measures to monitor the performance of the project. The Proponent shall implement the approved Noise Monitoring Program as approved from time to time by the Secretary.	Compliant	Reviewed latest Manning Noise Monitoring Program (NMP) as submitted to EPA on 19/04/16. EPA responded to submission of the NMP on 20/04/16. The NMP was then provided to DP&E for approval via letter dated 29/04/16.  WC (pers comm) confirmed no response from DP&E had been received as at the time of the site review component of the audit.
<b>Subsidence</b>	<b>4.0</b>	The Proponent shall limit its coal extraction methods on the site to first workings only, and shall not undertake second workings.	Not Triggered	No mining undertaken within the audit period. Manning has been on Care and Maintenance since November 2012.

Section	Sub-section	Requirement	Status	Comments
<b>SOIL AND WATER</b>				
	<b>5.0</b>	<b>Deleted.</b>	N/A	
<b>Discharge</b>	<b>6.0</b>	The Proponent shall only discharge water from the site as expressly provided for by its EPL.	<b>Not Compliant</b>	<p>Reviewed EPL191 Annual Returns for 2013 – 2015. <b>Four non-compliances were reported against Condition L2.4</b> of EPL191, including:</p> <ul style="list-style-type: none"> <li>Exceedance of TSS limits occurred at LDP001 on 30 June and 1 July 2013. Results of 77 mg/L and 88 mg/L were recorded against a limit of 50 mg/L.</li> <li>Exceedance of TSS limits occurred at LDP001 on the 17/11/13 – 18/11/13. Results of 112 mg/L and 105 mg/L recorded against limit of 50 mg/L;</li> <li>Exceedance of pH limit (8.5) at LDP01 (EPL ID#1) occurred on the 13/10/ 2014. Result of pH 8.6; and</li> <li>Exceedance of TSS criteria occurred at LDP001 (EPL ID#1) from the 28/2/14 – 1/3/14.</li> </ul> <p><b>Three non-compliances were reported against Condition L2.1 of EPL191.</b></p> <ul style="list-style-type: none"> <li>Exceedance of oil and grease limit at LDP001 on 30/3/15 (recorded result of 11mg/L against limit of 10mg/L)</li> <li>TSS exceedance at LDP001 on 5/4/15 (recorded result of 56mg/L against limit of 50 mg/L).</li> <li>Exceedance of TSS limit for Monitoring Point 1 on 20/4/15 and 21/4/15. Result of 58 mg/L against limit of 50 mg/L</li> </ul> <p><b>One non-compliance was reported against M7.1 of EPL191</b></p> <ul style="list-style-type: none"> <li>Failure to monitor flow volume (continuously) at LDP001 on multiple occasions as a result of power outages.</li> </ul> <p>Previous audit confirmed compliance.</p>
	<b>7.0</b>	The Proponent shall investigate, assess and report on the ecological interactions of minewater discharged from the site with the aquatic ecology of the unnamed creek and wetlands (and associated vegetation) between the minewater discharge point/s and Lake Macquarie. This report must: (a) be prepared in consultation with EPA by suitably qualified expert/s whose appointment/s have been approved by the Secretary; (b) be submitted to the Secretary by the end of March 2009; and	Compliant	

Section	Sub-section	Requirement	Status	Comments
		(c) assess the probable alterations in the local ecology attributable to previous and proposed minewater discharges and any future cessation of minewater discharge flows.		Reviewed Manning Colliery Water Management Plan (WMP) dated January 2013. Previous audit confirmed compliance of WMP.
<b>Water Management Plan</b>	<b>8.0</b>	<p>The Proponent shall prepare a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with <b>DPI Water</b> by suitably qualified expert/s whose appointment/s have been approved by the Secretary;</p> <p>(b) be submitted to the Secretary by the end of March 2009; and</p> <p>(c) include a:</p> <ul style="list-style-type: none"> <li>• Site Water Balance;</li> <li>• Erosion and Sediment Control Plan;</li> <li>• Surface Water Monitoring Plan; and</li> <li>• Groundwater Monitoring Program.</li> </ul> <p>The Proponent shall implement the approved management plan as approved from time to time by the Secretary.</p>	Compliant	<p>The WMP includes the following information:</p> <ul style="list-style-type: none"> <li>• Site Water Balance (Section 6);</li> <li>• Erosion and Sediment Control Plan (Section 7);</li> <li>• Surface Water Monitoring Plan (Section 8); and</li> <li>• Groundwater Monitoring Plan (Section 9).</li> </ul> <p>Water quality monitoring during the audit period was implemented generally in accordance with the WMP and the requirements of EPL 191, with results reported in the audit period Annual Reviews.</p> <p>WC (pers comm) confirmed that the WMP (2013) was under revision by LC at the time of audit and would be submitted for regulatory review later in 2016.</p>
<b>Site Water Balance</b>	<b>9.0</b>	<p>The Site Water Balance must:</p> <p>(a) include details of:</p> <ul style="list-style-type: none"> <li>• sources and security of water supply;</li> <li>• water use on site;</li> <li>• water management on site; and</li> </ul> <p>(b) investigate, assess and report on measures to minimise water use by the project, particularly potable water from the Wyong Shire town water supply.</p>	Compliant	<p>Section 6 of the WMP (Site Water Balance) includes the following detail:</p> <ul style="list-style-type: none"> <li>• Water Supply and Use (Section 6.1);</li> <li>• Surface Runoff (Section 6.2);</li> <li>• Storage Volumes (Section 6.3);</li> <li>• Underground water (Section 6.4); and</li> <li>• Water Balance (Section 6.5).</li> </ul> <p>The previous audit recommended the WMP be updated to include the recommendations of the two GHD reports referenced in the EA (January, 2013). This has not been undertaken during the audit period.</p> <p><b>It is recommended that the GHD reports referenced in the EA (January, 2013) be considered in the 2016</b></p>

Section	Sub-section	Requirement	Status	Comments
Erosion and Sediment Control	10.0	<p>The Erosion and Sediment Control Plan must:</p> <p>(a) be consistent with the requirements of <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom 2004, or its latest version);</p> <p>(b) identify activities that could cause soil erosion and generate sediment;</p> <p>(c) describe measures to minimise soil erosion and the potential for transport of sediment from the site;</p> <p>(d) describe the location, function, and capacity of erosion and sediment control structures; and</p> <p>(e) describe what measures would be implemented to monitor and maintain the structures over time.</p>	Compliant	<p><b>review of the WMP.</b></p> <p>Section 7 of the WMP provides an Erosion and Sediment Control Plan for Manning. The WMP references the a number of controls, including for:</p> <ul style="list-style-type: none"> <li>Existing infrastructure (Section 7.1);</li> <li>Measures to minimise erosion and control sediment (Section 7.2 and 7.3);</li> <li>Location, function and capacity of structures (Section 6.2 and Section 6.3); and</li> <li>Monitoring and maintenance measures (Section 7.1 and Section 8).</li> </ul> <p>The previous audit identified a number of recommendations required during the next revision of the WMP, namely ensuring the WMP is consistent with Landcom 2004 guidelines, clearly defining activities that could cause soil and erosion, and including measures to monitor and maintain sediment control structures over time. The WMP has not been revised since the last audit and hence recommendations have not yet been implemented. <b>It is recommended that the recommendations of the previous independent compliance audit are considered in the review of the WMP.</b></p>
		<p>The Surface Water Monitoring Plan must include:</p> <p>(a) detailed baseline data on surface water flows and quality in creeks and other waterbodies that could be affected by the project;</p> <p>(b) surface water impact assessment criteria;</p> <p>(c) a program to monitor the impact of the project on surface water flows and quality; and</p> <p>(d) procedures for reporting the results of this monitoring.</p>	Compliant	<p>WC (pers comm) confirmed the procedures in place for the inspection of erosion and sediment controls at Manning by LC Environmental staff and by the nominated waste management contractor (Remondis). Viewed copies of LC Environmental Inspection forms completed during the audit period (typically on a weekly basis).</p> <p>The Surface Water Monitoring Plan is included in Section 8 of the WMP and includes:</p> <ul style="list-style-type: none"> <li>An Ecological Assessment (March 2009), which provided baseline data, as required (Section 8.2);</li> <li>Section 8.1.1 and 8.1.2 Assessment criteria (Section 8.1.1 and Section 8.1.2);</li> <li>Monitoring requirements (Section 8.2.1);</li> <li>Reporting requirements (Section 8.3), however includes a reference to the Centennial Coal web site (and not the LC website).</li> </ul>
Groundwater Monitoring	12.0	<p>The Groundwater Monitoring Program must include:</p> <p>(a) detailed baseline data to benchmark the natural variation in</p>	<b>Not Compliant</b>	<p>The Groundwater Monitoring Plan is included in Section 9 of the WMP.</p>

Section	Sub-section	Requirement	Status	Comments																
<b>Program</b>		<p>groundwater levels, yield and quality;</p> <p>(b) groundwater impact assessment criteria;</p> <p>(c) a program to monitor the impact of the project on groundwater levels, yield and quality; and</p> <p>(d) procedures for reporting the results of this monitoring.</p>		<p>The previous audit recommended that approval be obtained from the Director-General (Secretary) that current groundwater monitoring arrangements (within the underground workings) are sufficient to meet this requirement. Viewed a letter dated 28/08/14 from LC to DP&amp;E seeking confirmation over the adequacy of groundwater monitoring program in place at Manning. WC (pers comm) confirmed that no response had been received from DP&amp;E to date. <b>It is recommended that LC follow up the previous correspondence with DP&amp;E to gain confirmation over the adequacy of current groundwater monitoring arrangements.</b></p>																
<b>REHABILITATION</b>	<b>13.0</b>	<p>The Proponent shall rehabilitate the site to the satisfaction of the Secretary and DRE. Rehabilitation must be substantially consistent with the Rehabilitation Objectives described in the EA, the Statement of Commitments and the following objectives in Table 2 below.</p> <p><i>Table 2: Rehabilitation Objectives</i></p> <table border="1"> <thead> <tr> <th>Feature</th> <th>Objective</th> </tr> </thead> <tbody> <tr> <td>Mine site (as a whole of the disturbed land and water)</td> <td>Safe, stable and non-polluting, fit for the purpose of the intended post-mining land use(s).</td> </tr> <tr> <td>Rehabilitation materials</td> <td> <ul style="list-style-type: none"> <li>Materials (including topsoils, substrates and seeds of the disturbed area) are recovered, appropriately managed and use effectively as resources in the rehabilitation.</li> </ul> </td> </tr> <tr> <td>Surface infrastructure</td> <td>To be decommissioned and removed, unless the DRE agree otherwise.</td> </tr> <tr> <td>Portals and ventilation shafts</td> <td>To be decommissioned and made safe and stable.</td> </tr> <tr> <td>Other land affected by the development</td> <td>Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of: <ul style="list-style-type: none"> <li>local native plant species (unless the DRE agrees otherwise); and</li> <li>a landform consistent with the surrounding environment.</li> </ul> </td> </tr> <tr> <td>Built features damaged by mining operations</td> <td>Repair to pre-mining condition or equivalent unless: <ul style="list-style-type: none"> <li>the owner agrees otherwise; or</li> <li>the damage is fully restored, repaired or compensated under the <i>Mine Subsidence Compensation Act 1961</i>.</li> </ul> </td> </tr> <tr> <td>Community</td> <td>Ensure public safety.</td> </tr> </tbody> </table>	Feature	Objective	Mine site (as a whole of the disturbed land and water)	Safe, stable and non-polluting, fit for the purpose of the intended post-mining land use(s).	Rehabilitation materials	<ul style="list-style-type: none"> <li>Materials (including topsoils, substrates and seeds of the disturbed area) are recovered, appropriately managed and use effectively as resources in the rehabilitation.</li> </ul>	Surface infrastructure	To be decommissioned and removed, unless the DRE agree otherwise.	Portals and ventilation shafts	To be decommissioned and made safe and stable.	Other land affected by the development	Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of: <ul style="list-style-type: none"> <li>local native plant species (unless the DRE agrees otherwise); and</li> <li>a landform consistent with the surrounding environment.</li> </ul>	Built features damaged by mining operations	Repair to pre-mining condition or equivalent unless: <ul style="list-style-type: none"> <li>the owner agrees otherwise; or</li> <li>the damage is fully restored, repaired or compensated under the <i>Mine Subsidence Compensation Act 1961</i>.</li> </ul>	Community	Ensure public safety.	Not Triggered	<p>No rehabilitation works were required during the audit period, as reported in the Annual Reviews 2013 - 2015. Manning has been on Care and Maintenance since November 2012.</p>
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Built features damaged by mining operations	Repair to pre-mining condition or equivalent unless: <ul style="list-style-type: none"> <li>the owner agrees otherwise; or</li> <li>the damage is fully restored, repaired or compensated under the <i>Mine Subsidence Compensation Act 1961</i>.</li> </ul>																			
Community	Ensure public safety.																			
	<b>13.0A</b>	<p>The Proponent shall carry out all surface disturbing activities in a manner that, as far as practicable, minimises potential for dust emissions and shall carry out rehabilitation of disturbed areas progressively, as soon as reasonably practicable, to the</p>	Not Triggered	<p>No land preparation works were undertaken during the audit period, as reported in the Annual Reviews 2013 - 2015. Manning has been on Care and Maintenance since November 2012.</p>																

Section	Sub-section	Requirement	Status	Comments
Land Management Plan		satisfaction of the Secretary and DRE.		Reviewed the Manning Land Management Plan (LMP) dated January 2013. Previous audit confirmed compliance of approved LMP.
	14.0	<p>The Proponent shall prepare a detailed Land Management Plan for the site to the satisfaction of the Secretary and DRE. This plan must:</p> <p>(a) be submitted to the Secretary by the end of September 2008;</p> <p>(b) be prepared by suitably qualified expert/s whose appointment/s have been endorsed by the Secretary;</p> <p>(c) be prepared in consultation with DRE, OEH and affected councils; and</p> <p>(d) include measures to:</p> <ul style="list-style-type: none"> <li>• minimise visual impacts;</li> <li>• control weeds, feral pests and access; and</li> <li>• manage bushfires; and</li> </ul> <p>(e) provide details of who is responsible for monitoring, reviewing and implementing the plan.</p> <p>Prior to the end of April 2016, the Proponent shall revise the Land Management Plan to incorporate the measures required to implement its commitments described in new row 2 of the Terrestrial Ecology section of its Statement of Commitments, and submit it to the Secretary for approval.</p> <p>The Proponent shall implement the approved management plan as approved from time to time by the Secretary.</p>	Compliant	<p>Also reviewed the revised LMP prepared by LC. Viewed a letter from LC to DP&amp;E dated 29/04/16 submitting revised LMP for review. WC (pers comm) noted that the revised LMP was prepared to address comments made by OEH and DRE on the Environmental Assessment for PA 06_0311 (MOD3). As such, the revised LMP was only to be submitted to DP&amp;E (this is noted in Section 1.2 of the revised LMP).</p> <p>In relation to land management, LC received one complaint on 27/3/14 via the Rural Fire Service regarding bushfire hazards at a remote ventilation site at Munmorah. LC completed a number of general bushfire hazard reduction activities (slashing, land maintenance) by 28/4/14 to address the complaint in consultation with the RFS.</p> <p>Section 6.2 of the revised LMP provides detail on bushfire management, prevention and response, including for Asset Protection Zones as required under the PA 06_0311 SoCs.</p> <p>A summary of weed controls and other land management activities was provided in the audit period Annual Reviews.</p>
	14.0A	The Proponent shall implement its preferred option of the three options set out in new row 2 of the Terrestrial Ecology section of its Statement of Commitments by 1 December 2016, following consultation with OEH and to the satisfaction of the Secretary.	Not Triggered	<p>Implementation of this condition is required by 1/12/16.</p> <p>LC met with OEH in December 2015 to discuss the options for these offsets.</p> <p>OEH will confirm funding requirements to LC to meet bio-banking method calculations. Viewed minutes of meeting from 4/12/15 between LC and OEH. LC will prepare bio-banking calculations for these areas.</p> <p>Viewed Manning Colliery Mining Operations Plan (MOP) document, as amended for the period 31 December 2014 – 31 March 2015. LC notified DRE of the proposed amendment (Amendment A) via letter dated 12/11/14.</p> <p>Also reviewed the Chain Valley Colliery (CVC) MOP, 2015</p>
Rehabilitation Plan	15.0	The Proponent shall prepare a Rehabilitation Plan for the site to the satisfaction of the DRE. This plan must: (a) be submitted within 3 months of approval of Mod 2 for approval by DRE prior to carrying out any disturbing activities of the development, unless otherwise agreed by	Compliant	

Section	Sub-section	Requirement	Status	Comments								
		<p>the Secretary;</p> <p>(b) be prepared in accordance with DRE guidelines and in consultation with the Department, OEH, EPA, DPI Water, WSC and LMCC and the mine's CCC;</p> <p>(c) incorporate and be consistent with the rehabilitation objectives in the EA, Statement of Commitments and Table 2 above;</p> <p>(d) integrate and build on, to the maximum extent practicable, the other management plans required under this approval; and</p> <p>(e) address all aspects of mine closure and rehabilitation, including post-mining land use domains, rehabilitation objectives, completion criteria and rehabilitation monitoring and management.</p> <p><b>The Proponent shall implement the approved management plan as approved from time to time by the Secretary.</b></p> <p><i>Note: The approved Mining Operations Plan (which will become the REMF once the Mining Act Amendments have commenced) required as a condition of the Mining Lease(s) issued in relation to this project, will satisfy the requirements of this condition for a Rehabilitation Plan.</i></p>		<p>- 2018. Viewed letters to the CCC, WSC, LMCC, OEH, NOW, EPA and DP&amp;E dated 10/03/15. Comments from NOW were received via letter dated 8/04/15 and included in the final CVC MOP. The CVC MOP includes a description of LC activities within the Manning holdings, including detail on rehabilitation activities proposed for the MOP term.</p>								
<b>AIR QUALITY</b>												
<b>Impact Assessment Criteria</b>	<b>16.0</b>	<p>The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria listed in Table 3 at any residence on privately-owned land.</p> <p><i>Table 3: Long term impact assessment criteria for deposited dust</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging period</th> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td>Deposited dust</td> <td>Annual</td> <td>2 g/m<sup>2</sup>/month</td> <td>4 g/m<sup>2</sup>/month</td> </tr> </tbody> </table> <p><i>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS/NZS 3580.10.1-2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.</i></p> <p>The Proponent shall prepare an Air Quality Monitoring Program for the project to the satisfaction of the Secretary. This program must:</p> <p>(a) be submitted to the Secretary by the end of September</p>	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	Deposited dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month	Compliant	<p>Air quality monitoring results for Manning are reported in the audit period Annual Reviews. No exceedances of air quality criteria were recorded during the audit period.</p> <p>No complaints were received during the audit period in relation to air quality impacts.</p>
Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level									
Deposited dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month									
<b>Monitoring</b>	<b>17.0</b>		Compliant	<p>Reviewed Manning Colliery Air Quality Management Plan (AQMP), dated December 2012.</p> <p>Section 1 and Section 3 of the AQMP include details on the</p>								

Section	Sub-section	Requirement	Status	Comments
		<p>2008; and (b) use dust deposition gauges to monitor the performance of the project. The Proponent shall implement the approved monitoring program as approved from time to time by the Secretary.</p>		<p>air quality monitoring program for Manning.  Air quality monitoring results are provided in the audit period Annual Reviews and in Monthly Environmental Reports for January – April 2016 (available on the LC website). Five dust deposition gauges are maintained by LC and data is collected on a monthly basis.</p>
<b>HERITAGE</b>		<p>The Proponent shall prepare a Heritage Management Plan for the project to the satisfaction of the Secretary. This Plan must:</p> <p>(a) be prepared in consultation with any relevant Aboriginal stakeholders; (b) be submitted, prior to 31 March 2013, for approval to the Secretary; (c) include consideration of the Aboriginal and non-Aboriginal cultural context and significance of the site; (d) detail the responsibilities of all stakeholders; and (e) include programs/procedures and management measures for:</p> <ul style="list-style-type: none"> <li>• dealing with previously unidentified Aboriginal objects (excluding human remains), including any need to halt works in the vicinity, assessment of significance, determination of appropriate mitigation measures (by a qualified archaeologist in consultation with Aboriginal stakeholders), re-commencement of works, notifying OEH, and registering the new site(s) in the OEH AHIMS register;</li> <li>• dealing with any human remains which may be discovered, including halting of works in the vicinity; notifying NSW Police, OEH, the Department and Aboriginal stakeholders; and not re-commencing any works in the vicinity unless authorised;</li> <li>• heritage induction for construction personnel (including procedures for keeping records of inductions);</li> <li>• ongoing Aboriginal consultation and involvement (including procedures for keeping records of this);</li> </ul>		<p>Reviewed Centennial Coal Northern Holdings Aboriginal Cultural Heritage Management Plan (ACHMP) dated November 2012. Required content included in the plan for Manning Colliery. The Manning Annual Review 2013 reports an Aboriginal survey was conducted on the 31/05/13 with all Registered Aboriginal Parties invited to participate.  Reviewed the Manning Colliery Non-Indigenous Cultural Heritage Management Plan (NIHMP). Required content is included in the document. The previous audit found this to be non-compliant as the NIHMP was not submitted prior to the deadline of 31 March 2013. Subsequently the NIHMP was submitted during the current audit period on 11/07/13 for approval and subsequently approved on 10/09/13.  No impacts to heritage items were reported in the audit period Annual Reviews.  <b>It is recommended that LC review and update the ACHMP and NIHMP specifically for the management of heritage items at Manning.</b></p>
<b>Heritage Management Plan</b>	<b>18.0</b>		Compliant	

Section	Sub-section	Requirement	Status	Comments
VISUAL		<ul style="list-style-type: none"> <li>• appropriate identification, management, conservation and protection of both Aboriginal and non-Aboriginal heritage items identified on the site; and</li> <li>• dealing with previously unidentified non-Aboriginal heritage items which may be discovered during the project.</li> </ul> <p>The Proponent shall implement the approved management plan as approved from time to time by the Secretary.</p>		
	19.0	<p>The Proponent shall:</p> <p>(a) ensure no outdoor lights shine above the horizontal;</p> <p>(b) ensure that all external lighting associated with the project complies with <i>Australian Standard AS4282 (INT) 1995 – Control of Obrusive Effects of Outdoor Lighting</i>;</p> <p>(c) take all practicable measures to mitigate off-site lighting impacts from the project; and</p> <p>(d) minimise the visual impacts of the project, to the satisfaction of the Secretary.</p>	Compliant	<p>No complaints received during the audit to lighting or visual amenity.</p> <p>Annual Reviews during the audit period note that no lights are directed offsite or installed to shine above the horizontal. This was confirmed during the site inspection component of the audit.</p> <p>Viewed LC Manning General Environment and Community Awareness Training Package dated April 2016, which includes a component on lighting impact controls. WC (pers comm) noted that with the recommencement of operations, LC will commission a lighting audit by the end of December 2016 to confirm compliance with AS4282.</p>
TRANSPORT				
Monitoring of Coal Transport	20.0	<p>The Proponent shall keep records of the amount of coal transported from the site each year, and include these records in the <b>Annual Review</b>.</p>	Compliant	<p>No coal was transported from site during the auditing period, with the site being on Care and Maintenance since November 2012.</p>
Ruttleys Road Intersection	21.0	<p>The Proponent shall:</p> <p>(a) complete a road safety audit of the intersection of Ruttleys Road and Manning Colliery Access Road by the end of March 2009;</p> <p>(b) provide copies of this audit to RMS, WSC and the Secretary within one month of its completion; and</p> <p>(c) within 3 months of approval of Mod 2, install additional sections of guardrail (safety barrier) on the eastern side of Ruttleys Road between the Manning Colliery access road and existing sections of guardrail further to the north;</p> <p>(d) be responsible for the maintenance and upkeep of the</p>	Compliant	<p>Road safety audit completed November 2008 (Audit Report 2112714A-PR_2048 Rev E, Parsons Brinkerhoff P/L), and submitted 29 January 2009, as verified in the previous audit.</p> <p>Annual Review 2015 reported the new guardrail was installed on 23/02/15, as required.</p> <p>Viewed photos dated 23 February 2015 showing the completed sections of guardrail.</p> <p>Viewed manning register for Manning Colliery provided by WC dated 04 April 2016 which indicated that the current</p>

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		<p>pavement of the Ruttleys Road/Manning Colliery access road intersection whilst the site is used for mining purposes or until the intersection is upgraded to a Type CHR intersection treatment; and</p> <p>(e) prior to the number of workers (direct employees and contractors) at Manning Colliery exceeding 70, the Proponent shall upgrade the Ruttleys Road/Manning Colliery access road intersection to a Type CHR treatment in accordance with Construction Certificate SCC/69/2011 issued by WSC, or later updated versions of this Construction Certificate;</p> <p>to the satisfaction of the Secretary.</p>		<p>MC manning to be 66. WC (per com) advised that LakeCoal management were aware of the manning limit in the approval and advised that Manning's manning levels were only increased to this level while the link road was under construction. WC advised that the manning levels at Manning would be significantly reduced once the link road project was completed in Q4 2016.</p>
<b>GREENHOUSE AND ENERGY EFFICIENCY</b>				
		<p>The Proponent shall prepare a Greenhouse and Energy Efficiency Plan for the project to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with EPA and generally in accordance with the <i>Guidelines for Energy Savings Action Plans</i> (DEUS 2005, or its latest version);</p> <p>(b) be submitted to the Secretary for approval by the end of September 2008;</p> <p>(c) include a program to monitor greenhouse gas emissions and energy use generated by the project;</p> <p>(d) include a framework for investigating and implementing measures to reduce greenhouse gas emissions and energy use at the site; and</p> <p>(e) describe how the performance of these measures would be monitored over time.</p> <p>The Proponent shall implement the approved management plan as approved from time to time by the Secretary.</p>	Compliant	<p>Previous audit confirmed compliance with (a) and (b).</p> <p>Viewed NGERs reports submitted for Manning during the audit period. WC confirmed that LC intends to include a revised Greenhouse Gas and Energy Efficiency Plan (GGEEP) as a component of the revised AQMP (currently under revision for submission in 2016), with a summary of reporting to be provided in Annual Reviews.</p> <p><b>It is recommended that LC consult with EPA and DP&amp;E regarding the proposal to include the GGEEP required under this condition as a component of the revised AQMP.</b></p>
	<b>22.0</b>			
<b>WASTE</b>				
		<p>The Proponent shall:</p> <p>(a) monitor the amount of waste generated by the project;</p> <p>(b) investigate ways to minimise waste generated by the project;</p> <p>(c) implement reasonable and feasible measures to minimise waste generated by the project; and</p> <p>(d) report on waste management and minimisation in the</p>	Compliant	<p>Reviewed Annual Reviews completed for the audit period. Volumes of major waste streams are reported as required.</p> <p>General rubbish removal on site and housekeeping was raised as an action in the 2013 Annual Environmental Management Review by the DRE (letter from DRE dated 19/11/14). WC (pers comm) confirmed that the initial actions have been completed, however the general</p>
	<b>23.0</b>			

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<b>SCHEDULE 4</b>				
<b>ADDITIONAL PROCEDURES</b>				
<b>INDEPENDENT REVIEW</b>				
		<p>If a landowner considers the project to be exceeding the impact assessment criteria in schedule 3, then he/she may ask the <b>Secretary</b> in writing for an independent review of the impacts of the project on his/her land.</p> <p>If the <b>Secretary</b> is satisfied that an independent review is warranted, the Proponent shall within 2 months of the <b>Secretary's</b> decision:</p> <p>(a) consult with the landowner to determine his/her concerns;</p> <p>(b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the <b>Secretary</b>, to conduct monitoring on the land, to:</p> <ul style="list-style-type: none"> <li>• determine whether the project is complying with the relevant impact assessment criteria in schedule 3; and</li> <li>• identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and</li> <li>• give the <b>Secretary</b> and landowner a copy of the independent review.</li> </ul> <p>If the independent review determines that the project is complying with the relevant impact assessment criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the <b>Secretary</b>.</p> <p>If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 3, and that the project is primarily responsible for this non-compliance, then the Proponent shall:</p> <p>(a) take all reasonable and feasible measures, in consultation</p>		<p>housekeeping is an ongoing focus.</p> <p>Review of general housekeeping and waste management on site includes weekly waste services inspections (completed by total waste management system contractor (Remondis)) and supported by LC Environmental staff inspections.</p>
	1.0		Not Triggered	No private landowner requests for independent impact review made during the audit period.
	2.0		Not Triggered	
	3.0		Not Triggered	

Section	Sub-section	Requirement	Status	Comments
		with the landowner, to ensure that the project complies with the relevant criteria; and (b) conduct further monitoring to determine whether these measures ensure compliance. If the additional monitoring referred to above subsequently determines that the project is complying with the relevant criteria in schedule 3, or the Proponent and landowner enter into a negotiated agreement to allow these exceedances, then the Proponent may discontinue the independent review with the approval of the <b>Secretary</b> .		
	4.0	If the independent review determines that the relevant criteria in schedule 3 are being exceeded, but that more than one project is responsible for this non-compliance, then the Proponent shall, together with the relevant project/s: (a) take all reasonable and feasible measures, in consultation with the landowner, to ensure that the relevant criteria are complied with; and (b) conduct further monitoring to determine whether these measures ensure compliance; or (c) secure a written agreement with the landowner and other relevant projects to allow exceedances of the criteria in schedule 3, to the satisfaction of the <b>Secretary</b> . If the additional monitoring referred to above subsequently determines that the projects are complying with the relevant criteria in schedule 3, then the Proponent may discontinue the independent review with the approval of the <b>Secretary</b> .	Not Triggered	
	5.0	If the landowner disputes the results of the independent review, either the Proponent or the landowner may refer the matter to the <b>Secretary</b> for resolution. If the matter cannot be resolved within 21 days, the <b>Secretary</b> shall refer the matter to an Independent Dispute Resolution Process.	Not Triggered	
<b>SCHEDULE 5</b>				
<b>ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING</b>				
<b>ENVIRONMENTAL MANAGEMENT</b>				

Section	Sub-section	Requirement	Status	Comments
<b>Environmental Management Strategy</b>	<b>1.0</b>	<p>The Proponent shall revise an Environmental Management Strategy for the project. This strategy must:</p> <ul style="list-style-type: none"> <li>(a) be submitted for approval to the Secretary prior to 30 June 2013;</li> <li>(b) provide the strategic framework for the environmental management of the project;</li> <li>(c) identify the statutory approvals that apply to the project;</li> <li>(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;</li> <li>(e) describe the procedures that would be implemented to: <ul style="list-style-type: none"> <li>• keep the local community and relevant agencies informed about the operation and environmental performance of the project;</li> <li>• receive, handle, respond to, and record complaints;</li> <li>• resolve any disputes that may arise during the course of the project;</li> <li>• respond to any non-compliance; and</li> <li>• respond to emergencies; and</li> </ul> </li> <li>(f) include: <ul style="list-style-type: none"> <li>• copies of any strategies, plans and programs approved under the conditions of this approval; and</li> <li>• a clear plan depicting all the monitoring required to be carried out under the conditions of this approval.</li> </ul> </li> </ul> <p>The Proponent shall implement the approved management strategy as approved from time to time by the Secretary.</p>	Compliant	<p>Reviewed Centennial Coal Environmental Management Strategy (EMS) dated June 2013. Required content is included in the EMS.</p> <p>The EMS was submitted to DP&amp;E on 26/06/13 via letter from Centennial Coal. DP&amp;E approved the EMS via letter dated 10/09/13.</p> <p>WC (pers com) advised that the EMS was currently under review by LakeCoal.</p> <p><b>It is recommended that the EMS is reviewed and updated by LC to reflect current operations at Manning.</b></p>
<b>Management Plan Requirements</b>	<b>2.0</b>	<p>The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <ul style="list-style-type: none"> <li>(a) detailed baseline data;</li> <li>(b) a description of: <ul style="list-style-type: none"> <li>• the relevant statutory requirements (including any relevant approval, licence or lease conditions);</li> <li>• any relevant limits or performance measures/criteria;</li> <li>• the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management</li> </ul> </li> </ul>	<b>Not Compliant</b>	<p>Reviewed the following management plans for the site:</p> <ul style="list-style-type: none"> <li>• Manning WMP, January 2013;</li> <li>• Manning LMP, January 2013;</li> <li>• Manning NMP, December 2012;</li> <li>• Centennial Northern Holdings ACHMP, November 2012;</li> <li>• Manning NHMP, February 2013;</li> <li>• Manning AQMP, December 2012; and</li> <li>• Manning EMS, June 2013.</li> </ul> <p><b>Updates are required for a number of Manning management plans to ensure that they reflect current approved operations and the requirements of</b></p>

Section	Sub-section	Requirement	Status	Comments
		<p>measures;</p> <p>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</p> <p>(d) a program to monitor and report on the:</p> <ul style="list-style-type: none"> <li>• impacts and environmental performance of the project;</li> <li>• effectiveness of any management measures (see (c) above);</li> </ul> <p>(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;</p> <p>(f) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> <li>• incidents;</li> <li>• complaints;</li> <li>• non-compliances with statutory requirements; and</li> <li>• exceedances of the impact assessment criteria and/or performance criteria; and</li> </ul> <p>(g) a protocol for periodic review of the plan.</p> <p><i>Note: The Secretary may waive some of these requirements if they are unnecessary for particular management plans.</i></p>		<p><b>contemporary statutory requirements, regulatory guidelines and management measures on site.</b></p> <p>It was noted that at the time of audit, LC were in the process of updating the environmental management plans and programs required under PA06_0311 and that a lot of them were in draft.</p> <p><b>It is recommended that LC expedite the revision of these plans to reflect the current status of operations and the recommencement of mining activities at Manning.</b></p>
<b>Annual Review</b>	<b>3.0</b>	<p>By the end of February 2013, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the <b>Secretary</b>. This review must:</p> <p>(a) describe the development (including any rehabilitation) that was carried out in the past calendar year, and the development that is proposed to be carried out over the current financial year;</p> <p>(b) include a comprehensive review of the monitoring results and complaints records of the project over the past calendar year, which includes a comparison of these results against the:</p> <ul style="list-style-type: none"> <li>• the relevant statutory requirements, limits or performance measures/criteria;</li> <li>• requirements of any plan or program required under this approval;</li> <li>• the monitoring results of previous years; and</li> <li>• the relevant predictions in the <b>documents listed in condition</b></li> </ul>	<b>Administrative Non-Compliant</b>	<p>Reviewed the Manning Annual Reviews prepared during the audit period. The documents prepared during the audit period generally include required data on the performance of the site.</p> <p><u>2012 AEMR</u></p> <ul style="list-style-type: none"> <li>• Viewed letter from DRE dated 25/7/13 confirming that the 2012 AEMR was acceptable. In their letter, DRE note that the 2013 AEMR is to be provided to them by 28/02/14.</li> </ul> <p><u>2013 Annual Review</u></p> <ul style="list-style-type: none"> <li>• Viewed letter from DRE dated 19/11/14, confirming receipt of the AEMR dated 11/07/14. <b>This did not meet submission date of 28/2/14 requested by DRE.</b> DRE confirmed that the document generally satisfies requirements. Inspection noted completion of all outstanding actions from 2012 AEMR. In their</li> </ul>

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		<p><b>2 of Schedule 2;</b>                      (c) identify any non-compliance over the past year, and describe what actions were (or are being) taken to ensure compliance;                      (d) identify any trends in the monitoring data over the life of the project;                      (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and                      (f) describe what measures will be implemented over the current financial year to improve the environmental performance of the project.</p>		<p>letter, DRE note that the 2013 AEMR is to be provided to them 31/03/15.</p> <p><u>2014 Annual Review</u></p> <ul style="list-style-type: none"> <li>The Annual Review 2014 was submitted to DRE on 10/03/15. Viewed the response letter received by LC from DRE dated 9/07/15. The DRE correspondence notes general compliance with relevant statutory approvals and completion of actions from the 2013 AEMR.</li> </ul> <p><u>2015 Annual Review</u></p> <ul style="list-style-type: none"> <li>Viewed LC letters to DRE and other regulatory agencies (NOW, DP&amp;E) from LC submitting the 2015 Annual Review.</li> <li>Viewed email from WC to DP&amp;E dated 21/03/16 seeking an extension to the submission date for the 2015 Annual Review to 30/04/16. DP&amp;E granted the requested extension via letter dated 23/03/16.</li> <li>The Annual Review 2015 was submitted to DRE on 26/04/15.</li> </ul>
<b>Revision of Strategies, Plans and Programs</b>	<b>4.0</b>	<p>Within 3 months of:                      (a) the submission of an annual review under Condition 3 above;                      (b) the submission of an incident report under Condition 6 below;                      (c) the submission of an audit under Condition 8 below; or                      (d) any modification to the conditions of this approval (unless the conditions require otherwise),                      the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the <b>Secretary</b>.  <i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</i></p>	<b>Not Compliant</b>	<p><b>No evidence available at the time of the audit to indicate that these reviews had been undertaken by LC or Centennial in accordance with this condition (i.e. following incident reports, Modifications, etc) to ensure Manning documents remain consistent with current approvals and management practice.</b></p> <p>Evidence was noted regarding the revision of management plans required under Mod 3 (e.g Revised Noise Management Plan).</p> <p><b>It is recommended that LC implement a protocol to ensure that all strategies, plans and programs are regularly reviewed as required under this condition and provided to DPE for approval after each revision.</b></p>
<b>Community Consultative Committee</b>	<b>5.0</b>	<p>The Proponent shall continue to operate a Community Consultative Committee (CCC) for the project in accordance with the <b>Guidelines for Establishing and Operating Community</b></p>	Compliant	<p>Reviewed Manning CCC Minutes available on the LC website and confirmed documentation of meetings conducted during the audit period. Current members include Independent chairperson, two community</p>

Section	Sub-section	Requirement	Status	Comments
<b>REPORTING</b>		<p><i>Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version), and to the satisfaction of the Secretary.</i></p> <p><i>Notes:</i></p> <ul style="list-style-type: none"> <li><i>The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval; and</i></li> <li><i>In accordance with the guideline, the Committee should be comprised of an independent chair and appropriate representation from the Proponent, Councils and the local community.</i></li> </ul>		<p>members, WSC and LMCC members and LC representatives.</p> <p>It is noted that the possibility of merging the Manning and Chain Valley CCCs into a single body was discussed at the Manning CCC meeting on 10/05/16.</p> <p><b>It is recommended that LC continue to consult with DP&amp;E and existing community representatives regarding the proposed consolidation of the two CCC's for CVC and Manning Colliery into a single body.</b></p>
	<b>Incident Reporting</b> <b>6.0</b>	<p>The Proponent shall notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incidents associated with the project, the Proponent shall notify the Secretary and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.</p>	<b>Not Compliant</b>	<p><b>No evidence available at the time of audit to confirm that the reportable incidents under the EPL were reported to DP&amp;E within 7 days from the date they occurred.</b> A summary of incidents / exceedances of PA 06_0311 criteria was summarised in the audit period Annual Reviews provided to DPE. For a summary of EPL non-compliances and reporting during the audit period, see <b>Table B.</b></p> <p><b>It is recommended LC develop a checklist that outlines the respective regulatory agencies and (if relevant) landholders to be notified in the event of environmental incidents on site.</b></p>
<b>Regular Reporting</b> <b>7.0</b>	<p>The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.</p>	<b>Not Compliant</b>	<p>Reviewed the documents available on the LC website. Approved management documents and records of monthly monitoring and reporting are generally made publicly available as required under this condition, from the commencement of LC management of Manning.</p> <p><b>The monthly monitoring reports and complaints registers are only available from October 2013 (from the time LC took over as operator). CCC meeting minutes are only available from August 2013. No records are maintained on the website for the site for the period prior to these dates.</b></p> <p><b>It is recommended that these records be obtained from Centennial and made publicly available either on the Centennial or LC website for Manning.</b></p>	

Section	Sub-section	Requirement	Status	Comments
<b>INDEPENDENT ENVIRONMENTAL AUDIT</b>				
		By the end of March 2013 and every three years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must: <ul style="list-style-type: none"> <li>(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;</li> <li>(b) include consultation with the relevant agencies;</li> <li>(c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals); and</li> <li>(d) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.</li> </ul> Note: <i>This audit team must be led by a suitably qualified auditor and include experts in any field specified by the Secretary.</i>	Administrative Non-Compliant	<p>This audit.</p> <p>Letter to LC from DP&amp;E dated 28/01/16 approves and endorses Daniel Sullivan and Dorian Walsh of Hansen Bailey as independent auditors. This letter requested that the audit be completed by 31 March 2016.</p> <p><b>The audit was completed in accordance with this condition however it was not completed by 31 March 2016 date as requested in the DP&amp;E correspondence dated 28/01/16.</b></p>
	<b>8.0</b>			
		<p>Within 6 weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.</p>	Administrative Non-Compliant	<p>The previous audit report was finalised on 5/07/13. Accordingly the audit report and action plan were due to be submitted to DPE by 16/08/13. <b>The 2013 audit report was not submitted to DP&amp;E within 6 weeks.</b></p> <p>Viewed letter to DPE from Centennial Coal dated 27/03/14, indicating a letter was received from DPE on 11/03/14 requesting submission of Manning's response to the previous audit recommendations by 14/03/14. DPE letter indicated an extension of time had been granted to 4/04/14.</p> <p>Viewed letter received from DPE dated 02/05/14, confirming receipt of audit action plan from LC dated 25/03/14.</p>
	<b>9.0</b>			
<b>ACCESS TO INFORMATION</b>				
		The Proponent shall: <ul style="list-style-type: none"> <li>(a) make copies of the following publicly available on its website:               <ul style="list-style-type: none"> <li>• the documents referred to in condition 2 of Schedule 2;</li> </ul> </li> </ul>	Not Compliant	<p>Reviewed LC website. Approved PA 06_0311 documents and records of monthly monitoring completed during the audit period have been made publically available.</p> <p><b>Monthly environmental monitoring reports and</b></p>
	<b>10.0</b>			

Section	Sub-section	Requirement	Status	Comments
		<ul style="list-style-type: none"> <li>• all relevant statutory approvals for the project;</li> <li>• all approved strategies, plans and programs required under the conditions of this approval;</li> <li>• a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any approved plans or programs required under the conditions of this or any other approval;</li> <li>• a complaints register, which is to be updated on a monthly basis;</li> <li>• minutes of CCC meetings;</li> <li>• the annual reviews required under this approval;</li> <li>• any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit; and</li> <li>• any other matter required by the Secretary; and</li> </ul> <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>		<p>complaints registers only available from October 2013. CCC meeting minutes only available from August 2013. Previous reports are not currently available as it is understood that these were previously on the Centennial website.</p> <p>Mining leases not available on the website.</p> <p>It is recommended that these records be obtained and made publicly available either on the Centennial or LC website for Manning.</p>
<b>REVISED STATEMENT OF COMMITMENTS (December 2015)</b>				
<b>SUBSIDENCE</b>				
		Mining to be limited to the approved bord-and-pillar method where coal recovery is limited to first workings only.	Not Triggered	No mining undertaken within the audit period. Manning has been on Care and Maintenance since November 2012.
		Monitoring of the existing subsidence monitoring marks will continue and additional subsidence monitoring marks will be installed above the proposed mining areas to measure the subsidence and verify that subsidence is within the predicted levels.	Not Triggered	No mining undertaken within the audit period. Manning has been on Care and Maintenance since November 2012.
		If it is identified that subsidence levels are greater than the predicted maximum of 20 millimetres, the DTIRIS Minerals Division will be consulted to determine appropriate management and mitigation actions.	Not Triggered	No mining undertaken within the audit period. Manning has been on Care and Maintenance since November 2012.
<b>WATER MANAGEMENT</b>				
		LakeCoal will undertake a review of the existing site water management system in consultation with the EPA.	Compliant	LC reported in 2015 Annual Review that the requirement for daily water quality monitoring required during any discharges, was modified to occur weekly, in consultation

Section	Sub-section	Requirement	Status	Comments
				with the EPA. WC (pers comm) confirmed that a review of the site water management system was being undertaken as part of the WMP review.
		The water level within the sediment pond system will be monitored and kept at a relatively low operating level, such that the ponds can provide a detention function in a significant rainfall event.	Not Compliant	At the time of audit, the Manning sediment ponds were well maintained and being proactively managed, with the ability to receive rainfall from a significant rainfall event. <b>However, a number of non-compliances were reported under the EPL during the audit period associated with discharges exceeding water quality criteria (see Table B).</b>
		A visual assessment of the unnamed creek will be undertaken every 6 months to monitor stability and erosion.	Compliant	Viewed examples of completed Creek Stability Inspection forms (FRM-D-19102) from 2014 and 2015. <b>It is recommended that a summary of results from the Creek Stability Inspections be included in future Annual Reviews.</b>
		Where practicable, underground water levels will be recorded to monitor changes in the level of water stored in underground depressions and to verify that the rate of extraction is sufficient.	Compliant	WC (pers comm) confirmed that underground water levels are recorded in real-time, with underground pumping volumes controlled by floats. WC advised that UG water levels are monitored by the site deputies on a shiftly basis
		The extraction of underground water from the mine workings will be undertaken in accordance with the Bore License (20BL172016) issued under the <i>Water Act 1912</i> .	Compliant	Ground water extraction volumes reported in the audit period Annual Reviews. All extraction volumes are below licence limits.
		To enable on-going assessment of the quality of water discharged, the existing monitoring program will be maintained for the life of the Project with the following enhancements: <ul style="list-style-type: none"> <li>An assessment of the surrounding catchments summarising land uses and other background information to characterise an appropriate water quality; and</li> <li>Annual monitoring of heavy metals at the monitoring location identified as 'Downstream'.</li> </ul>	Compliant	Monitoring is undertaken in accordance with the EPL and PA 06_0311 requirements, with monthly metals analysis from upstream and downstream of the site.
		<b>TERRESTRIAL ECOLOGY</b>		
		The following measures to manage the impacts of vegetation clearing/disturbance associated with the APZ requirements will be ongoing: <ul style="list-style-type: none"> <li>weed management;</li> <li>large trees will be retained as a priority where possible;</li> </ul>	Not Triggered	WC (pers comm) confirmed that clearing for the APZ has not yet been undertaken. The required ecological surveys to address this SoC have been completed however.

Section	Sub-section	Requirement	Status	Comments
		<ul style="list-style-type: none"> <li>felled trees will be relocated adjacent to the APZs to create additional fauna habitat;</li> <li>any injured fauna will be taken to the nearest veterinary hospital for treatment before release; and</li> <li>an ecologist will complete a pre-disturbance survey to determine important components of the Swamp Oak Floodplain Forest EEC for retention in the APZs.</li> </ul>		
		<p>LakeCoal will investigate the following options for biodiversity offsets:</p> <ul style="list-style-type: none"> <li>provide \$10,000 of funding, which is equivalent to the biodiversity being lost (ie 5 credits x \$2,000 per credit) to existing environmental programs at the site which benefits the Swamp</li> <li>Oak Floodplain Forest EEC; or</li> <li>consult with OEH to identify a suitable conservation program and provide \$10,000 of funding;</li> <li>or purchase and retire 5 credits on the Biobanking register.</li> </ul> <p>These options will be considered by the proponent in consultation with OEH and will reflect OEH's 'Approved BioBanking Assessment Methodology 2014'. The option that achieves the greatest benefit to the biodiversity impacted by the proposed modification will be selected.</p>	Compliant	WC (pers comm) confirmed that LC had met with OEH in December 2015 to confirm the adequacy of the nominated options. WC advised that LC had committed to undertaking the bio-banking calculations for the offsets.
		<p>If monitoring indicates that mine-induced subsidence levels exceed 20 millimetres, a review will be undertaken to identify any potential impacts to terrestrial ecology.</p>	Not Triggered	No exceedance of 20 mm subsidence trigger was recorded during the audit period.
<b>AQUATIC ECOLOGY</b>				
		<p>If monitoring indicates that mine-induced subsidence levels exceed 20 millimetres, a review will be undertaken to identify any potential impacts to aquatic ecology.</p>	Not Triggered	No exceedance of 20 mm subsidence trigger was recorded during the audit period.
<b>ABORIGINAL HERITAGE</b>				
		<p>Activities will continue to be managed in accordance with the Colliery's Aboriginal Cultural Heritage Management plan (ACHMP). Given the Colliery's current ACHMP is integrated with other Centennial sites, separate ACHMP will be developed.</p>	Compliant	WC (pers comm) noted that an updated ACHMP was being prepared at the time of audit. LC intends to prepare a single consolidated Heritage Management Plan for Manning.
		<p>If monitoring indicates that mine-induced subsidence levels</p>	Not Triggered	No exceedance of 20 mm subsidence trigger was recorded during the audit period.

Section	Sub-section	Requirement	Status	Comments
		exceed 20 millimetres, a review will be undertaken to identify any potential impacts to cultural heritage in consultation with OEH.		
		All relevant Centennial Manning staff and contractors will be made aware of their statutory obligations for Aboriginal cultural heritage under the NP&W Act as part of the existing mine induction process.	Compliant	Viewed the Manning General Environmental Awareness Training Package (April 2016) and relevant components of the Induction provided to all LC staff and contractors. Both documents include content on heritage management obligations.
		An Aboriginal Cultural Heritage Management Plan (ACHMP) will be developed and implemented for the identified Aboriginal heritage items within the Project Site in consultation with the relevant Aboriginal stakeholders. If additional sites are identified they will be assessed for cultural significance and be incorporated into the ACHMP.	Compliant	Previous audit confirmed compliance of ACHMP (under revision at the time of audit).
		In the unlikely event that skeletal remains are identified, the NSW Police Coroner will be contacted to determine if the material is of Aboriginal origin. If determined to be Aboriginal, contact will be made with the OEH, a suitably qualified archaeologist and representatives of the relevant Aboriginal stakeholder groups to determine an action plan for the management of the skeletal remains and formulate management recommendations if required.	Not Triggered	
<b>EUROPEAN HERITAGE</b>				
		If monitoring indicates that mine-induced subsidence levels exceed 20 millimetres, a review will be undertaken to identify any potential impacts to non- indigenous heritage.	Not Triggered	No exceedance of 20 mm subsidence trigger was recorded during the audit period.
		All relevant Centennial Manning staff and contractors will be made aware of their statutory obligations for European cultural heritage under the Heritage Act 1977 as part of the existing mine induction process.	Compliant	Viewed the Manning General Environmental Awareness Training Package (April 2016) and relevant components of the Induction provided to all LC staff and contractors. Both documents include content on heritage management obligations.
		If, during the course of development works, significant non-indigenous cultural heritage material is uncovered within the Project Site, the Heritage Branch of OEH will be notified and any required monitoring or management strategies instigated.	Not Triggered	
<b>AIR QUALITY</b>				
		A review of dust management strategies and mitigation	Compliant	Viewed PRP completed by LC under the conditions of EPL

Section	Sub-section	Requirement	Status	Comments
		measures will be undertaken against the best practice dust mitigation measures identified in the NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining (Katestone Environmental Pty Ltd 2011), which was prepared for OEH. The review will identify any additional dust management practices that are reasonable and feasible for implementation at Manning Colliery and will be undertaken generally in accordance with any requirements of a pollution reduction program that may be imposed by the OEH on the Manning Colliery EPL in the future.		191 and submitted to EPA.
<b>TRAFFIC</b>				
		Centennial Manning will upgrade the Rutleys Road - Manning Colliery Access Road intersection to improve safety and operational efficiency.	Compliant	See Schedule 3 Condition 2. LakeCoal have installed the required sections of guardrail at the site intersection.
<b>SOCIO-ECONOMIC</b>				
		Centennial Manning is committed to on-going community consultation and will continue to engage the community for the purposes of providing information relating to on-going operations and the Extension of Mine Project.	Compliant	LC has maintained the Manning CCC during the audit period, in accordance with regulatory guidelines.
<b>REHABILITATION</b>				
		Rehabilitation will be undertaken in accordance with the Colliery's mining operations plan, which will be updated to include any changes as a result of the proposed modification.	Not Triggered	See Schedule 3 Condition 15. No rehabilitation required to be undertaken during the audit period.
		The Mining Operations Plan will be amended to reflect the proposed modification and will include integrated rehabilitation and environmental management.	Compliant	See Schedule 3 Condition 15. The MOP has been revised during the audit period to ensure it remains relevant to approved operations.
<b>MONITORING</b>				
		The Environmental Monitoring Program will be reviewed and updated, as required, to incorporate the commitments made in the Environmental Assessment and any additional consent conditions.	Compliant	Viewed the Manning Environmental Monitoring Program (EMP) dated December 2012. WC (pers comm) noted that the EMP was under revision at the time of audit.
<b>APPENDIX 4A: NOISE COMPLIANCE ASSESSMENT</b>				
<b>Applicable Meteorological Conditions</b>				
1		The noise criteria in Tables 1 and 2 in Appendix 4B are to apply under all meteorological conditions except the following: (a) wind speeds greater than 3m/s at 10 metres above ground level;		

Section	Sub-section	Requirement	Status	Comments
		(b) stability category F temperature inversion conditions and wind speeds greater than 2 m/s at 10 m above ground level; or (c) stability category G temperature inversion conditions.		
<b>Determination of Meteorological Conditions</b>				
2		Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological station located on the site.	Compliant	The Manning Meteorological station is used for all monitoring onsite (WC pers comm).
<b>Compliance Monitoring (Noise)</b>				
3		Attended monitoring is to be used to evaluate compliance with the relevant conditions of this approval.	Compliant	Attended monitoring results are provided in Section 3.10 of the AR's.
4		This monitoring must be carried out at least once a month (at least two weeks apart) for the first 12 months following commencement of underground coal extraction, and then quarterly thereafter, unless the Secretary directs otherwise. <i>Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the project.</i>	Not Triggered	No mining during the audit period. First monthly round of monitoring was undertaken in May 2016 by Global Acoustics. No exceedances of the site criteria were recorded.
5		Unless the Secretary agrees otherwise, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the <i>NSW Industrial Noise Policy</i> (as amended from time to time), in particular the requirements relating to: (a) monitoring locations for the collection of representative noise data; (b) meteorological conditions during which collection of noise data is not appropriate; (c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and (d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.	Not Triggered	No mining during the audit period. First monthly round of monitoring was undertaken in May 2016 by Global Acoustics. No exceedances of the site criteria were recorded.
<b>APPENDIX 4B: ALTERNATE NOISE CONDITIONS</b>				
1		From the recommencement of underground coal extraction at	Not	No mining during the audit period. First monthly

Section	Sub-section	Requirement	Status	Comments																																																																
		<p>Manning Colliery until 18 months thereafter, the Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 1 at any residence on privately-owned land.</p> <p><i>Table 1: Noise limits dB(A)</i></p> <table border="1"> <thead> <tr> <th rowspan="2"><math>L_{Aeq(15\ min)}</math></th> <th colspan="2">Evening</th> <th colspan="2">Night</th> <th rowspan="2">Location</th> </tr> <tr> <th><math>L_{Aeq(15\ min)}</math></th> <th><math>L_{A1(1\ min)}</math></th> <th><math>L_{Aeq(15\ min)}</math></th> <th><math>L_{A1(1\ min)}</math></th> </tr> </thead> <tbody> <tr> <td>40</td> <td>40</td> <td>49</td> <td>40</td> <td>49</td> <td>4 – di Rocco</td> </tr> <tr> <td>43</td> <td>43</td> <td>41</td> <td>41</td> <td>49</td> <td>5 – Keighran</td> </tr> <tr> <td>42</td> <td>42</td> <td>41</td> <td>41</td> <td>49</td> <td>6 – Swan</td> </tr> <tr> <td>39</td> <td>39</td> <td>39</td> <td>39</td> <td>47</td> <td>7 – Druitt</td> </tr> <tr> <td>46</td> <td>46</td> <td>46</td> <td>46</td> <td>47</td> <td>8 – May</td> </tr> <tr> <td>41</td> <td>41</td> <td>41</td> <td>41</td> <td>51</td> <td>9 – Jeans</td> </tr> <tr> <td>39</td> <td>39</td> <td>39</td> <td>39</td> <td>49</td> <td>11 – Jeans</td> </tr> <tr> <td>39</td> <td>39</td> <td>39</td> <td>39</td> <td>51</td> <td>18 – Jeans</td> </tr> <tr> <td>40</td> <td>40</td> <td>40</td> <td>40</td> <td>51</td> <td>20 – Knight and all other Chain Valley Bay residences</td> </tr> </tbody> </table> <p><i>Note: The location of the land referred to in Table 1 is shown on the figure in Appendix 4.</i></p>	$L_{Aeq(15\ min)}$	Evening		Night		Location	$L_{Aeq(15\ min)}$	$L_{A1(1\ min)}$	$L_{Aeq(15\ min)}$	$L_{A1(1\ min)}$	40	40	49	40	49	4 – di Rocco	43	43	41	41	49	5 – Keighran	42	42	41	41	49	6 – Swan	39	39	39	39	47	7 – Druitt	46	46	46	46	47	8 – May	41	41	41	41	51	9 – Jeans	39	39	39	39	49	11 – Jeans	39	39	39	39	51	18 – Jeans	40	40	40	40	51	20 – Knight and all other Chain Valley Bay residences	Triggered	round of monitoring was undertaken in May 2016 by Global Acoustics. No exceedances of the site criteria were recorded.
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		<p>Noise generated by the project is to be measured in accordance with the relevant requirements of the <i>NSW Industrial Noise Policy</i> (as may be updated from time-to-time). Appendix 4A sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.</p> <p>However, these criteria do not apply if the Proponent has an agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.</p>																																																																		
2		<p>Following the expiry of the 18 month period referred to in condition 1 above, the Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 2 at any residence on privately-owned land.</p>	Not Triggered																																																																	

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40	40	40	40	51	20 – Knight and all other Chain Valley Bay residences																																																															
		<p>Noise generated by the project is to be measured in accordance with the relevant requirements of the <i>NSW Industrial Noise Policy</i> (as may be updated from time-to-time). Appendix 4A sets out the meteorological conditions under which these criteria apply, and the requirements for evaluating compliance with these criteria.</p> <p>However, these criteria do not apply if the Proponent has an agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.</p> <p>The Proponent shall prepare a report on all noise mitigation measures required to achieve the noise limits in Table 2 to the satisfaction of the Secretary. This report must:</p> <ul style="list-style-type: none"> <li>(a) be prepared by a suitably qualified and experienced acoustic consultant whose appointment has been approved by the Secretary;</li> <li>(b) be prepared in consultation with EPA, and submitted to the Department for approval within 6 months after commencement of underground coal extraction; and</li> <li>(c) include an action plan for the implementation of any reasonable and feasible recommendations of the report.</li> </ul> <p>The Proponent shall implement the noise mitigation measures prior to the expiry of the 18 month period referred to in condition 1 above.</p>																																																																		
3			Not Triggered	No mining during the audit period.																																																																
4			Not																																																																	

Section	Sub-section	Requirement	Status	Comments
		<p>project to the satisfaction of the Secretary. The report must:</p> <ul style="list-style-type: none"><li>(a) be prepared by a suitably qualified acoustic consultant, whose appointment has been approved by the Secretary;</li><li>(b) be prepared in consultation with EPA, and be submitted for approval within 6 months of the expiry of the 18 month period referred to in condition 1 above; and</li><li>(c) investigate and evaluate the effectiveness of the noise mitigation measures required under condition 3 and compliance with the noise limits in Table 2.</li></ul>	Triggered	

**Table B**  
**Other Licences & Approvals**

Instrument	Status	Comments
EPL 191	Not Compliant	<p>Reviewed Environment Protection Licence (EPL) 191 conditions and Annual Returns submitted to the EPA during the audit period. The following non-compliances and recommendations were identified:</p> <p><b>2013</b></p> <p><b>L2.4 Water and/or Land Concentration Limits</b></p> <ul style="list-style-type: none"> <li>Exceedance of TSS limits occurred at licensed discharge point 1 on 30 June and 1 July 2013. Results of 77 mg/L and 88 mg/L were recorded against a limit of 50 mg/L. Manning recorded rainfall of 71mm and 18mm respectively on 30 June and 1 July and the water management system was not able to contain the volume of dirty water.</li> <li>Exceedance of TSS limits occurred at licensed discharge point 1 on 17/11/13 – 18/11/13. Results of 112 mg/L and 105 mg/L. Greater than 100mm of rainfall received in 24 hours prior to incident, which exceeded the site sediment dams design capacity. Will continue to maintain sediment dams at low levels during dry periods to maximise storage capacity. Reported to EPA on 25/11/13.</li> </ul> <p><b>2014</b></p> <p><b>L2.4 Water and/or Land Concentration Limits</b></p> <ul style="list-style-type: none"> <li>Exceedance of pH limit (8.5) at LDP001 (EPL ID#1) occurred on the 13/10/2014. Result of pH 8.6. No adverse effects identified. No direct cause was identified. Committed to continuing with ongoing monitoring.</li> <li>Exceedance of TSS criteria occurred at LDP001 (EPL ID#1) from the 28/2/14 – 1/3/14. Over 160mm rainfall received in 48 hours, exceeding sediment dam storage capacity. Will continue to actively manage sediment dam levels to provide maximum available storage during rainfall event.</li> </ul> <p><b>R1.5 Annual return documents</b></p> <ul style="list-style-type: none"> <li>Annual return for the 17 October – 31 December 2013 reporting period was submitted to the EPA via email on 10/03/14, outside of the 60 day timeframe required under the condition.</li> </ul> <p><b>2015</b></p> <p><b>L2.1 Concentration Limits</b></p> <ul style="list-style-type: none"> <li>Exceedance of oil and grease limit at LDP001 on 30/3/15 (recorded result of 11mg/L against limit of 10mg/L). Source of the result was from an anthropogenic or petrogenic source and not a petroleum hydrocarbon. No adverse effects. Reported to EPA.</li> <li>TSS exceedance at LDP001 on 5/4/15 as a result of heavy rainfall event, outside design capacity of the site water management system. No adverse effects. Improvement works undertaken to flocculent system to reduce sediment load. Further, LC will continue to manage site sediment dams through controlled dewatering to maximise storage capacity.</li> <li>Exceedance of TSS limit for Monitoring Point 1 on 21/4/15 with a result of 58 mg/L recorded as a result of a heavy rainfall event, outside the design capacity of the site water management system. No adverse effects. Improvements as per above with flocculent system etc.</li> </ul> <p><b>M7.1 Requirement to Monitor Volume or Mass</b></p> <ul style="list-style-type: none"> <li>Failure to monitor flow volume (continuously) at LDP001 on multiple occasions as a result of loss of power to the</li> </ul>

Instrument	Status	Comments
Manning Mining Authorities	Not Compliant	<p>discharge point, flow meter and data logger. No adverse effects. Investigating the practicality and feasibility of solar power to existing discharge point.</p> <p><b>R2.2 Notification of environmental harm</b></p> <ul style="list-style-type: none"> <li>The notification to the EPA for the TSS exceedance of 5/04/15 was provided to the EPA by LC via the EPA hotline on 10/04/15, with the incident report provided on 17/04/15. This was outside of the 7 day period from the occurrence of the incident required under the condition.</li> </ul> <p><b>General Recommendations</b></p> <ul style="list-style-type: none"> <li>Condition A1.2 – recommend updating the approved coal mining and coal handling volumes permitted in EPL 191 at the next variation of the licence for consistency with PA 06_0311; and</li> <li>Condition 03 – recommend updating the conditions describing measures to minimise dust emissions from haul trucks described in EPL 191 at the next variation of the licence for consistency with PA 06_0311.</li> </ul> <p>The following Manning Mining Authorities were reviewed for the audit:</p> <p><b>Consolidated Coal Lease 719</b> – Centennial Manning Pty Ltd (part sublease to LakeCoal Pty Ltd and Fassi Coal Pty Ltd), expires 22/12/2020.</p> <p><b>Condition 1, Notice to Landholders</b></p> <ul style="list-style-type: none"> <li>Viewed newspaper advertisement dated 25 November 2015 providing notice to landholders as required for the renewal of CCL719 in 2015.</li> </ul> <p><b>Condition 5, Environment Incident Report</b></p> <ul style="list-style-type: none"> <li><b>Notification to the Department of Resources and Energy was not provided for breaches of the Protection of the Environment Operations Act 1997 that occurred during the audit period. It is however noted that LC reported these incidents in its Annual Reviews. It is recommended that LC review their regulatory reporting procedures to include the requirement to notify the Department of Resources and Energy of any relevant incidents that occur on site.</b></li> </ul> <p><b>Condition 8, Group Security</b></p> <ul style="list-style-type: none"> <li>Viewed NAB security bond dated 12/01/16 for a total of \$3.226M which is consistent with the amount required as stated in the letter from DRE dated 27/11/15</li> </ul> <p><b>Consolidated Coal Lease 721</b> – Centennial Manning Pty Ltd (sublease to LakeCoal Pty Ltd and Fassi Coal Pty Ltd), expires 29/7/2026. No non-compliances were identified.</p> <p>It should also be noted that changes to the Manning Colliery holding occurred in 2014, which resulted in all active areas of the holding being transferred to LC Chain Valley Colliery holding.</p>
Water Licence 20BL172016	Not Compliant	<p>Condition 7(a – d) – it is recommended that the groundwater management section(s) of the revised WMP (being prepared by LC at the time of audit) include detail to address the requirements of this condition. The revised WMP should be provided to DPI-Water for review, as required under PA 06_0311 Schedule 3, Condition 8.</p> <p><b>Condition 12 – Evidence not available at the time of audit to confirm NOW (now DPI-Water) are satisfied with the arrangements put in place by LC to monitor the quantity of water extracted from the underground</b></p>

Instrument	Status	Comments
		<b>workings.</b> The current monitoring arrangements should be described in the revised WMP document. It should be noted that evidence was available to demonstrate the regular maintenance and calibration of equipment in place for the monitoring of the volume of water extracted from the underground workings during the audit period.

***APPENDIX F***  
***Plates from Site Inspection***



**Plate 1**  
**Hydrocarbons stored on banded pallets in the site service shed**



**Plate 2**  
**Waste oil can storage bin in service shed**



**Plate 3**  
**Bunded diesel tanks in Manning's Hydrocarbon storage shed**



**Plate 4**  
**Weeds on coal stockpile**



**Plate 5**  
**Good house keeping around water management structures**



**Plate 6**  
**Water management infrastructure near coal stockpile area**



**Plate 7**  
**Control pond B with adequate free board.**



**Plate 8**  
**LDP 001 (Discharge location to Lake Macquarie)**