# Independent Environmental Audit (IEA) Myuna Colliery



for Centennial Myuna Pty Ltd

Myuna Colliery, 14 Summerhill Drive, Wangi Wangi NSW 2283

# MCW Environmental

October 2016

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# **Abbreviations**

Abbreviation	Description		
AQMP	Air Quality Management Plan		
AEMR	Annual Environmental Management Report		
ANZECC	Australian and New Zealand Environment and Conservation Council		
CCC	Community Consultative Committee		
СоА	Condition of Approval		
Council	Lake Macquarie City Council		
СНР	Coal Handling Plant		
DA	Development Application		
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays		
Department	Department of Planning and Infrastructure		
Director-General	Director-General of Department of Planning, or delegate		
DP&I	Department of Planning & Infrastructure (formerly DoP)		
DTIRIS-DRE	Department of Trade and Investment, Regional Infrastructure and Services (formerly Department of Primary Industries (DPI))		
EIS	Environmental Impact Statement		
EC	Electrical Conductivity		
EEC	Endangered Ecological Community, as defined under the NSW Threatened Species Conservation Act 1995		
Environmental consequences	Environmental consequences of Subsidence Impacts, including: damage to infrastructure, buildings and residential dwellings; loss of surface flows to the subsurface; loss of standing pools; adverse water quality impacts; development of iron bacterial mats; cliff falls; rock falls; damage to Aboriginal heritage sites; impacts on aquatic ecology, ponding etc.		
EMP	Environmental Management Plan		
EMS	Environmental Management System		
EP&A Act	Environmental Planning and Assessment Act 1979		
EP&A Regulation	Environmental Planning and Assessment Regulation 2000		
EPL	Environment Protection Licence		
ESCP	Erosion and Sediment Control Plan		
Evening	Evening is defined as the period from 6pm to 10pm		
HWLSCZ	High Water Level Subsidence Control Zone		
INP	Industrial Noise Policy		
Land	Land means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval		
LMCC	Lake Macquarie City Council		
LW	Longwall		
MIA	Mine Infrastructure Area		
Mine Water	Water that accumulates within active mining areas, coal rejects emplacement areas, tailings dams and infrastructure areas, synonymous with dirty water		
Mining Operations	Includes all coal extraction, processing, and transportation activities carried out on site		
Minister	Minister for Planning, or delegate		
Mtpa	Million tonnes per annum		
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays		
NMP	Noise Monitoring Program		
NOW	NSW Office of Water (adopted certain responsibilities of DWE from July 2009)		
OEH	Office of Environment and Heritage (formerly Department of Environment, Climate Change and Water (DECCW))		
Panel	Independent Hearing and Assessment Panel for the Project		
Privately owned land	Land that is not owned by a public agency, or a mining company (or its		

Abbreviation	Description
	subsidiary).
PA	Project Approval
Project	The development as described in the EA
PSMP	Property Subsidence Management Plan
Proponent	Centennial Coal Company
REF	Review of Environmental Factors
ROM	Run of Mine
RTA	Roads and Traffic Authority
SEE	Statement of Environmental Effects
Site	Lands described in Schedule 1 of the Development Consents of PA 10/0080
SoC	Statement of Commitments The Proponent's commitments in Appendix 1
Subsidence or Subsidence effects	Deformation of the ground mass due to mining, being all mining induced ground movements, including both vertical and horizontal displacement, tilt, strain and curvature
Subsidence impacts	Physical changes to the ground and its surface caused by Subsidence Effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface disturbance or troughs
SMP	Subsidence Management Plan
TARP	Trigger Action Response Plan
TSS	Total Suspended Solids

### **Executive Summary**

MCW Environmental Pty Ltd (MCW) was engaged by Centennial Myuna Pty Ltd (Myuna) to carry out an Independent Environmental Audit (IEA) of the Myuna Colliery located at 14 Summerhill Drive, Wangi Wangi in the Lake Macquarie area, New South Wales (NSW) 2283. Myuna Colliery is an underground mine which is wholly owned and operated by Centennial Myuna Pty Ltd, a fully owned subsidiary of Centennial Coal Company Limited (Centennial).

Condition No.9, Schedule 5 of the Myuna Colliery - Myuna Colliery Mining Project Approval 10\_0080 (PA 10\_0080), dated 18 January 2012 requires Myuna to commission an independent environmental audit prior to the end of June 2013 and every three years thereafter. To meet this requirement, MCW was commissioned prior to the end of June 2016 to carry out an independent audit of the Myuna Project Approval. The audit site inspection was undertaken on the 30 and 31 May 2016.

The audit was completed in accordance with PA 10\_0080, Schedule 5, Condition 9, and MCW Environmental proposal to conduct the work dated 23 April 2016. This is the second IEA to be conducted under PA 10\_0080.

The audit methodology comprised the following activities:

- Initial discussions with Myuna management to organise the audit, including the provision of documentation, the site visit and timing;
- Discussions with NSW Department of Planning and Environment (DP&E) to discuss any concerns and areas for particular focus during the audit;
- · Review of site compliance checklists and other documentation provided by Myuna;
- A two-day site inspection and interviews with key site personnel, on the 30 and 31 May 2016;
- · Consultation with key government agencies and other relevant as presented in this report;
- Review of additional documentation provided by Myuna after the site inspection;
- · Submission of a Draft Report to Myuna outlining the audit findings; and
- · Finalisation of the report based on comments from Myuna.

The audit period has been defined as from 26 June 2012 (last date of the previous IEA site inspection) to 31 May 2016 (date of site visit conducted by MCW Environmental). This report presents the findings of this audit.

The Independent Environmental Audit assessed compliance with relevant approvals, licences and management plans applicable to Myuna. Detailed compliance registers identifying audit findings, comments and recommendations are presented in **Appendix A**. Non-compliances identified against relevant approvals are identified and discussed in Section 8. Myuna's overall compliance status is summarised in **Table ES-1**.

Relevant Approval	Percent Compliant (%)	Number of Conditions Non-compliant	Number of Conditions Not Verified
Project Approval Myuna Mine PA 10_0080	94	3	1
Project Approval Myuna Mine PA 10_0080 Appendix 3 Statement of Commitments	100	0	0
Environmental Protection Licence No. 366	91	7	0
Mining Lease 1632	97	1	0
Mining Purposes Lease 334 (Covering Pit Top area only)	87	3	2

### Table ES-1 - Overall Compliance Assessment and Audit Score

In addition the scope of the audit included a review of the adequacy of the strategies, plans and programs required under the Development Approval. The findings of the adequacy review of management plans and systems is presented in Sections 7. Continuous improvement opportunities were identified and are presented throughout the report.

A summary of recommended actions to improve environmental performance and compliance status are presented in Section 8.

# 1 Introduction

### 1.1 Background

MCW Environmental Pty Ltd (MCW) was engaged by Centennial Myuna Pty Ltd (Myuna) to carry out an Independent Environmental Audit (IEA) of the Myuna Colliery located at 14 Summerhill Drive, Wangi Wangi in the Lake Macquarie area, New South Wales (NSW) 2283. Myuna Colliery is an underground mine which is wholly owned and operated by Centennial Myuna Pty Ltd, a fully owned subsidiary of Centennial Coal Company Limited (Centennial).

Condition No.9, Schedule 5 of the Myuna Colliery - Myuna Colliery Mining Project Approval (PA 10\_0080) (dated 18 January 2012) requires Myuna to commission an independent environmental audit prior to the end of June 2013 and every three years thereafter. To meet this requirement, MCW was commissioned prior to the end of June 2016 to carry out an independent audit of the Myuna Project Approval. The audit site inspection was undertaken on the 30 and 31 May 2016.

The audit was completed in accordance with PA 10\_0080, Schedule 5, Condition 9, and MCW Environmental proposal to conduct the work dated 23 April 2016. This is the second IEA to be conducted under PA 10\_0080.

The audit team was approved by DP&E in a letter dated 15 April 2016.

The audit period has been defined as from 26 June 2012 (last date of the previous IEA site inspection) to 30 May 2016 (date of site visit conducted by MCW Environmental). This report presents the findings of this audit.

### 1.2 Audit Scope

The audit was conducted in accordance with the requirements set out in Myuna Colliery Mining Project Approval (PA 10\_0080) (dated 18 January 2012) Schedule 5, Condition 9 as detailed in **Table 1-1**.

### Table 1-1 - Scope of Work

Project Approval Condition	Requirement	Where Addressed in this Report
5.9	By the end of June 2013, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:	This Report
5.9(a)	Be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;	Section 1.4
5.9(b)	Include consultation with the relevant agencies;	Section 3
5.9(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);	Sections 6, 7, 8 & Appendix A
5.9(d)	Review the adequacy of strategies, plans or programs required under the abovementioned approvals; and	Section 7
5.9(e)	Recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.	Sections 4 to 8 of this Report

Project Approval Condition	Requirement			Where Addressed in this Report

Note: This audit team must be led by a suitably qualified auditor and include Se experts in any field specified by the Secretary (no specialists were required by the Secretary).

Section 2

### 1.2.1 Audit Methodology

This IEA was undertaken in accordance with MCW Environmental Proposal (dated 23 April 2016) to meet the scope outlined above in **Table 1-1**.

Compliance checklists were developed by MCW Environmental that included a list of conditions and commitments to be assessed for compliance, including PA 10\_0080, Myuna Colliery Environmental Assessment Statement of Commitments and Environment Protection Licence (EPL) No.366, Consolidated Coal Lease (CCL) 762 and Mining Purposes Lease (MPL) 334 (covering pit top area only). These are discussed in the Compliance Review Section 6 and Appendix A.

The audit included limited use of the Centennial compliance database to demonstrate compliance by viewing evidence of documents associated with each aspect of the various approvals and associated plans, programs and strategies. Myuna management reported that the site's compliance database will shortly be updated to a database consistent with other regional Centennial sites.

The Audit was carried out in accordance with *ISO 19011:2014 Guidelines for auditing management* systems (ISO, 2014), which superseded the ISO 14000 series and the NSW Government *Independent Audit Guideline, Post Approval Requirements for State Significant Developments*, dated October 2015.

The audit methodology comprised the following activities:

- Initial discussions with Myuna management to organise the audit, including the provision of documentation, the site visit and timing;
- Discussions with NSW Department of Planning and Environment (DP&E) to discuss any concerns and areas for particular focus during the audit;
- · Review of site compliance checklists and other documentation provided by Myuna;
- A two-day site inspection and interviews with key site personnel, on the 30 and 31 May 2016;
- Consultation with key government agencies and other relevant stakeholders as presented in this report;
- · Review of additional documentation provided by Myuna after the site inspection;
- Submission of a Draft Report to Myuna outlining the audit findings; and
- · Finalisation of the report based on comments from Myuna.

This report provides a summary of findings including details of non-compliances identified in the audit, an audit score (percentage compliant), and recommended actions to improve compliance status.

### **1.3 Documents Reviewed**

The following information was reviewed during the audit process:

- Project Approval 10\_0080;
- EPL No. 366;
- ML 1632;
- MPL 334 (including renewed conditions dated 20 October 2015);
- · Management Plans as provided by Myuna;
- · Site environmental plans, procedures and checklists;
- · Selected records of competency, induction and training;
- · Selected meeting minutes;
- · Selected reports; and
- Evidence of selected monitoring and review.

Documents used as part of the audit are also referenced as part of the text discussing compliance status in **Appendix A**.

### **1.4 Personnel and Timing**

In accordance with PA 10\_0080, Schedule 5, Condition 9 the audit was required to be conducted by a qualified, experienced and independent team of specialists whose appointment has been endorsed by the Director-General. The audit team comprised of the following personnel, as approved by the Secretary (letter dated 15 April 2016 presented in **Appendix B**):

- Michael Woolley, Lead Auditor (MCW Environmental); and
- Nick Ballard, Auditor (AECOM Australia Pty Ltd).

Michael Woolley and Nick Ballard are registered by Exemplar Global as a Certified Lead Auditors for Environmental Management and Compliance Auditing. The site visit for the audit was conducted on 30 and 31 May by Michael Woolley and Nick Ballard.

Personnel responsible for the management at Myuna interviewed during the site visit included the following:

- · Morgan Gleeson, Environment and Community Coordinator;
- Pieter van Rooyen, Technical Services Manager;
- Daniel Hart, Mine Surveyor; and
- Mal Yule, Colliery Manager.

### **1.5 Sensitive Information**

It is understood that information collected during the audit may be sensitive. Documents used during the audit to verify compliance were kept secure and not distributed outside the relevant personnel involved in the audit.

### **1.6 Format of Report**

The format of this report is as follows:

- · Section 1 is introductory and defines the scope and nature of the audit;
- Section 2 describes Myuna operations as observed during the site inspection;
- · Section 3 summarises the consultation with key regulatory agencies and stakeholders;
- Section 4 provides an assessment of the environmental performance of the development and its effects on the surrounding environment;
- Section 5 provides a summary of photographs from the site inspection.

- Section 6 describes the approach to the assessment against the relevant standards, performance measures and statutory requirements;
- Section 7 presents the findings of the review of the adequacy of the Environmental Management Strategy and environmental management and monitoring plans
- Section 8 summarises the non-compliances and recommendations made throughout the report.
- Section 9 provides the limitations of the report.

**Appendix A** is a tabulated review of the results of the assessment against the Conditions of Approval (CoA) and Statement of Commitments (SoCs) of PA 10\_0080, Environmental Protection Licence 366 and key relevant mining leases.

# 2 Myuna Colliery Operations

### 2.1 Site Description

Myuna Colliery is an existing underground coal mine located on the western side of Lake Macquarie, at Wangi Wangi, approximately 25 kilometres south-west of Newcastle, New South Wales.

Myuna Colliery has been operating since 1979 with coal extraction commencing in 1982. Coal extraction has been carried out under the existing Development Consent (SH 110/148) granted in 1977 and under existing mining leases and Section 74 of the Mining Act beyond this area. Extraction of coal and associated mining activities has occurred in three coal seams (Wallarah, Great Northern and Fassifern) using bord and pillar methods. The mine was purchased from Powercoal Pty Ltd in 2002. Myuna Colliery is located in the northern portion of the Sydney Basin. The coal deposits within its mining tenements belong to the late Permian Age Newcastle Coal Measures. Myuna Colliery currently mines within the Wallarah, Great Northern, and Fassifern seams of the Newcastle Coal Measures. To date, geological exploration at Myuna Colliery has primarily targeted the Wallarah, Great Northern and Fassifern seams.

Coal produced by Myuna is supplied directly to Eraring Power Station by the Enclosed Overland Conveyor. Approval for Eraring Energy's Enclosed Overland Conveyor is provided by section 21 of the *Eraring Power Station Act 1981*. Myuna does not wash ROM coal and there is no coal reject material produced on-site. Minor quantities of waste rock is generated at the Coal Handling Plant (CHP) and is removed from site to landfill. Some small stockpiles of coal/reject are located near the emergency stockpile area.

In 2010 Myuna Colliery submitted a Project Approval under Part 3A of the *Environment Planning and Assessment Act 1979* to continue mining in those areas outside the existing Development Consent Mining Area and within the existing mining leases. In January 2012 Myuna received Project Approval (10\_0080) for the continuation of mining until 31 December 2032. PA 10\_0080 was modified on 1 February 2015 to:

- Mine using bord and pillar mining methods in the Wallarah, Great Northern, and Fassifern seams in Mining Lease (ML) 1632 (formerly Consolidated Coal Lease (CCL) 762); MPL 334 and ML 1370 until 2032;
- Produce, handle and distribute up to three million tonnes per annum (Mtpa) of coal to Eraring Power Station using existing above ground infrastructure;
- · Continue the use of ancillary infrastructure and services for a further 21 years;
- Upgrade the water management system; and
- · Rehabilitate the surface facilities within five years of completion of mining.

The Site employs 220 people and can operate 24 hours per day, 7 days a week.



### Figure 2-1 - Location of Myuna Colliery, Wangi Wangi, NSW

(Source: GHD, 2016, Annual Groundwater Management Report 2016, Figure 1-1, p.7)

The nearest privately owned residences from the centre of pit top operations are located in the township of Wangi Wangi, approximately 700 m to the south-east of the colliery on Summerhill Drive.

### 2.2 Description of Site Operations

During the audit period the following activities were conducted at Myuna:

- Mining in the Wallarah, Great Northern and Fassifern seam in 2013 and 2014 that allowed blending of the ROM coal.
- During 2014 the exploration activities comprised the drilling of a single in-seam drill hole. The drill hole consisted of 1,538m of HQ drilling size effectively intersecting 591m of the Great Northern Coal Seam (670 panel).

There was no interseam drilling activities in 2013. No construction within the surface lease holding of the mine occurred during the audit period.

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There were no surface exploration drilling activities conducted during the audit period. Myuna Colliery does not wash ROM coal hence there is no coal reject material produced on site other than minor quantities of rock generated at the breaker which is removed form site by a licenced contractor. Myuna production figures for the audit period were sighted. The following ROM coal handled was reported for the audit period:

- 2013: 1,635,662 tonnes of ROM coal produced.
- 2014: 1,874,324 tonnes of ROM coal produced.
- 2015: 1,707,027 tonnes of ROM coal produced.

Myuna colliery consists of the following underground workings and surface infrastructure:

- Myuna Mine underground workings comprise:
  - three seams Wallarah, Great Northern and Fassifern.
- Mine infrastructure, including but not limited to men and materials portal, conveyor drift portal, drive houses and downcast ventilation shaft.
- · Coal Handling Preparation Plant (CHPP).
- · Workshop and administration infrastructure.
- Pollution control infrastructure, including but not limited to wash down oil/water separator, emergency coal stockpile sediment dam and pump house and water management infrastructure.
- Non-mine infrastructure, located at the Surface Facilities Area includes:
  - enclosed overland conveyor (Eraring Energy owned);
  - potable water supplies (Hunter Water Corporation) from Toronto and Wangi Wangi reservoirs;
  - overhead transmission lines (Energy Australia) (including 11kV and 33kV power supplies);
  - Energy Australia 33kV substation;
  - telecommunications (Telstra) network cabling; and
  - Hunter Water Corporation sewage system.

Myuna Colliery's Surface Facilities Area is located in proximity to Wangi Creek which is a heavily modified waterway as a result of the Wangi Power Station outflow canal. Myuna Colliery's existing water management system discharges water to Wangi Creek through two discharge points licensed under the Colliery's Environmental Protection Licence 366, namely Licensed Discharge Points (LDP) LDP A and LDP B.

### 2.1 Activities Occurring During Site Audit Inspection

The following activities were observed during the site inspection, as outlined below:

- · Water management operations.
- · Management of surface waste material.

Underground mining during the audit period was conducted in the Wallarah, Great Northern (Panels 670 (spare panel), 680, 681, 682) and Fassifern seams. Mining in the three seams allows blending of the run of mine coal.

Photos of environmentally significant aspects of the operation taken during the site inspection on 30 and 31 May 2016, are provided throughout the report. Plans of the colliery and locations of monitoring can be found in Annual Review report(s) (AR) found on the Myuna website.

# **3** Consultation with Key Government Agencies

As part of the audit process, MCW Environmental contacted key government agencies and local stakeholders to seek their views on the environmental performance of Myuna. The following provides a summary of this consultation, as well as outcomes of recent regulatory reviews of Myuna annual reporting.

### 3.1 NSW Department of Planning and Environment (DP&E)

MCW Environmental contacted the Department of Planning and Environment (DP&E – Compliance Branch) on 17 May 2016. DP&E responded to MCW Environmental on 24 May 2016 and indicated the following:

- The DP&E compliance team conducted an annual inspection with DRE in 2015 and 2016 as part of the Annual Review assessment and that the site showed a very high level of compliance concerning environmental and project approvals.
- DP&E considered key risks for the site to be noise, groundwater and hydrocarbon management.
- DP&E had not received any complaints and noted that no complaints had been received by the site for 2015 and 2016 (as of 24 May 2016).

### 3.1.1 2015 DP&E Annual Review

The 2015 Annual Review was submitted to DP&E on 24 March 2016. DP&E conducted a site inspection on 5 May 2016; however, no formal feedback was available at the time of the site inspection concerning the inspection or Annual Review.

### 3.1.2 2014 DP&E Annual Review

The 2014 Annual Review was submitted to DP&E on 24 March 2015. The Department attended a meeting and site inspection at the site accompanied by the Division of Resources and Energy (DRE) on 19 August 2015. DP&E noted the following concerning the AEMR in a letter dated 10 September 2015:

- "Please provide an Executive Summary of significant activities, complaints incidents, breaches and non-compliances which occurred during the reporting period with future Annual Reviews.
- Please provide further detail in regard to weed management onsite, including a location plan detailing areas of spraying and which weed species were targeted in future Annual Reviews.
- In accordance with Schedule 4, Condition 23, Myuna Colliery is required to develop a site water balance which must be included in future Annual Reviews. It is recommended that as a minimum the Input/Output model of the Water Accounting Framework developed by the Minerals Council of Australia be used in development of this site water balance.
- At the time of the desktop review of the AEMR and at the time of addressing this letter, the Myuna Colliery website did not contain a community complaints register nor evidence of monthly update as required under Schedule 5, Condition 11. This is noted as an administrative non-compliance with the consent and the Department requests this to be rectified by 31st October 2015".

During their site inspection on 19 August 2015 DP&E also noted the following:

- "The washdown sediment sump above the CHP dam contained visible hydrocarbon (photo 1 and 2). As this water is transferred to the underground workings it is recommended that a need for a system to remove hydrocarbons from this water be investigated.
- A moderate amount of sediment was noted on the road from the CHP to the coal desilt storage area (photo 3). It is recommended that efforts should be made to prevent the amount of sediment build up and potential overflow into the below gully.
- Efforts in housekeeping and general site tidiness are noted".

The sediment sump was inspected during the site inspection for this IEA and no hydrocarbon sheen was observed. A boom was observed at the outflow of the sump to the CHP Dam to manage hydrocarbons. No hydrocarbon sheen was observed in the CHP Dam at the time of the site inspection.

### 3.1.3 2013 DP&E Annual Review

The 2013 Annual Review was submitted to DP&E on 28 February 2014. DP&E approved the 2013 Annual Review in a letter dated 21 March 2014 requesting improvements continue to the dirty water management system.

### 3.2 NSW Environment Protection Authority (EPA)

Feedback was sought by MCW Environmental in May 2016 from the EPA officer responsible for Myuna; however, no comment was received. Based on recent interactions with the EPA in Newcastle, it is their policy not to provide feedback for Independent Environmental Audits.

### 3.3 NSW Division of Industry Resources and Energy (DRE)

Feedback was sought on 17 May 2016 from the Environmental Sustainability Unit of the NSW Department of Industry, Division of Resources and Energy (DRE). Feedback was provided to MCW Environmental by email on 24 May 2016 with DRE requesting the IEA consider the following scope of works shown in **Table 3-1** and **Table 3-2**.

DRE Requested Scope	2016 IEA Observation
Is there a current Mining Operations Plan (MOP) in place and has it been approved by DRE?	Myuna submitted a new MOP / Rehabilitation Plan for the period 1 January 2016 to 30 November 2022 to DRE during the audit period. DRE approved the MOP on 7 December 2015.
	DRE approved the Stage 1 MOP on 8 October 2013 for the period ending 30 June 2015. Myuna submitted a variation of the MOP to DRE for an extension to the approval date to allow for a transition between the previous EDG03 MOP guidelines and the ESG03 MOP guidelines. DRE granted approval for the MOP until 31 December 2015.
Has the MOP been prepared in consultation with the relevant agencies as outlined in the Project Approval?	The auditors sighted correspondence from Myuna to the Community Consultation Committee, Wyong Shire Council and Lake Macquarie City Council dated 10 November 2015 seeking feedback on the Mining Operations Plan / Rehabilitation Management Plan January 2016 to December 2022. Site management reported that Fisheries NSW were not consulted and no evidence was available to confirm feedback had been sought from the Fisheries NSW.
	DRE approved the MOP 2013-2015 Amendment on 11 June 2015. The MOP was approved until 31 December 2015 to allow a transition between the previous EDG03 MOP Guidelines and the new ESG3 MOP Guidelines (September 2013).
	A revised Mining Operations Plan 2016-2022 was submitted to DRE on 11 November 2015. DRE approved the MOP on 7 December 2015.
	Refer to PA 10_0080, Schedule 3, Condition 35 for further details concerning the MOP.

### Table 3-1 – DRE Desktop Component of IEA

DRE Requested Scope	2016 IEA Observation			
Is the rehabilitation strategy as outlined in the MOP consistent with the Project Approval in terms of progressive rehabilitation schedule; and proposed final land use(s)?	The rehabilitation strategy of the MOP appears to be consistent with PA 10_0080 in terms of progressive rehabilitation schedule and proposed final landuse. However, it is noted that under the current MOP Project surface infrastructure is proposed to remain in-			
Has the rehabilitation objectives and completion criteria as outlined in the MOP been developed in accordance with the proposed final land(s) as outlined in the Project Approval.	situ (workshop, Administration Building, Bathhouse, carpark, roads and hardstand, with the CHP plant and other small sheds to be removed) and redeveloped for light industrial use contrary to, Schedule 3, Condition 33 of PA 10_0080 that notes Project surface infrastructure will be decommissioned and removed unless the Executive Director Mineral Resources otherwise agrees. DRE approved the current MOP on 7 December 2015. This approach is reliant on a change to the Lake Macquarie Local Environment Plan (LMLEP) and would be subject to a development approval.			
	No works conducted during the audit period triggered the requirement for progressive rehabilitation. The MOP (p.49) notes that the rehabilitation hierarchy follows the guidance provided DRE document Explanatory Note 2(h) of <i>ESG3: Mining Operations</i> <i>Plan (MOP) Guidelines, September 2013.</i>			
	Myuna will continue to operate infrastructure to support mining throughout the duration of the current MOP period from 2016 to 2022. The MOP does not require significant rehabilitation to be conducted prior to cessation of mining, stating that <i>"There are no rehabilitation activities scheduled for the term of the</i> MOP".			
	Rehabilitation of any exploration drill sites will be undertaken at the completion of these sites during the MOP period in consultation with the landowner and in accordance with the relevant mining lease.			
	Rehabilitation of water management structures are not planned during the current MOP period. Dams and water management structures will continue to be used to manage water on-site.			
	The final land form for the current MOP is for retention of some infrastructure and rezoning to light industrial as stated above. Surrounding bushland is proposed to remain natural bushland.			
Has a rehabilitation monitoring program been developed and implemented to assess performance against the nominated objectives and completion criteria? Has a rehabilitation care and maintenance program	Site management reported that there is no planned rehabilitation until the end of mining and then actions will commence to facilitate ongoing industrial land use at the site. It is expected that decommissioning, remediation and removal of mine related infrastructure and coal pads will occur prior to change of land use to			
been developed and implemented based on the outcomes of monitoring program?	ongoing industrial land use. The Mining Operations Plan and Rehabilitation Plan includes requirements for rehabilitation issues, such as restricted access to rehabilitated areas and replanting of native species within disturbed and significant retained vegetation communities.			

Table 3-2 – DRE Site inspection Component of IE
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DRE Requested Scope	2016 IEA Comment
Are mining operations being conducted in accordance with the approved MOP (production, mining sequence etc.), including within the designated MOP approval boundary?	The 2013 MOP covered the period from 8 September to 30 June 2015. Production continued in the Great Northern, Wallarah and Fassifern South seams throughout 2013 and into 2014. Mining activities ceased in the Wallarah seam which placed on care and maintenance in 2014. Production continued in the Great Northern and Fassifern seams for the remainder of the MOP period. An amendment to the MOP requesting an extension to the term of the MOP, was approved until 31 December 2015 to allow a transition between the previous MOP guidelines and the new guidelines. Myuna will continue to operate infrastructure to support mining throughout the duration of the current MOP period from 2016 to 2022. Operations appeared to be in general compliance with the MOP at the time of the site inspection.
Is rehabilitation progress consistent with the approved MOP as verified by site plans and a site inspection? This should include an evaluation against rehabilitation targets and whether the final landform is being developed in accordance with conceptual final landform in Project Approval.	It is noted that in accordance with the approved MOP, rehabilitation of the site had not commenced at the time of the site inspection.
Based on a visual inspection, are there any rehabilitation areas that appear to have failed or that have incurred an issue that may result in a delay in achieving the successful rehabilitation?	Final landform and rehabilitation had not commenced at the time of the site inspection.

A letter from Centennial to Lake Macquarie City Council (LMCC) dated 24 August 2015 requested feedback concerning the final land form use options for the Site. LMCC responded in a letter dated 4 September 2015 noting that Centennial proposed to:

- Rehabilitate the area zoned SP1 to a final land use compatible with light industry or mixed use development; and
- · Rehabilitate the area zoned E2 to predevelopment natural bushland.

Refer to PA 10\_0080, Appendix A, Conditions, Schedule 3, Conditions 33 to 35 for details concerning the MOP and rehabilitation at the site and MPL 334, Appendix A, Conditions 10 to 26.

### 3.3.1 2015 DRE Annual Review

The 2015 Annual Review was submitted to DRE on 24 March 2016. DRE conducted a site inspection on 5 May 2016; however, no formal feedback was available at the time of the site inspection concerning the inspection or Annual Review. The purpose of the inspection was to review compliance with environmental requirements of relevant approval instruments including the Mining Lease, Mining Operation Plan (MOP) and Annual Environmental Management Report (AEMR). Site management reported that during DRE's inspection it was found that there was general compliance with the relevant statutory approval instruments administered by the DRE and that DRE acknowledged the Myuna's efforts to improve general housekeeping, in particular hydrocarbon storage. DRE required no actions to be taken from the previous 2015 Annual Review.

### 3.3.2 2014 DRE Annual Review

The 2014 Annual Review (AEMR) was approved by DRE in a letter dated 21 August 2015. The letter noted that a site inspection had been conducted by the Department on 19 August 2015 and that the Department acknowledged the site's efforts to improve housekeeping, in particular hydrocarbon storage.

### 3.3.3 2013 DRE Annual Review

The 2013 Annual Review was accepted in a letter from DRE to Myuna on 14 October 2014.

DRE conducted a site inspection at Myuna on 9 October 2014 as part of the Annual Review process. The purpose of the inspection was to review compliance with environmental requirements of relevant approval instruments including the Mining Lease, MOP and Annual Review. During the inspection some issues were identified that either required comment or continued management. DRE observations and the actions taken by Myuna are detailed in **Table 3-2**.

### Table 3-3 – DRE 2013 Annual Review Findings

DRE Issue / Observation Note 1	Myuna Action Note 1	2016 IEA Status
Consents, Leases and Licences	Include details regarding the MOP in Table 1 of Annual Review	MOP details were observed in Table 1 of the 2015 Annual Review.
Tracking the mined area against the MOP	Provide a figure within the AEMR which compares the approved and actual mined areas.	Plans were observed to be included in the 2015 Annual Review appendices showing the mined area against the MOP.
Minor error – table references within the Annual Review	Amend AEMR where table references are incorrect.	Amended
Report of stored water volumes	Update table 8 of the AEMR to include information associated with the storage and discharge of water.	Table 8 of the 2015 Annual Review included volumes of stored water.
Quality of reporting accuracy	Surface water management reporting in section 3.2.3 is inconsistent (i.e. text and figure 3 does not align with table 12). Table 12 does not align with figure 7 and 8. The extent of vegetation clearance is inconsistently reported between sections.	Section 3.2.3 of the 2015 Annual Review included reporting information. A review of Section 3.2.3 indicated the information to generally be consistent with other sections of the Annual Review.
Phase 2 Contamination Assessment	Provide a summary of the findings. Report on the progress against the actions / recommendations within the report	Section 3.2.5 of the Annual Review included a summary of the progress against the actions of the Phase 2 ESA.
RCE	Confirm that the liability identified by the Phase 2 Contamination Assessment has been included in the RCE.	
Poor general housekeeping associated with hydrocarbon management.	Complete a review of work practices and assess opportunities for improvement.	Housekeeping at the hazardous chemical store and bulk oil shed was observed to be generally tidy at the time of the site inspection. Refer to <b>EPL 366-REC-2016-02</b> (EPL 366, Condition O1.1).

Note 1 Centennial, 2015 Annual Review, pp.9-10.

### 3.4 Office of Environment and Heritage (OEH)

MCW Environmental contacted the OEH officer responsible for Myuna on 18 May 2016 via email. The OEH officer responded to MCW Environmental on 23 May 2016 noting that given OEH has had limited interaction with Myuna Colliery during the audit period it was not appropriate to provide any feedback concerning the environmental performance of the site.

### 3.5 Department of Primary Industries Water (DPI Water)

Feedback was sought on 18 May 2016 from the Department of Primary Industries Water. Feedback was provided to MCW Environmental by letter on 24 June 2016 with DPI Water requesting the IEA assess whether the site holds and complies with the required water entitlements, approvals and licenses under the *Water Management Act 2000* or *Water Act 1912* (as applicable).

An email from Centennial to DPI Water dated 3 November 2014 requested that the Department provide clarification concerning the applicability of two legislative clauses so that the site could determine whether a licence application needed to be submitted. No response from DPI Water to the Centennial's email was available for review at the time of the site inspection.

Site management reported that a licence for injecting water underground is pending approval from DPI Water and that the application process for the licence is being managed by Centennial Corporate. A meeting was reported to have been arranged with DPI Water prior to the end of June 2016.

Reference is made to PA 10\_0080, Soil and Water (Appendix A, p.17) for further discussion and information on these points.

### 3.6 Lake Macquarie City Council

MCW Environmental contacted the Lake Macquarie City Council officer responsible for Myuna on 18 May 2016. No response was received from LMCC.

### 3.7 Community Consultative Committee

MCW Environmental contacted the Chair of the Community Consultative Committee (CCC) for Myuna by email on 18 May 2016, 16 June 2016 and 18 October 2016.

The Independent Chair of the CCC provided the following feedback for the IEA:

"I have been Chair of the Myuna Colliery Community Consultative Committee since 2012.

I am not aware of any recent compliance issues, notices or enforcement issues with the Colliery site. There have been a couple of issues around airborne dust, noise and a holding dam minor spill. In all these instances they were detected by mine staff from the various monitoring stations around the site. The issue of the water spill was the result of an extraordinary rain event. A recent moderately high noise reading went unnoticed by residents who only became aware of it when the company advised them in accordance with their licence provisions.

In relation to environmental management at Myunna there is a very strong commitment from the management team to ensuring industry best practices are the minimum standard adopted. There is a real focus on acknowledging the unique location of the mine in relation to nearby residential areas and sensitive local natural features e.g., the Lake.

I am not aware of any specific area the environmental audit should focus on. I am confident in the integrity of the whole environmental control and monitoring of the mine site."

Due to initial difficulties in contacting the Chair of the CCC, the following recommendation is made.

### **Recommendation:**

**MR-REC-2016-01** – Contact details, including telephone a number(s) for key members of the CCC should be maintained by Site management.

# **4** Environmental Performance

This Section addresses the requirement of the scope of works to "assess the environmental performance of the development" by providing an overview of the compliance status for Myuna; listing the environmental management and monitoring plans used by Myuna to manage and assess environmental performance and discusses complaints received by the mine and incidents reported during mining activities as further indicators for environmental performance. Compliance with Approvals and Licences is also a key indicator of environmental performance and is discussed in Section 6.

### 4.1 Monitoring Plans

Myuna has developed the following management / monitoring plans and programs to monitor the environmental performance of the project and mitigate its effects on the surrounding environment:

- · Noise Management Plan;
- · Air Quality & Greenhouse Gas Management Plan;
- Water Management Plan which includes:
  - Site Water Balance;
  - Erosion & Sediment Control Plan;
  - Surface Water Management Plan;
  - Groundwater Monitoring Program; and
  - Surface & Groundwater Response Plan.
- Biodiversity Management Plan;
- · Heritage Management Plan, which has been split into two management plans, including:
  - Aboriginal Cultural Heritage Management Plan; and
  - Non-indigenous Cultural Heritage Management Plan.
- · Mining Operations Plan / Rehabilitation Management Plan; and
- Pollution Incident Response Management Plan.

The auditors based the assessment of the environmental performance of the Project on the assessment of implementation of the above management and monitoring plans as well as the assessment of compliance with the Conditions of Approval (CoA), SoC (Statement of Commitments) and the Environment Protection Licence (EPL). The findings of this assessment are provided in the Compliance Matrix presented in **Appendix A** with the identified non-compliances and associated recommendations summarised in Section 8.

The assessment of adequacy of the above management plans is presented in Section 7 of this report.

In addition, to further evaluate the Project's environmental performance, the auditors reviewed the environmental incidents and complaints recorded during the audit period. The discussion of incidents and complaints is provided below.

### 4.2 Incident Management

Centennial Management Standard 012 – External Environmental Reporting (EER Standard) provides standardised procedures to follow in the event of an environmental incident. The EER Standard states that Centennial sites, including Myuna, are to follow the environmental incident reporting procedures provided in the EER. Environmental incidents are categorised according to the severity of the incident, the remediation actions required, and the extent of regulatory action (if any). Categories are numbered from 1 to 5.

The Environmental Co-ordinator is responsible for reviewing the outcomes of the environmental incident investigation process, closing out the incident once the investigation has been completed, reporting the incident to appropriate regulatory authorities as per the EER and coordinating any

corrective or preventative actions to be instigated. The outcomes of the incident investigation and any corrective or preventative actions is discussed with staff at the daily management meeting and be made available to the workforce if approved by the Mine Manager as a "HSEC alert" via email. Myuna maintains electronically a record of environmental incidents in the ECD and a hardcopy of Myuna "Incident/Accident Form" retaining the details of environmental incidents, investigations and corrective or preventative actions.

The site's Pollution Incident Response Management Plan (PIRMP) contains details of how employees should respond to an environmental incident.

Table 4-1 summarises the number of incidents recorded by category.

### Table 4-1 - Summary of Incidents Recorded by Category Period 25 June 2013 – 31 May 2016

Category	No. of Incidents
1: Prosecution (Major)	0
2. Offence (Significant)	0
3. Reportable (Major)	0
4. Reportable (Significant)	12
5. Technical (Minor)	0

As shown in **Table 4-1** Myuna did not record any Category 1 - Prosecution, Category 2 – Offence or Category 3 – Reportable incidents between 25 June 2013 and 31 May 2016. Twelve Category 4 – Reportable (Significant) incidents were recorded. The majority of the incidents concerned surface water exceedances of EPL 366 criteria. These are discussed in Appendix A.

The above incidents were observed to be logged in the Centennial ECD Lotus Notes database, each with a unique reference number.

### **Recommendations:**

### Refer to PA 10\_0080-REC-10 (PA 10\_0080, Schedule 5, Condition 7).

### 4.2.1 Reported Incidents

The Site maintains a PIRMP as well as Centennial Corporate Standard 'External Reporting Standard 012' that describes the requirements and processes in relation to the external reporting of environmental incidents requiring external notification under legislation/approval conditions.

### 4.3 Complaint Management

No complaints were reported to have been received during the audit period.

Myuna has developed a procedure titled "Recording Community Complaint/Enquiry" that outlines the process for managing community complaints. Myuna operates an Environment and Community Enquiry Line (02) 4970 0270. Calls are received at the Myuna site office that is staffed 24 hours a day, seven days per week. If the call concerns a complaint and/or enquiry it is recorded on the "Myuna Mine Community Initiated Contact Record Sheet".

The record sheet would be forwarded to the Environmental Coordinator or the Mine Manager (during or outside of normal working hours) for investigation. Following investigation, the Environmental Coordinator or Mine Manager would respond to the complainant.

Complaints are required to be logged by Environmental Coordinator within Lotus Notes using the Environmental Community Database (ECD) system. The database requires the following information to be collected: reference number, complainant details, complaint type, date and time of occurrence,

complaint details, investigation / cause, remediation details, implementation process, implementation date and details of consultation.

The Complaints and Enquiry Line is advertised via the Centennial and Myuna websites and the 2012 Community Complaints Register, also available on the Myuna website. It is noted that the telephone number stated in the Community Complaints Register on the Myuna website did not match the phone number of the Contacts page of the Centennial <u>website</u>.

### **Recommendations:**

Refer to EPL 366-REC-05 (EPL 366, Condition M7.2).

4.4 Compliance Management

The Site was in the process of implementing a corporate compliance database to assist Centennial sites manage the requirements of Project Approvals and associated plans, programs and strategies. Site management reported that actions had yet to be assigned to the conditions entered into the compliance database. The database will allow conditions to be entered and actions to be automatically generated when a trigger is met. The full capability of the database was not observed during the audit; however, the database was used to demonstrate how compliance with various approvals and the EPL is managed by viewing evidence of documents attached to the relevant section of each condition.

### 4.5 Addressing Recommendations from the Previous Independent Environment Audit

The previous IEA Report in (URS, 2013) included a number of recommendations for improvement. This audit has assessed whether recommendations have been carried out in the period since the last audit and make the following comments: Six recommendations were closed during the audit period and two recommendations were identified to be ongoing. A summary of the status of the 2013 IEA recommendations are provided in **Appendix B**.

# **5** Site Inspection Observations

Table 5-1 presents photographs of infrastructure and issues observed during the site inspection.

### Table 5-1 - Photographs of infrastructure and issues observed during the site inspection

Photo #	Comment	Photo
5-1.	An internal drain that reports to the on-site oil/water separator at the washbay was observed in the hazardous chemicals store adjacent to the bulk oil shed. Refer to <b>EPL 366-REC-03</b> (EPL 366, Condition O1.1).	
5-2.	The pit top area was observed to be sealed and generally clean and tidy at the time of the site inspection.	
5-3.	Rubbish was observed in the clean water diversion drain behind the waste storage area bund. Refer to <b>EPL 366-REC-02</b> (EPL 366, Condition L.4.1).	

# Photo<br/>#CommentPhoto5-4.Waste from underground was observed to be<br/>collected in a large waste bin during the site<br/>inspection.<br/>The previous IEA (URS, 2013, Appendix A,<br/>p.23) identified a large stockpile of waste at<br/>the emergency stockpile area that had been<br/>brought to the surface from underground.<br/>This stockpile has since been removed.Final content of the surface from underground.<br/>This stockpile has since been removed.

5-5. A pile of wooden pallets was observed during the site inspection. Site management reported they were in the process of sorting the pallets for disposal.



5-6. A permanent real-time noise logger was installed to the north of the site during the audit period.



Photo	Comment	Photo
5-7.	Piped spray heads for dust suppression purposes were observed along the perimeter of the short haul road to the emergency coal stockpile area.	<image/>
5-8.	No erosion control devices were observed at the outlet of LDP A to minimise the impact of discharged water to the base and/or bank or the receiving channel. The distance between the end of the outflow pipe and the base of the channel was estimated to be greater than two meters. No dedicated spillway was observed at the dam to facilitate water management in the event of the dam overtopping. Refer to <b>MPL 334-REC-2a</b> (MPL 334, Condition 30).	
5-9.	A gap was observed between the earthen bund adjacent to the container housing the water pump at the Emergency Coal Stockpile Dam. The gap provided a potential pathway for run-off from a disturbed area to flow into the drainage channel at LDP A. Refer <b>MPL 334-REC-02b</b> (MPL 334, Condition 30).	

Photo #	Comment	Photo
5-10.	Evidence of erosion gullying was observed at the emergency stockpile dam leading towards the LDP A discharge point and below the pipe discharge of LDP A. Refer <b>MPL 334-REC-02b</b> (MPL 334, Condition 30).	0.05 2010 14.27
5-11.	An increased capacity water pump was observed adjacent to LDP A to pump water from the emergency stockpile dam to the CHP Dam during high rain events.	
5-12.	Water monitoring telemetry equipment at LDP B.	

5-13. The discharge from the First Flush Settlement Dam had been diverted from discharging to LDP B to the CHP Dam during the audit period. The photograph shows the aboveground pipework from the First Flush Settlement Pond to the CHP Dam.	
5-14. Installation of siphon at CHP Dam that injects water to the underground workings to facilitate management of surface storage capacity occurred during the audit period.	
5-15. High Volume Air Samplers (HVAS) operated during the audit period. The HVAS were located adjacent to the settlement ponds.	

# **6** Compliance with Statutory Requirements

This Section fulfils the requirement to assess whether the project is complying with the relevant requirements in its Project Approval, EPL and mining leases.

### 6.1 Approvals and Licences

Myuna operates under the Myuna Colliery EPL No. 366 administered by the Environmental Protection Authority (EPA). The NSW Department of Planning and Environment (DP&E) granted Project Approval 10\_0080 on 18 January 2012. One modification has occurred to PA 10\_0080 since it was granted in 2012.

**Table 6-1** identifies the major approvals, licences in place for Myuna and provides relevant information were applicable. Not all approvals were covered in this audit. Section 6.2 defines the approvals and licences that were assessed as part of this audit.

### Table 6-1 - Summary of Major Approvals and Licences

Title	Summary	Date Granted	Expiry
Project Approval (10_0080)	Extension of Mining – Environmental – Assessment approved by the DP&E	18/01/2012	31/12/2032
MOD 1		01/02/2016	
Development Consent	Development of Myuna and Cooranbong collieries, as described in the EIS and subject to certain conditions	21/12/1977	No expiration date specified in the consent. Subject to renewal of mining leases
Environmental Protection Licence (EPL) 366	Licence authorising discharges to water and Mining for coal at a rate of 2 to 3.5 Mtpa	01/01/2000	-
Consolidated Coal Lease (CCL) 762	A title including the area originally in CL195 for coal mining purposes of approximately 10,820 hectares	CL 195 granted 08/08/1979, consolidated into CCL 762 in 1991	Replaced by ML1632, 13/09/2013
Mining Lease (ML) 1632	Title that provides rights to mine the coal resource of approximately 7426.5 hectares	13/09/2013	13/10/2022
Mining Purposes Lease 334 (Renewed on 20/10/15 with changed conditions)	Title to construct and operate prescribed mine related plant and infrastructure of approximately 33 hectares (lease conditions updated in renewed lease)	20/10/2015	20/10/2036
Mining Purposes Lease (MPL) 334 (Expired on 20/10/15)	Title to construct and operate prescribed mine related plant and infrastructure of approximately 33 hectares	20/10/1994	20/10/2015

Title	Summary	Date Granted	Expiry
Mining Lease (ML) 1370	Title that provides rights to mine the coal resource of approximately 653 hectares	26/09/1995	02/12/2016
Exploration Licence (EL) 4444	Licence granted to allow exploration to be undertaken to determine the occurrence and extent of the coal resource and to assess the potential for mining of approximately 5,164 hectares	16/10/2014	23/10/2017
Exploration Licence 6640	Licence granted to allow exploration to be undertaken to determine the occurrence and extent of the coal resource and to assess the potential for mining of approximately 1,599 hectares	14/10/2013	23/10/2017
Trade Waste Permit (D 171027)	Permits the discharge of 'prohibited substances' to sewer in accordance with various quality requirements	23/10/1995	-
Section 151 Licence (Mining Operations – Various Licence)	Mining Operations – Various Licence, Point Wolstoncroft	11/09/2015	10/09/2020
Section 151 Licence (Mining Operations – Various Licence)	Mining Operations – Various Licence, Pulbah Island	01/11/2011	31/10/2016
Section 151 Licence (Mining Operations – Various Licence)	Mining Operations – Various Licence, Wangi Wangi Point	16/02/2016	15/02/2021
20BL172565	Bore Licence (Dewatering ground water 4380 ML)	13/12/2010	12/12/2015
20BL173259	Bore Licence (Monitoring Bores)	07/08/2012	Perpetuity
Mining Operation Plan	Management and rehabilitation of surface lands pursuant to the mining leases within the colliery holding.	01/01/2016	31/12/2022

### 6.1.1 Environmental Protection Licence 366

There have been six variations to EPL 366 since 2000 (many of which are administrative) pursuant to the *Protection of the Environment Operations Act 1997* (NSW). Four of these variations occurred during the audit period. The following licensed surface water discharge points apply to the Site:

- LDP-A: Emergency Coal Stockpile Dam discharge point.
- LDP-B: Surface water discharge point from the Settling Ponds

### 6.1.1.1 Audit Period Variations to EPL 366

EPL 366 was subject to the following three variations during the audit period:

- EPL 366 was varied by notice 1527732 issued on 13 May 2015 with the following amendments:
  - Limit Conditions
    - § L4 EPA amended waste table limit to make reference to new Waste Regulation
    - § L5.1 EPA has amended the location of the sensitive receivers to be consistent with the 27 February 2015 planning consent and assessments.
  - Monitoring Conditions
    - § M4 EPA amended noise monitoring requirements
  - Reporting Conditions
    - § R4 EPA removed the reference to 2014 reporting as this is covered in monitoring
- EPL 366 was varied by notice 1533862 issued on 13 November 2015 with the following amendments:
  - Administrative Conditions
    - § A1.1 Increased the fee based activity for Coal works and Mining for coal
    - § A1.2 increased the ROM coal limit to 3 MTPA and amended the planning approval date
    - § A2.1 EPA amended the plan details due to provision of an updated plan of the premises
  - o Monitoring Points
    - § P1.1 EPA updated plan of the premises details and easting and northings of HVAS.
  - Monitoring Conditions
    - § M5.4 EPA removed condition
  - Operating Conditions
    - § O5.3 EPA added coal transport condition consistent with development consent
  - Pollution Studies and Reduction Programs
    - § U1 EPA removed PRP1 Assessment of potential impacts of metals as complete
- EPL 366 was varied by notice 1524277 issued on 5 November 2014 with the following amendments:
  - o Administrative Conditions
    - § A1 updated plan of the premises.
    - § A1.2 Established extraction limit consistent with development approval.
  - Location of Monitoring / discharge points
    - § P1 updated description of monitoring and discharge points (information required) (this includes noise monitoring locations)
  - o Limit Conditions
    - § L4.1 included standard waste condition

- § L5 noise table updated into new template (information required)
- Operating Conditions
  - § O4 added emergency response standard condition
  - § 05.1 added tracking condition
  - § 05.2 added bunding condition
- Monitoring Conditions
  - § M4 amended noise monitoring condition
  - § M5 included weather monitoring in new table (information required)
- o Reporting Conditions
  - § R4 amended noise monitoring report condition
- o General Conditions
  - § G2 added completed PRP table to licence

### 6.1.1.2 EPL 366 Monitoring

Monitoring criteria for EPL 366 is included in the Water Management Plan (GHD, 2013). Evidence of the compliance status with the EPL 366 conditions is provided in **Appendix A**.

Myuna dust monitoring requirements are managed by criteria specified in EPL 366. The following dust monitoring points are located at the Site:

- Four deposition dust gauges (DG1, DG2, DG3 and DG4).
- One High Volume Air Sampler (HVAS), measuring both PM<sub>10</sub> and Total Suspended Particulates was located adjacent to the on-site weather station.

The HVAS provides real-time measurement of airborne  $PM_{10}$  concentration levels and TSP. Real-time  $PM_{10}$  concentrations are reported online, along with real-time meteorological data such as wind speed and direction, for proactive dust management. Monitoring data is manually downloaded on a monthly basis for data validation purposes.

Myuna noise monitoring requirements are managed by criteria specified in EPL 366. The following attended noise monitoring locations are located in the vicinity of the Site:

- R1 2 Turrama Street, Wangi Wangi
- R2 2 Moani Street, Wangi Wangi
- · R3 3 Sunset Close, Wangi Wangi
- R4 119 Donnely Road, Arcadia Vale
- R5 93 Donnelly Road, Arcadia Vale
- R6 83 Donnelly Road, Arcadia Vale
- R7 63 Donnelly Road Arcadia Vale
- R8 53 Donnelly Road, Arcadia Vale

A permanent noise logger was installed on-site in January 2014 as required by the Noise Management Plan. AECOM (2015, p14) note that "*The noise logger installed was a 01dB Duo Smart Noise Monitor. This instrument has Class 1 characteristics as defined in AS IEC 61672.1-2004 "Electroacoustics - Sound Level Meters". Measurements were conducted over 15-minute intervals*". Due to malfunction of the noise logger at various periods throughout the year, the logger was not operating during March and June attended monitoring periods data from the closest 15 minute periods to the attended noise monitoring periods was used.

### **EPL 366 Pollution Studies and Reduction Programs**

The following pollution studies and reduction programs were active during the audit period.

### PRP 1 - Assessment of Potential Impacts of Metals

The Site was required to: "conduct an assessment of metals detected in wastewater discharges from the mine in accordance with Australian and New Zealand Environment and Conservation Council (ANZECC) water quality guidelines: to obtain a greater understanding of the type and concentration of
metals discharged in mine water and entering the receiving waters and: to limit the concentration of metals discharged in mine water within ANZECC guidelines".

The above program was completed in August 2015. Site management reported the EPA was compiling data from other sites in the region and it was unlikely that there would be an outcome in the near future.

#### 6.1.2 Mining Leases

**Appendix A** provides a compliance assessment of the relevant mining leases for Myuna. Mining Purpose Lease (MPL) 334 and Mining Lease 1632 were assessed for this IEA. MPL 334 was renewed on 20 October 2015 with new and fewer conditions. These new conditions were assessed as part of the IEA.

#### 6.2 Key Strategies, Plans & Programs

It is noted that not all approvals and licences were considered in the audit. The audit assessed compliance with the following:

- Myuna Colliery Project Approval 10\_0080 and Statement of Commitments;
- Environmental Protection Licence (EPL) 366;
- Mining Lease 1632; and
- Mining Purposes Lease (MPL) 334.

**Table 5-2** summarises the strategies, plans and programs required by PA 10\_0080.

#### Table 6-2 - List of Strategies, Plans and Programs

Strategy / Plan / Program	Date Prepared / Revised	Approval Date
Environmental Management Strategy	Approved prior to audit period and revised in May 2016	Original Strategy approved in September 2012.
		by the Director-General.
Noise Management Plan	Approved prior to audit	Original Plan approved in July 2012.
	May 2016	Revised Plan pending Approval by the Director-General.
Air Quality & Greenhouse Gas Management Plan	Approved prior to audit period and revised in	Original Plan approved in August 2012.
	May 2016	Revised Plan pending Approval by the Director-General.
Water Management Plan that includes:	July 2013	23 January 2014
Site Water Balance;		
Erosion & Sediment Control Plan;		
Surface Water Management Plan;		
Groundwater Monitoring Program; and		
Surface & Groundwater Response Plan.		
Biodiversity Management Plan	Approved prior to audit period and revised in May 2016	Original Plan approved in September 2012.
		Revised Plan pending Approval by the Director-General

Strategy / Plan / Program	Date Prepared / Revised	Approval Date
Aboriginal Cultural Heritage Management Plan	Approved prior to audit period and revised in	Original Plan approved in November 2012.
	July 2016	Revised Plan pending Approval by the Director-General.
Non-indigenous Cultural Heritage Management Plan.	August 2012	4 September 2012
Pollution Incident Response Management Plan	18 April 2016	Approval Not Required

The status of Myuna's performance during the audit, in respect of each condition of the DA, EPL, SoC and ML's is presented in **Appendix A**. Conditions considered to be not complied with, or not able to be verified, have been listed in Section 10 of this report.

**Table 5-3** provides a summary of the performance categories in respect the compliance status for each requirement or commitment as defined in the *Post Approval Requirements for State Significant Developments, Independent Audit Guideline* (NSW Government, October 2015, p7).

#### Table 6-3 - Performance Category Assessment Criteria

Performance Category	Definition
Compliant	Currently in compliance. Sufficient verifiable evidence was available to demonstrate that the intent and all elements of the requirement of the regulatory instrument had been complied with within the scope of the audit.
Non-compliant	Currently not in compliance. Sufficient verifiable evidence was available to demonstrate that the intent of one or more specific elements of the regulatory instrument have not been complied with within the scope of the audit.
Administrative Non-compliance	A technical non-compliance with a condition of the consent that would not impact on performance and that is considered minor in nature (e.g. report submitted but not on the due date, failed monitor or late monitoring session). This would not apply to performance related aspects (e.g. exceedance of a noise limit) or where a condition had not been met at all (e.g. noise management plan not prepared and submitted for approval).
Not Verified	It has not been possible to determine whether compliance exists. Sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory instrument have been complied with within the scope of the audit was not available.
Not Triggered	Condition not applicable at time of audit or had not been triggered
Observation	The identified issue(s) of concern do not strictly relate to the scope of the audit or assessment of compliance. Further observations are considered to be indicators of potential non-compliances or areas where performance may be improved.
Noted	A statement or fact, where no assessment of compliance is required.

**Table 5-4** provides a summary of the risk levels for non-compliances as defined in the *Post Approval Requirements for State Significant Developments, Independent Audit Guideline* (NSW Government, October 2015, p8).

#### Table 6-4 – Risk Levels for Non-compliances

Risk Level	Definition
High	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium	<ul> <li>Non-compliance with:</li> <li>potential for serious environmental consequences, but is unlikely to occur; or</li> <li>potential for moderate environmental consequences, but is likely to occur.</li> </ul>
Low	<ul> <li>Non-compliance with:</li> <li>potential for moderate environmental consequences, but is unlikely to occur; or</li> <li>potential for low environmental consequences, but is likely to occur.</li> </ul>
Administrative Non- compliance	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).

Auditor's comments are provided next to each condition to explain evidence sighted relevant to each condition. Where considered relevant, observations have been made regarding specific compliance issues.

Conditions considered Non-compliant are presented in **Table 10-1** (Section 10) of this report. The table includes a discussion of the compliance status and recommendations for improvement where appropriate.

Where conditions were considered compliant; however it was considered a continuous improvement opportunity existed to improve the compliance status or to improve environmental performance at the site, a recommendation has been made in the compliance table. A summary of these recommendations is provided in **Table 10-5** (Section 10) of this report.

The auditors have not undertaken a rigorous or technical assessment of the documents required by the Development Consent or EPL, particularly where these documents have been signed off and/or approved by relevant regulatory authorities (for example, DP&E). A high level review of adequacy of some documents is provided in Section 6 of this report.

# 7 Review of Environmental Management System

This Section fulfils the requirement to assess the adequacy of strategies, plans or programs required under the Project Approval. The implementation of the management plans / programs is discussed in **Appendix A**.

#### 7.1 Centennial Environmental Management Overview

Centennial Coal has established an Environmental Policy and Environmental Management System (EMS) Framework, as well as a number of Environment and Community Standards. The policy, EMS framework and associated procedure provide guidance to Centennial's sites, such as Myuna, on the development of their own Environmental Management plans.

Myuna has developed an Environmental Management Strategy and a number of supporting environmental management plans to manage environmental aspects and impacts of operational activities. Myuna's Environmental Strategy (the Strategy) operates under the overarching Centennial Coal Environmental Policy and EMS Framework.

Centennial Coal has developed an Environmental Management System Framework Document (EMS Framework) incorporating the following four components:

- EMS Framework Document (Volume 1)
- EMS Procedures (Volume 2)
- Environment and Community Management Standards (Volume 3)
- Environment and Community Management Plans (Volume 4)

The Centennial EMS Framework has been developed to be consistent with the International Standard for Environmental Management Systems ISO 14001. The EMS Framework is applicable to all activities and areas managed by Centennial. The purpose of the EMS Framework is to provide an effective management tool, which will foster sound environmental management of all EMS Framework that each Business Unit, such as Myuna, develop an Environmental Management Strategy, consistent with the EMS Framework objectives. Myuna has adopted the Centennial Coal Standards.

Myuna has developed an Environmental Management Strategy, an Environmental Management System and a number of environmental management plans and monitoring programs. These are discussed in more detail in Sections 7.2 and 7.3 below.

A review of the site's implementation of Centennial Standards and the Environmental Management System (EMS) was not included in the scope of this audit. The detail of the Centennial Coal EMS Framework was not assessed in detail during the audit.

#### 7.2 Environmental Management Strategy

Myuna prepared an Environmental Management Strategy (the Strategy) in August 2012 to satisfy the requirements of Schedule 5, Condition 1 of PA 10\_0080. The Strategy was approved by the Director-General (letter dated 4 September 2012) and was revised in May 2016 was pending approval from the Director-General at the time of the site inspection.

The Project Approval (Schedule 5, Condition 1 of PA 10\_0080) requires the following:

"The Proponent shall revise and implement an Environmental Management Strategy for the project to the Satisfaction of the Director-General. This strategy must:

- a) be submitted for approval to the Director-General within 7 months of the date of this approval;
- b) provide the strategic framework for the environmental management of the project;
- c) identify the statutory approvals that apply to the project;

- d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
- e) describe the procedures that would be implemented to:
  - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
  - receive, handle, respond to, and record complaints;
  - resolve any disputes that may arise during the course of the project;
  - respond to any non-compliance; and
  - respond to emergencies; and
- f) include:
  - copies of any strategies, plans and programs approved under the conditions of this approval; and
  - a clear plan depicting all the monitoring required to be carried out under the conditions of this approval".

In accordance with the Conditions of Approval, Section 1.3 of the Strategy sets out the regulatory requirements of the project and Section 5.0 sets out the accountabilities and responsibilities of the Mine Manager and the Environmental Coordinator. As noted in the previous IEA (URS, 2013, p.23) the Strategy contains procedures applicable to CoA Schedule 5, Condition 1, including:

- "Section 4.1 described the process for managing community issues and information;
- Section 4.1.3 described how to manage complaints. A protocol was provided in appendix 2 illustrating how complaints are to be managed;
- Section 4.1.1 addressed dispute resolution and the process to follow. A protocol was provided in appendix 3 illustrating how complaints are to be managed;
- Section 4.2.3 addressed non-compliance reporting. Specific management plans detail further information concerning non-compliances. No reference was made to an overarching incident and/or non-compliance procedure.
- Section 7.0 referenced that a pollution incident response management plan (PIRMP) would be prepared by 1 September 2012. A PIRMP dated august 2012 was available to review, however, the strategy had not been updated to reflect the PIRMP".

Section 3.0 provided reference to management plans required under Project Approval 10\_0080, however, no clear programs and strategies were provided. A clear plan depicting all the monitoring required to be carried out under the conditions of this approval was available in Appendix 4 as required by the second point of Condition f).

#### 7.3 Management Programs and Plans

The following documents were reviewed for adequacy by the auditors with a summary of the review provided in Table 6-1:

- Noise Management Plan
- Air Quality & Greenhouse Gas Management Plan
- · Water Management Plan; which includes:
  - Site Water and Salt Balance
  - Erosion & Sediment Control Plan
  - Surface Water Management Plan
  - Groundwater Monitoring Program
  - Surface & Groundwater Response Plan
  - Aboriginal Cultural Heritage Management Plan.
- Non-indigenous Cultural Heritage Management Plan
- Biodiversity Management Plan
- Pollution and Incident Response Management Plan
- Mining Operations Plan / Rehabilitation Management Plan

#### 7.3.1 General Summary of Management Plan Adequacy Review

Myuna has established key management and monitoring plans/programs under the scope of the overarching Myuna Environmental Management Strategy and Centennial Coal Environmental Management System – Framework Document. In general, these plans and programs are established and implemented in accordance with the consent conditions of PA 10\_0080 and the requirements of Centennial Coal's Environmental Management System – Framework Document. The management plans provide information to manage, monitor and report on environmental aspects and impacts associated with the development. The following comments are made regarding the EMS and Management Plans:

- The plans had been updated since the previous IEA (URS, 2013) to reflect minor changes in legislation.
- Generally the plans were well prepared and included actions and timings allowing Myuna staff to understand roles and responsibilities and timeframes for specific requirements; however, some references such as to LDP A, LDP B and future real-time noise logger were out of date.
- There remains limited integration between the Centennial EMS and the Management Plans. The EMS and Management Plans do not reinforce the link to one another, causing a lack of information in some respects or a double up of information in others. For example the Air Quality and Greenhouse Gas Management Plan did not provide a reference or link to the Energy Savings Action Plan or any corporate Centennial requirements.

The findings of the review of the adequacy of the management plans / monitoring programs and subsequent recommendations are provided in **Table 6-1**.

Management Plan / Monitoring Program	Adequacy Review and Recommendations
Air Quality and Greenhouse Management Plan (May, 2016)	The Air Quality and Greenhouse Gas Management Plan (May 2016) has been revised four times since the previous IEA (URS, 2013). Revision 1 of the Air Quality and Greenhouse Gas Management Plan (August, 2012) was approved by the Director-General (letter dated 8 August 2012) and was considered to adequately address the requirements of Condition 19, Schedule 3 of the PA 10_0080.
	The plan was concise and generally considered adequate for the control of air quality risks on-site if implemented effectively. The plan included limited information concerning how greenhouse gas data will be collected and reported other than it will be reported in the Annual Review.
	The 2015 Annual Review noted that a Regional Air Quality and Greenhouse Gas Management Plan which will include the Centennial sites of Mandalong, Myuna, Newstan and Northern Coal will be developed and implemented in 2016.
	MCW Environmental consider that the observations from the previous IEA (URS, 2013, p.25) remain valid:
	<ul> <li>"The pit top area was generally sealed and well kept. The only unsealed area of land (grassed) at the pit top was around the settlement ponds and garden areas by the entrance.</li> </ul>
	<ul> <li>Section 7.1.3 (p.16) stated that a high volume air sampler (HVAS) will be installed". The HVAS was observed to have been installed during the site inspection.</li> </ul>
	Recommendations
	• <b>MR-REC-2016-02</b> - Until such time as the Regional Air Quality and Greenhouse Gas Management Plan is approved, the Myuna Air Quality and Greenhouse Gas Management Plan should be updated to reflect GHG reporting is conducted at a corporate level.

#### Table 7-1 - Adequacy Review of Management Plans / Monitoring Programs

Management Plan / Monitoring Program	Adequacy Review and Recommendations
Noise Management Plan (May, 2016)	The Noise Management Plan has been reviewed and updated twice since the previous IEA (URS, 2013). The latest review was conducted in May 2016 as part of the Annual Review process; however, the plan had not been submitted to DP&E for approval at the time of the site inspection
	The Noise Management Plan has been established and implemented by Myuna to address the requirement of Condition 13, Schedule 3 of the PA 10_0080. The plan was originally approved by the Director-General on 30 July 2012 and applies to the monitoring and control of surface operations to facilitate compliance with project approval conditions.
	During the site inspection, a number of local sensitive receiver locations as identified in Table 4 of the plan were observed by the auditors. Generally, it was found that the plan sufficiently addressed the requirements of Condition 13 of Schedule 3 of PA 10_0080. No noise complaints had been received during the audit period which is an indicator of the effectiveness of the plan.
	Section 5.3 (Shot Blasting, p.5) stated that " <i>all shots will be planned and designed to achieve the required outcomes with minimal impacts on the surrounding residential receivers</i> ". Vibration from underground shot firing is predicted to be negligible and below levels of human perception at the nearest residential locations.

Management Plan / Monitoring Program	Adequacy Review and Recommendations
Water Management Plan (July, 2013)	The Water Management Plan (WMP) prepared by GHD Pty Ltd was approved by the Secretary on 23 January 2014. MCW Environmental sighted a letter from DP&E dated 23 January 2014 approving the WMP as required by conditions 22 to 27 of PA 10_0080.
	The Water Management Plan (WMP), dated July 2013 has been established and implemented by Myuna to address the requirement of Conditions 22 to 27, Schedule 3 of the PA 10_0080. The WMP incorporates the Water and Salt Balance Assessment (July, 2013), Erosion and Sediment Control Plan (July, 2013), Surface Water Management Plan (August, 2012), Groundwater Monitoring Program (August, 2012) and the Surface and Groundwater Response Plan (August, 2012).
	The Surface Water Management Plan (SWMP) is the principal component of the WMP and includes copies of two background water management assessments in conducted in 2008 (Water Management Options) and 2010 (Water Quality Options).
	From an adequacy perspective the draft WMP generally covers the requirements of the PA 80_0010. The objectives of the WMP are to satisfy the imposed statutory environmental and health requirements.
	At the time of the previous IEA (URS, 2013) the WMP had not been approved by the Secretary (formerly the Director-General); however, the approved WMP did not appear to have been updated since the previous IEA (URS, 2013) as there was still reference to former licenced discharge points LDP001 and LDP002 (e.g. WMP, Table 5-2, p.38).
	The technical studies that form the basis of the WMP are listed below:
	Groundwater and surface water:
	<ul> <li>variation to EPL to: (i) combine LDP001 and LDP002 into LDP B;</li> </ul>
	<ul> <li>establish LDP A at the ECS dam; and</li> </ul>
	<ul> <li>investigate water reuse options.</li> </ul>
	<ul> <li>The WMP included a Failure Modes and Effects Analysis (FMEA) risk assessment which revealed that the most significant environmental risk to the management of water is heavy and prolonged rainfall (WMP, Section 1.3, p.8).</li> </ul>
	• There are five categories of water within the Myuna Colliery operations: clean, dirty, underground mine water, potable and waste water. The SWMP focuses primarily on the management of clean and dirty water at the surface. Key pieces of water management infrastructure are:
	<ul> <li>clean water management: catering for (i) buildings runoff, (ii) hardstand areas runoff, (iii) clean water diversions catering for perimeter catchments to the west of the site.</li> </ul>
	<ul> <li>dirty water management to mitigate the risk of coal-laden water from being discharged from the site downstream into Wangi Creek: First Flush Settlement Tank, CHP Dam, Emergency Stockpile Dam and to a lesser extent the Mine Water Settling Ponds 2 and 3.</li> </ul>
	<ul> <li>The SWMP assessed the capacity of both the clean and dirty water management system concluding:</li> </ul>
	<ul> <li>the clean water diversions cater for flows between 90 to 630 L/s in a 20 year ARI event storm (Table 4-1). The assessment states that <i>"It is assumed that the drainage network is of a capacity that can convey the 20 year ARI"</i> (p.10). The plans also recommends that a separate detailed hydraulic assessment be undertaken where the diverted catchment is routed through the existing drainage network (Erosion and Sediment Control Plan, p.13).</li> </ul>

Management Plan / A Monitoring Program	Adequacy Review and Recommendations
	<ul> <li>the Erosion and Sediment Control Plan (p.22) refers to the construction of an injection bore near the sediment dams to act as a sink for the pumped water from the CHP Dam where settlement of particles can occur on a much larger time frame than with the limitations at the surface. This had been completed during the audit period.</li> </ul>
•	The assessment discusses options for water reuse on site as required by the consent conditions and concludes that the opportunities for water reuse are limited due to the high salt concentrations (EC) of the site's mine water thereby requiring some form of desalination prior to reuse (for instance in the underground operation where most of the potable water is consumed). Site management reported they considered this to be impractical and uneconomical. The site does recycle its dirty water, primarily by using it to aid dilution of high TSS/EC water at the CHP dam (however the volumes and frequency of this opportunity are small compared with the overall discharge off site), and dust suppression within the Emergency Stockpile Area (again, given that most coal is conveyed directly to Vales Point there is little opportunity for this reuse).
•	A water quality assessment was performed by the WMP authors (GHD). The assessment evaluates the baseline water quality, the default water quality criteria and proposes new trigger values and expands the suite of analytes.
•	A geomorphic/stream health assessment of Wangi Creek is also included and discusses the issues associated with establishing LDP A and LDP B. Although no major impacts are predicted, the report recommends repair of discrete reaches plus monitor/repair of channel incision.
•	Throughout the plan references are made to the proposed licenced discharge points LDP A and LDP B. These have now been installed and are included on EPL 366.
I	Recommendations
•	<b>MR-REC-2016-03</b> - A drainage investigation be conducted to confirm the capacity of the stormwater network to carry flow from clean water diversions.
•	<b>MR-REC-2016-04</b> - To enable ongoing assessment of water quality discharged from Myuna the existing monitoring program to be maintained for the life of the Project with the following enhancements:
	<ul> <li>augment sampling analytes as per the SWMP.</li> </ul>
	- include geomorphic monitoring of Wangi Creek as per the SWMP.
•	<b>MR-REC-2016-05</b> - Update the WMP and Figures to include the locations of LDP A and LDP B and remove references to LDP001 and LDP002.

Management Plan / Monitoring Program	Adequacy Review and Recommendations
Pollution Incident Response Management Plan (PIRMP) (April, 2016)	The PIRMP defines how external pollution reporting is to be undertaken in accordance with Centennial Coal's Management Standard-012 External Environmental Reporting and provides guidance concerning pollution incident reporting.
	Centennial internal standards are referenced in the PIRMP for external reporting and internal incident investigation purposes.
	MCW Environmental undertook a high-level, summary assessment of adequacy against the content of the PIRMP, as outlined at Clause 98C of the <i>Protection of the Environment (General) Regulation 2009</i> and found a high level of compliance against the requirements identified in the Regulation. The following observations are made:
	• The PIRMP was lasted tested on 17 December 2015. The simulation involved a large oil spill on the pit stop surface hard stand area. The (simulated) oil spill supposedly entered the storm water system and flowed through to the gross pollutant trap. Personnel were not informed of the simulated emergency prior to it occurring. The PIRMP test audit report dated December 2015 noted that there were no significant issues identified during the test and that the PIRMP would be updated to reflect the test had been conducted.
	• The Figures provided in the PIRMP did not show the location of potential pollutants on the premises.
	Recommendations
	• <b>MR-REC-2016-06</b> - To comply with <i>Protection of the Environment</i> ( <i>General</i> ) <i>Regulation 2009</i> Clause 98C, ensure the figure appended to the PIRMP clearly and legibly show the location of potential pollutants on the premises.

Management Plan / Monitoring Program	Adequacy Review and Recommendations
Aboriginal Cultural Heritage Management Plan (July, 2016)	The Aboriginal Cultural Heritage Management Plan (July, 2016) has been updated once since the previous IEA (URS, 2013) and was pending approval from the Director-General at the time of the site inspection.
	Centennial Coal's Northern Holdings Aboriginal Cultural Heritage Management Plan dated July 2016 prepared by RPS (East Australia) Pty Ltd on behalf of Centennial and was originally approved on 26 November 2012. The Plan addressed management of Aboriginal Cultural Heritage at Centennial's northern operations facilities including:
	Newstan/Awaba Colliery;
	Myuna Colliery;
	Mannering Colliery; and
	Mandalong Mine.
	For Myuna the following site specific issues were addressed in the Northern Holdings Aboriginal Cultural Heritage Management Plan:
	Overview of operations
	Registered Aboriginal parties
	Aboriginal heritage commitments and consent conditions
	Myuna Colliery Project Approval conditions
	Cultural significance ranking outcomes
	Archaeological significance ranking outcomes
	Site specific management measures
	Centennial Myuna engaged a Cultural Heritage specialist to conduct an Aboriginal due diligence assessment on a section of Morisset Peninsula shoreline during 2015. The due diligence assessment was undertaken prior to the installation of subsidence monitoring markers to identify whether:
	Aboriginal objects were present or likely to be present in the Project Area;
	<ul> <li>proposed activities are likely to harm Aboriginal objects (if present); and</li> </ul>
	<ul> <li>to determine whether an Aboriginal Heritage Impact Permit (AHIP) was required.</li> </ul>
	The Aboriginal due diligence assessment identified that the installation of subsidence monitoring markers would not impact Aboriginal objects and that an AHIP was not required (Centennial, 2015 Annual Review, p.18).
	No indigenous heritage items were reported to have been identified and/or disturbed during the reporting period. In the event that any major development or change to the existing site infrastructure was planned, or where mining operations would impact the surface appropriate surveys would be conducted.
Non-Indigenous Cultural Heritage Management Plan (August, 2012)	The Non-Indigenous Cultural Heritage Management Plan (August, 2012) has not been updated since the previous IEA (URS, 2013) and was approved by the Director-General on 4 September 2013.
	Section 5.1 (p.11) of the Myuna Non-Indigenous Cultural Heritage Management Plan addressed the protection of the section of remnant railway line associated with the decommissioned Wangi Power Station that is located within the site.
	No significant non-indigenous heritage items were reported to have been identified during the audit period.

Management Plan / Monitoring Program	Adequacy Review and Recommendations
Mining Operations Plan / Rehabilitation Management Plan (January 2016 to	Myuna submitted a new MOP / Rehabilitation Plan for the period 1 January 2016 to 30 November 2022 to DRE during the audit period. DRE approved the MOP on 7 December 2015. It is noted that:
December 2022)	• Section 5.4 (pp.55-57) provided detail concerning mine closure planning.
	<ul> <li>No buildings were renovated, removed or rehabilitated during the audit period.</li> </ul>
	<ul> <li>Rehabilitation of degraded areas affected by environmental weeds was systematically carried out during the reporting period, as part of land management practices.</li> </ul>
	<ul> <li>No rehabilitation trials, research or initiatives were undertaken during the audit period.</li> </ul>
	The following observations are made concerning the Mining Operations Plan / Rehabilitation Management Plan:
	• The period of the plan is from January 2016 to November 2022.
	<ul> <li>No rehabilitation or removal and renovation of buildings are proposed in the plan period.</li> </ul>
	• Myuna will continue to operate infrastructure to support mining throughout the duration of the MOP period from 2016 to 2022.
	• Rehabilitation of exploration drill sites will be undertaken at the completion of these sites during the MOP period in consultation with the relevant landowner.
	<ul> <li>Rehabilitation of water management structures are not planned during the MOP period. Dams and water management structures will be used to manage water on site.</li> </ul>
	<ul> <li>Final landform creation and rehabilitation activities will largely be undertaken following the completion of mining and removal of surface infrastructure.</li> </ul>
	• Final landform will reflect the existing topography providing a free draining landform similar to that which currently exists. The mine access road will be retained for light industrial infrastructure.
	<ul> <li>Selected site infrastructure will be maintained for light industrial use pending further approvals and a change to the LEP. The down cast shaft area will be revegetated with native tree and shrub species.</li> </ul>

Management Plan / Monitoring Program	Adequacy Review and Recommendations
Biodiversity Management Plan (May, 2016)	The Biodiversity Management Plan has been revised and updated once since the previous IEA (URS, 2013) and was due to be sent to DP&E for approval at the time of the site inspection.
	Centennial wrote to DP&E on 30 October 2015 (Centennial, 2015) notifying the Department of their intent to adopt a regional approach to the development of the following management plans: Air Quality and Greenhouse Gas Management Plan / Biodiversity Management Plan / Heritage Management Plan / Noise Management Plan / Water Management Plan. Centennial noted that the plans would take into consideration the conditions, commitments and operations of their regional operations including Myuna Colliery.
	MCW Environmental sighted a letter from the DP&E to Myuna dated 3 September 2012 that approved the previous Biodiversity Management Plan in accordance with Condition 28 of Schedule 3.
	<ul> <li>The initial plan was prepared by qualified ecologists (RPS Consultants (Australia) Pty Ltd) who were approved by the Director General on 20 April 2012.</li> </ul>
	• Section 4.3 (p.11) Section 5 (pp.16-26) of the plan addressed measures that would be implemented over the life of the mine to protect and enhance the Swamp Sclerophyll Forest on Coastal Floodplains endangered ecological community near Wangi Wangi Creek. Section 5 (pp.16-26) of the Plan addressed measures that would be implemented over the life of the mine to ensure that native vegetation and habitat within the surface facilities are properly managed.
	<ul> <li>Hunter Land Management Pty Ltd is engaged to conduct weed management activities.</li> </ul>
	• The Weed Action Plans for 2014, 2015 and 2016 showed weed focus areas for the audit period as well as weed controlled areas. It was not clear from the reports how the site monitors the effectiveness of the plan(s). No monitoring schedule was available for review and there was no update survey to compare and determine if there has been an improvement of weed infestation at treated areas. Site management reported that HLM visit the site every second month.
	• Fauna monitoring is to be implemented if subsidence is measured greater than 20 mm. This requirement had not yet been triggered in the Plan.
	<ul> <li>Section 5.8 (p.24) referred to fire management issues. A Bushfire Management Plan dated May 2016 was available for review.</li> </ul>
	Recommendations
	• Refer to PA 10_0080-REC-08a and PA 10_0080-REC-08b (Condition 28, Schedule 3).

It is suggested that the recommendations provided in **Table 7-1** be addressed at the next scheduled review date for each of the management plans.

# 8 Summary of Non Compliances and Recommendations

Some non-compliances have been identified with the Development Consent Conditions, EPL conditions, Mining Lease conditions and SoC conditions. These non-compliances as well as the requirements assessed as Not Verified and the associated recommendations have been consolidated and are summarised in **Table 10-1** below.

For a number of requirements that were assessed as compliant or not applicable, recommendations were made where continuous improvements were identified. These requirements and recommendations are summarised in **Table 10-5**.

Recommendations relating to observations of general environmental management, the adequacy of the various plans / programs are provided in Section 6.

## Table 10-1 - Non-Compliant and Not Verified Conditions - Project Approval 10\_0080

Condition	Comments and Evidence Signed for Addit Period	and Recommendation
<ul> <li>Noise Management Plan</li> <li>The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must: <ul> <li>a) be submitted for approval to the Secretary within 7 months of the date of this approval;</li> <li>b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval;</li> <li>c) outline procedures to manage responses to any complaints or issues raised by the owners of affected residences; and</li> <li>d) include a noise monitoring program that: <ul> <li>uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the project; and</li> </ul> </li> </ul></li></ul>	<ul> <li>The Noise Management Plan has been reviewed and updated twice since the previous IEA (URS, 2013). The latest review was conducted in May 2016 as part of the Annual Review process; however, the plan had not been submitted to DP&amp;E for approval at the time of the site inspection.</li> <li>Centennial wrote to DP&amp;E on 30 October 2015 (Centennial, 2015) notifying the Department of their intent to adopt a regional approach to the development of the following management plans: Air Quality and Greenhouse Gas Management Plan / Biodiversity Management Plan / Heritage Management Plan / Noise Management Plan / Water Management Plan. Centennial noted that the plans would take into consideration the conditions, commitments and operations of their regional operations including Myuna Colliery.</li> <li>Preparation</li> <li>a) MCW Environmental sighted a letter from the DP&amp;E to Myuna dated 30 July 2012 that approved the Noise Management Plan on 27 July 2012.</li> <li>b) Sections 7.1.2 and 7.1.3 outlined the measures that are implemented to ensure compliance with the conditions of this approval and EPL 366.</li> <li>c) Section 5.1 outlined the protocols for managing noise exceedances and community noise complaints.</li> <li>d) <ul> <li>sections 7.1.2 and 7.1.3 described that attended and real-time noise monitoring would be conducted. The real-time noise logger was installed in January 2014.</li> <li>a protocol for determining exceedances was included as Appendix A".</li> </ul> </li> </ul>	Preparation – Compliant (pending approval from the Secretary) Implementation – Non-compliant Administrative Non-compliance <b>PA 10_0080-REC-02</b> - The Noise Management Plan should be updated to reflect the maintenance, operation, collection and use of modelling data of the on-site real-time noise logger.
	Implementation	
	<ul> <li>Quarterly noise monitoring is conducted at the site. The auditors sighted quarterly and annual attended noise reports for 2013, 2014 and 2015 conducted by AECOM (Australia) Pty Ltd.</li> <li>A permanent noise logger had been installed during the audit period in accordance with the NMP (Section 7.1.3, p.12); however, the NMP did not include any details concerning the collection of modelling data that may be used to facilitate compliance with EPL 366 noise criteria. Section 7.1.3 also noted that the site 'would' install a real-time noise logger.</li> <li>The NMP did not include details concerning the maintenance (i.e. calibration frequency) and operation of the onsite noise logger.</li> <li>The auditors conducted a 'drive by' inspection of the noise monitoring location located at Turrama Street.</li> </ul> Given the collection of real-time noise data for modelling purposes to facilitate compliance with PA 10_0080 and EPL 366 was not detailed in the Noise Management Plan [May, 2016] and that the noise logger was installed in lanuary.	
		<ul> <li>Sections 7.1.2 and 7.1.3 described intra attended and rear-unit offse motioning would be conducted. The real-time noise logger was installed in January 2014.</li> <li>a protocol for determining exceedances was included as Appendix A".</li> <li>Implementation</li> <li>Quarterly noise monitoring is conducted at the site. The auditors sighted quarterly and annual attended noise reports for 2013, 2014 and 2015 conducted by AECOM (Australia) Pty Ltd.</li> <li>A permanent noise logger had been installed during the audit period in accordance with the NMP (Section 7.1.3, p.12); however, the NMP did not include any details concerning the collection of modelling data that may be used to facilitate compliance with EPL 366 noise criteria. Section 7.1.3 also noted that the site 'would' install a real-time noise logger.</li> <li>The NMP did not include details concerning the maintenance (i.e. calibration frequency) and operation of the onsite noise logger.</li> <li>The auditors conducted a 'drive by' inspection of the noise monitoring location located at Turrama Street.</li> <li>Given the collection of real-time noise data for modelling purposes to facilitate compliance with PA 10_0080 and EPL 366 was not detailed in the Noise Management Plan [May, 2016] and that the noise logger was installed in January 2014, implementation of the plan was found to be non-compliant.</li> </ul>

Condition Number	Condition	Comments and Evidence Sighted for Audit Period
	Soil and Water	The following is noted concerning water licences at the site:
	Note: Under the Water Act 1912 and/or the Water Management Act 2000 is required to obtain the necessary water licences for the project.	<ul> <li>Siphon - One borehole is located adjacent to the sediment ponds where water is directed into the underground workings to facilitate surface water management. The installation of this bore occurred during the audit period. No licence was available for directing water underground at this location.</li> <li>Portal - Water from the sediments ponds is piped down the drift and into the underground workings. No licence was available for directing water underground at this location.</li> </ul>
		An email from Centennial to DPI Water dated 3 November 2014 requested that the Department provide clarification concerning the applicability of two legislative clauses so that the site could determine whether a licence application was required to be submitted. No response from DPI Water to the site's email was available for review at the time of the site inspection.
		Site management reported that a licence for directing/injecting water underground is pending approval from DPI Wate and that the application process for the licence is being managed by Centennial Corporate. A meeting was reported t have been arranged with DPI Water prior to the end of June 2016.
		GHD was engaged by Myuna to conduct an independent environmental audit of Centennial's compliance with the requirements of Myuna Bore Licence Number 20BL172565 (GHD, 2016-B). The licence requires that "At five yearly intervals, and on completion of mining operations the licence holder must engage an independent expert, approved by DPI-Water, to undertake an audit of the groundwater conditions, all monitoring records and any related impacts." The GHD audit (GHD, 2016-B) identified four non-compliant conditions, eight compliant conditions and five conditions that were 'not applicable'. The audit report noted that there was a delay between granting of the licence in 2010 and issue of the licence to Myuna in 2014 and that as a result a number of the requirements of the licence were not conducted within the specified timeframes. The report noted that the "majority of these conditions have since been fulfilled" (GHE 2016, p.5), A total of five recommendations were identified in the report.
		Aboveground
		Three pipes from the portal discharge into the sediment ponds (Licence #20BL172565); however, the site was awaitin a copy of the licence from DPI Water at the time of the site inspection.
		MCW Environmental sighted the previous copy of the licence that was held on-site. It is noted that the licence require an annual review and a five year groundwater audit. GHD Australia Pty Ltd had been engaged to conduct the groundwater study. Site management reported that a draft report had been prepared and that comments had been returned to the consultant.
		GHD was engaged by Myuna to conduct an independent environmental audit of Centennial's compliance with the requirements of Myuna Bore Licence Number 20BL172565 (GHD, 2016-B). The licence requires that "At five yearly intervals, and on completion of mining operations the licence holder must engage an independent expert, approved b DPI-Water, to undertake an audit of the groundwater conditions, all monitoring records and any related impacts." The GHD audit (GHD, 2016-B) identified four non-compliant conditions, eight compliant conditions and five conditions that were 'not applicable'. The audit report noted that there was a delay between granting of the licence were not conducted within the specified timeframes. The report noted that the "majority of these conditions have since been fulfilled" (GHE 2016, p.5). A total of five recommendations were identified in the report.
		Phase 2 ESA
		MCW Environmental sighted bore licence 20BL173259 for 13 groundwater monitoring bores installed as part of a Phase 2 ESA.
		Given a groundwater licence was in the process of being applied for and discussions with DPI Water were ongoing at the time of the site inspection as to what licences would be issued, this condition was found to be Not Verified.

#### Compliance Status (C/O/NC/NA) and Recommendation

Not Verified

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Condition Number	Condition	Comments and Evidence Sighted for Audit Period	Compliance Status (C/O/NC/NA) and Recommendation
Condition Number	Condition  Surface Water Discharges  The Proponent shall ensure that all surface water discharges from the site comply with the discharge limits (both volume and quality) set for the project in any EPL.	<ul> <li>Comments and Evidence Sighted for Audit Period</li> <li>The following non-compliances concerning concentration levels were noted as having been reported by Myuna for the audit period:</li> <li>2013: <ul> <li>22 November 2013: TSS was recorded at 94 mg/L from LDP B during a rainfall event. The cause of the TSS exceedance was not identified.</li> <li>2014:</li> <li>28 February 2014: Dam water was discharged at LDP A following a high rainfall event. The on-site weather station recorded rainfail of 302 mm on the 28 February 2014. Laboratory analysis of pH indicated a result of 6.3 which exceeded the lower concentration EPL 366 limit of 6.5.</li> <li>1 March 2014: Dam water was discharged at LDP A following a high rainfall event. The on-site weather station recorded rainfall of 302 mm for the 28 February 2014. Laboratory analysis of pH indicated a result of 6.5.</li> <li>1 March 2014: Dam water was discharged at LDP A following a high rainfall event. The on-site weather station recorded rainfall of 302mm for the 28 February 2014. The discharge continued until 09:00am on 1 March 2014. Laboratory analysis for TSS indicated a result of 157 mg/L (i.e.107 mg/L greater than the TSS EPL criteria of 50 mg/L).</li> </ul> </li> <li>2015:</li> <li>2015:</li> <li>2 April 2015: TSS was recorded as 60 mg/L from LDP B. The solid matter collected in the sample was analysed by the Hunter Water Corporation Laboratory as organic (algae and plant matter). The Myuna weather station recorded no rainfall on the 2 April 2015 therefore there were no unplanned discharge events on that day. Real-time monitoring of the parameters including turbidity, pH, EC and temperature has been undertaken at LDP B since July 2013. Turbidity levels recorded at LDP B on the 2 April anged from 15 Formazin Turbidity Unit (FTU) to 18 FTU.</li> <li>4 April 2015: TSS was recorded as 63 mg/L from LDP B. A total of 67.8mm of rainfall was recorded for the 24 hours preceding the sample collection from the on-site weather station. Site management reported tha</li></ul>	Compliance Status (C/O/NC/NA) and Recommendation         Non-compliant         Low Risk
		<ul> <li>which site management reported to quickly peak and subside was identified to be from mineral solids that were washed in from the bank of the discharge channel at the discharge point during the rainfall event.</li> <li>One volume exceedance from LDP B was noted in the 2015 Annual Return.</li> <li><u>21 April 2015</u>: 13,590 kL was discharged through LDP B exceeding the volume limit of 13,000 kL. The volume of mine water pumped to the surface to be discharged was reported to be 4, 519 kL. Site management reported that a large storm event caused a high volume of surface water run-off as well as a local power outage that led to on-site system and electronic communication failures. The power outage let to insufficient information being available to manage the volume of water being discharged from the site and prevented water being pumped to the underground workings from the CHP Dam via the Borehole. Site management reported that despite the power outage equipment at LDP B was monitoring the flow/volume; however, management was unable to view the data due to the power outage. Following the event a corrective action was to change water transfer from the CHP dam to the borehole from electrical operation to manual operation so that the CHP Dam water levels can be managed in the event of a power outage. Data from the on-site weather station observed during the site inspection indicated monitoring continued at LDP B during the power outage.</li> <li>Improvements to the water management system have been conducted by increasing the rate of transfer (from approximately 10 L/sec to approximately 50 L/sec) from the CHP Dam to the underground workings settlement reservoir. Site management reported that this has been achieved by the addition of a larger pipe to the automated pumping system and the construction of a Siphon line from the CHP Dam to the underground workings via a borehole. The new pipeline and Siphon was observed during the site inspection.</li> </ul>	
S5.10	Independent Environmental Audit Within 6 weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.	The 2013 IEA (URS, 2013) was submitted to DP&E on 30 October 2013. A letter from DP&E dated 20 December 2013 acknowledging receipt of the 2013 IEA. Given the late submittal (greater than 6 weeks) of the 2013 IEA (URS, 2013) this condition was found to be non- compliant.	Non-compliant Administrative Non-Compliance

<sup>Note 1</sup> defined in Post Approval Requirements for State Significant Developments, Independent Audit Guideline, October 2015, NSW Government

#### Table 10-2 - Non-Compliant and Not Verified Conditions – Environmental Protection Licence 366

Condition Number		Condition		Comments and Evidence Sighted for Audit Period	Compliance Status (C/O/NC/NA) and Recommendation
L2 L2.1	<b>Concentration</b> I For each monito a point number), that area, must r	Condition Limits pring/discharge point or utilisation area specifie , the concentration of a pollutant discharged at not exceed the concentration limits specified in	d in the table\s below (by that point, or applied to the EPL.	<ul> <li>Comments and Evidence Sighted for Audit Period</li> <li>The following non-compliances were noted concerning concentration levels for the audit period: <ul> <li>2013:</li> <li>22 November 2013: TSS was recorded at 94 mg/L from LDP B during a rainfall event. The cause of the TSS exceedance was not identified.</li> </ul> </li> <li>2014: <ul> <li><u>1 March 2014</u>: Dam water was discharged at LDP A following a high rainfall event. The on-site weather station recorded rainfall of 302 mm for the 28 February 2014. The discharge continued until 09:00am on 1 March 2014. Laboratory analysis for TSS indicated a result of 157 mg/L (i.e.107 mg/L greater than the TSS EPL criteria of 50 mg/L).</li> </ul> </li> <li>2015: <ul> <li><u>2 April 2015</u>: TSS was recorded as 60 mg/L from LDP B. The solid matter collected in the sample was analysed by the Hunter Water Corporation Laboratory as organic (algae and plant matter). The Myuna weather station recorded no rainfall on the 2 April 2015 therefore there were no unplanned discharge events on that day. Real-time monitoring of the parameters including turbidity, pH, EC and temperature has been undertaken at LDP B since July 2013. Turbidity levels recorded at LDP B on the 2 April ranged from 15 Formazin Turbidity Unit (FTU) to 18 FTU.</li> <li><u>4 April 2015</u>: TSS was recorded as 63 mg/L from LDP B. A total of 67.8mm of rainfall was recorded for the 24 brute mean dire the one of the monitor for the one of the parameter texter.</li> </ul> </li> </ul>	Non-Compliant Low Risk EPL 366-REC-01 - Monitor the effectiveness of the change to the water management system and if exceedances (i.e. TSS) continue, implement further measures to address the exceedances.
				<ul> <li>hours preceding the sample collection from the on-site weather station. Site management reported that the CHP Dam had insufficient capacity to control surface run-off from the storm and overflowed into the clean water dams which then flowed through LDP B.</li> <li><u>22 May 2015</u>: TSS was recorded as 70 mg/L from LDP B. A total of 40 mm of rainfall was recorded for the four hours preceding the sample collection from the on-site weather station. Site management reported that the high intensity run-off from the rain event caused the CHP Dam dirty water to overflow into the clean water settlement ponds which then flowed through LDP B.</li> <li>2016: <ul> <li><u>16 March 2016</u>: TSS was recorded as 111 mg/L from LDP B. The increase in the discharge water turbidity, which site management reported to quickly peak and subside was identified to be from mineral solids that were washed in from the bank of the discharge channel at the discharge point during the rainfall event.</li> </ul> </li> <li>Improvements to the water management system have been conducted by increasing the rate of transfer (from approximately 10 L/sec to approximately 50 L/sec) from the CHP Dam to the underground settlement reservoir. Site management reported that this has been achieved by the addition of a larger pipe to the automated pumping system and the construction of a Siphon line from the CHP Dam to the underground workings via a borehole. The new pipeline and Siphon were observed during the site inspection.</li> </ul>	
L2.2	<b>Concentration</b> I Where a pH qua must be within th	Limits ality limit is specified in the table, the specified he specified ranges.	percentage of samples	On 28 February 2014 dam water was discharged at LDP A following a high rainfall event. The on-site weather station recorded rainfall of 302 mm on the 28 February 2014. Laboratory analysis of pH indicated a result of 6.3 which was not in compliance with the lower concentration EPL 366 limit of 6.5.	Non-Compliant Low Risk
<b>L3</b> L3.1	Volume and Mass Limits         For each discharge point or utilisation area specified below (by a point number), the volume/mass of:         (a) liquids discharged to water; or         (b) solids or liquids applied to the area;         must not exceed the volume/mass limit specified for that discharge point or area.         Point       Unit of Measure       Volume/Mass of Limit		/ a point number), the arge point or area. Volume/Mass of Limit	A total of 13,590 kL was discharged through LDP B on 21 April 2016 exceeding the volume limit of 13,000 kL. The volume of mine water pumped to the surface to be discharged was reported to be 4, 519 kL. Site management reported that a large storm event caused a high volume of surface water run-off as well as a local power outage that led to on-site system and electronic communication failures. The power outage let to insufficient information being available to manage the volume of water being discharged from the site and prevented water being pumped to the underground workings from the CHP Dam via the Borehole. Site management reported that despite the power outage equipment at LDP B was monitoring the flow/volume; however, management was unable to view the data due to the power outage. Following the event a corrective action was to change the water transfer from the CHP dam to the borehole from electrical operation to manual operation so that the CHP Dam water levels can be managed in the event of a power outage. Data from the on-site weather station observed during the site inspection indicated monitoring	Non-Compliant Low Risk
	9	Kilolitres per day	13,000	continued at LDP B during the power outage. Improvements to the water management system have been conducted by increasing the rate of transfer (from approximately 10 L/sec to approximately 50 L/sec) from the CHP Dam to the underground workings settlement reservoir. Site management reported that this has been achieved by the addition of a larger pipe to the automated pumping system and the construction of a Siphon line from the CHP Dam to the underground workings via a borehole. The new pipeline and Siphon was observed during the site inspection.	

Condition Number	Condition	Comments and Evidence Sighted for Audit Period		
M2	Requirement to monitor concentration of pollutants discharged	Monitoring results for dust are compiled and stored on a spread sheet within the Centennial Lotus Notes		
M2.1	For each monitoring/discharge point or utilisation area specified in the table (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the	Monitoring results for depositional dust data were sighted from May 2014 to April 2016. HVAS data was 5 May 2015 to 29 April 2016. For the data reviewed TSS and PM <sub>10</sub> had been recorded every six days.		
	concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	A non-compliance was reported in the EPA 2014 Annual Return for a failure to collect and analyse the re of samples from DG2. The monthly sample collection and analysis for 2014 was undertaken by a contra is recorded for DG2 for the months September and December 2014. Site management reported that the collected from DG2 for the months of September and December was broken during transportation on a b between DG2 and DG1. An incident investigation and a procedural review was undertaken and subsequ container was designed and implemented for the secure transport of dust deposition sample jars.		

Carbon Based (2016, p.3) stated that "The depositional dust gauges are operated to the Australian Stan AS3580.10.1 "Methods for Sampling and Analysis of Ambient Air Method 10.1 Determination of Particula Deposited Matter—Gravimetric Method" (equivalent to EPA AM-19). Sampling occurs every 30 +/- 2 day gauge is analysed for insoluble solids and ash residue. The results are reported as g/m2.month. The Hig Samplers are operated to the Australian Standards AS2724.3 "Ambient Air—Particulate matter, Part 3: D of Total suspended particulates (TSP)—High Volume sampler Gravimetric method" (equivalent to EPA Al AS3580.9.6 "Methods for Sampling and Analysis of Ambient Air. Determination of Suspended Particulates High Volume Air sampler with size selective inlet - Gravimetric method" (equivalent to EPA AM-18). Sam scheduled for 24 hours every 6 days to the DECCW (EPA) protocol".

There was general compliance with this condition, however, given dust deposition monitoring was not co the months of September and December 2014 Myuna was found to be non-compliant with this condition.

#### M2.2 Points 3, 4, 5, 6 (Dust)

Pollutant	Units	Frequency	Sampling Method
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19

#### Points 7 (High Volume Air Sampler)

Pollutant	Units	Frequency	Sampling Method
Total suspended solids	Micrograms per cubic metre	Every 6 days	AM-15

#### Points 8 (High Volume Air Sampler)

Pollutant	Units	Frequency	Sampling Method
PM10	Micrograms per cubic metre	Every 6 days	AM-18

Refer to M2.1

	Compliance Status (C/O/NC/NA) and Recommendation
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equired number actor. No result e sample jar bush track uently a	
ndard ates— ys and each igh Volume Air Determination AM-15) and es—PM10 npling is	
onducted for	
	Non-compliant Low Risk

Condition Number		Conditi	on	Comments and Evidence Sighted for Audit Period	Compliance Status (C/O/NC/NA) and Recommendation
<b>M4</b> M4.1	<ul> <li>Environmental Monitoring</li> <li>Requirement to monitor noise</li> <li>To determine compliance with condition L5.1, attended noise monitoring must be undertaken in accordance with conditions L5.5 and L5.6, and</li> <li>a) at each one of the locations listed in condition L5.1;</li> <li>b) occur annually within the reporting period of the Environment Protection Licence;</li> <li>c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy (EPA 2000) for a minimum of 1.5 hours during the day; 30 minutes during the evening; and 1 hours during the night, and</li> </ul>		ttended noise monitoring must be and L5.6, and ion L5.1; of the Environment Protection Licence; period as defined in the NSW Industrial 1.5 hours during the day; 30 minutes night, and	The 2015 Annual Noise Report (AECOM, 2016, Appendix B) included an email from the EPA (EPA, 2015) that indicated Myuna had telephoned the EPA officer for the site to notify them that the site had inadvertently undertaken monitoring on the same day of the week for the first two quarterly monitoring periods. The first quarter and second quarter day, evening and night time noise monitoring were undertaken on the same week day. This condition came into effect with Licence Variation notice 1527732 issued on the 13 May 2015 which is in the second quarter of the Annual Return monitoring period. Myuna was advised by the EPA officer to include the incident as a non-compliance in the Annual Return for the period; however, recommend that the EPA treat the incident as a transitional phase and that the EPA would not take any action. The incident was included in the 2015 Annual Return.	Non-compliant Administrative Non-compliance
	occur for three (3) con	secutive days.			
<ul> <li>M8 Requirement to Monitor Volume or Mass</li> <li>M8.1 For each discharge point or utilisation area specified belowed a) the volume of liquids discharged to water or applied to b) the mass of solids applied to the area;</li> <li>c) the mass of pollutants emitted to the air;</li> <li>at the frequency and using the method and units of meas</li> </ul>		cified below, the licensee must monitor: r applied to the area; s of measure, specified below.	The Centennial Weather Portal provides real-time data for volume of liquids discharged to water at LDP B Continuous flow monitoring data for LDP B showing the water sensor flow was available for review. A technical non-compliance resulted from a power outage due to battery failure between 22 and 27 January 2015. The volume of water discharged through LDP B was not recorded by the LDP B web based real-time monitor for the period 5:25pm 22 January 2015 to 2:55pm 27 January 2015. There are three mine water discharge lines which contribute to the discharge at LDP B. Each discharge line is metered. An approximate volume of discharge at LDP B was determined from the metered mine water discharge lines. The volume limit was not exceeded.	Non-compliant Low Risk	
	Point 9			On 21 April 2015 13,590 kL was discharged through LDP B exceeding the volume limit of 13,000 kL. The volume of mine water pumped to the surface to be discharged was reported to be 4, 519 kL. Site management reported that a	
	Frequency	Unit of Measure	Sampling Method	large storm event caused a high volume of surface water run-off as well as a local power outage that led to on-site system and electronic communication failures. The power outage let to insufficient information being available to	
	Daily during any discharge	Daily during any discharge     Kilolitres per day     Continuously		manage the volume of water being discharged from the site and prevented water being pumped to the underground workings from the CHP Dam via the Siphon. Site management reported that despite the power outage equipment at LDP B was monitoring the flow/volume; however, management was unable to view the data due to the power outage. Following the event a corrective action was to change the Siphon from electrical operation to manual operation so that the CHP Dam water levels can be managed in the event of a power outage. Data from the on-site weather station observed during the site inspection indicated monitoring continued at LDP B during the power outage.	
				Civen the two shove insidents this condition was found to be non-compliant	

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	Kilolitres per day	Continuously

Given the two above incidents this condition was found to be non-compliant.

#### Table 10-3 - Non-Compliant and Not Verified Conditions – Mining Lease 1632

Condition Number	Condition	Comments and Evidence Sighted for Audit Period	Compliance Status (C/O/NC/NA) and Recommendation
12	<b>Prevention of Soil Erosion and Pollution</b> Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, water body or ground waters. The lease holder must observe and perform any instructions given by the Director-General in this regard.	Myuna operate under EPL 366 that regulates the levels of pollution in water discharges. A review of the EPL is provided in this report (Appendix A). The review found overall compliance with the EPL 366. Refer to EPL 366, Condition L1.1 and Conditions L2.1 to L2.5 for further information.	Non-compliant Low Risk

### Table 10-4 - Non-Compliant and Not Verified Conditions – Mining Purpose Lease 334

Condition Number	Condition	Comments and Evidence Sighted for Audit Period
6	Dams and Escape of Water Settling dams or other dams constructed or to be constructed on the subject area shall	As identified in the previous IEA (URS, 2013) settling dams for water treatment are located in the lease a construction of the dams was not reviewed as part of the audit. No evidence of whether these dams we to the satisfaction of the Director was available for review.
		MCW Environmental concur with the previous finding that compliance with the condition is not verified a information was not available for review.
14	<ul> <li>a) The report shall comprise: <ul> <li>A plan showing short, medium and long-term mining plans;</li> <li>A rehabilitation report (in respect of open cut operations) and/or a surface environmental management report (in respect of underground operations).</li> <li>A review performance in terms of Environment Protection Authority and department of Water Resources Licence and approval conditions (related to the Clean Air Act 1961, the Clean Waters Act 1970, the Noise Control Act 1975, the Environmentally Hazardous Chemical Act 1985, the Pollution Control Act 1970 and the Water Act 1912) applicable to the subject area.</li> <li>A review of performance in terms of Development Consent conditions for the subject area.</li> </ul> </li> <li>A listing of any variations obtained to approvals applicable to the subject area during the previous year.</li> </ul>	<ul> <li>The following is noted:</li> <li>a) Mining plans for the reporting period were outlined in Section 2.4 of the Annual Review. Section 6 a activities for the next reporting year but did not clearly address medium and long-term mining plans</li> <li>b) Rehabilitation was addressed in Section 5 of the Annual Review.</li> <li>c) Compliance with current regulatory requirements were addressed throughout the Annual Review, in Section 3.</li> <li>d) Development consent conditions were addressed throughout the AEMR, in particular in Section 3.</li> <li>Section 1.1 addressed approvals applicable to the subject area during the previous year.</li> </ul>
21	Where the registered holder shall provide and maintain to the satisfaction of the Minister efficient means to prevent contamination, pollution, erosion or siltation of any river, stream, creek, tributary, lake, dam, reservoir, watercourse, groundwater or catchment area or any undue interference to fish or their environment and shall observe any instruction given or which may be given by the Minister with a view to preventing or minimising the contamination, pollution, erosion or siltation of any river, stream, creek, tributary, lake, dam, reservoir, watercourse, groundwater or catchment area, or any undue interference to fish or their environment.	Myuna operate under EPL 366 that regulates the levels of pollution in water discharges. A review of the provided in this report (Appendix A). The review found overall compliance with the EPL 366. Notwithsta following incidents were recorded concerning water during the audit period: Refer to EPL 366, Condition L1.1 and Conditions L2.1 to L2.5 for further information. Site management reported that no directions had been given by the Minister relating to this requirement audit period.
30	The registered holder shall ensure that the run off from any disturbed areas including the overflow from any depression of ponded area is discharged in such a manner that it will not cause erosion.	LDP A is located at the Emergency Coal Stockpile Dam for event based discharges from a small diameter unlined drainage channel that flows to Wangi Creek. No erosion control devices were observed at the or to minimise the impact of discharged water to the base and/or bank or the receiving channel. The distant the end of the outflow pipe and the base of the channel was estimated to be greater than two meters. No dedicated spillway was observed at the dam to facilitate water management in the event of the dam. It was observed that there was no dedicated sampling site for the outflow pipe of LDP A and that when or sample a person may be required to climb down the steep bank beneath the outflow. AS/NZS 5667.1.1 <i>quality – sampling Part 1: Guidance on the design of sampling programs, sampling techniques and the ja</i> <i>and handling of samples</i> Section 3.6 (p.9) states that "Sampling from unsafe sites, such as unstable bank avoided if possible. If this is unavoidable, the operation should be conducted by a team using appropria rather than one person". A metal gantry/walkway with attached steps was observed adjacent to the com the water pump at the Emergency Coal Stockpile Dam. Site management reported that the intention was gantry would be installed at the LDP A outflow to provide a safe sampling site. A gap was observed between the earthen bund adjacent to the container housing the water pump at the Coal Stockpile Dam. The gap provided a potential pathway for run-off from a disturbed area to flow into channel at LDP A. Given the installation of erosion control structures at LDP A is a repeat finding from the previous IEA (UI Appendix A, 82) this condition was found to be provide to be a sampling to the previous IEA (UI Appendix A, 82) this condition was found to be provide to be a sampling the mater pump at the coal Stockpile Dam. The gap provided a potential pathway for run-off from a disturbed area to flow into channel at LDP A.
		Appendix A, p.82) this condition was found to be non-compliant.

	Compliance Status (C/O/NC/NA) and Recommendation
area. The ere constructed	Not Verified
s construction	
addressed	Administrative Non-compliance <b>MPL 334-REC-01</b> - Include medium
	and long-term mining plans in the AEMR.
particular in	
nding this, the	Non-compliant
during the	
er pipe into an	Non-compliant
utiet of LDP A	Low Risk
overtopping. collecting a 998, Water preservation hks, should be te precautions tainer housing	<b>MPL 334-REC-02a</b> – Erosion controls should be installed beneath the outflow to LDP A to minimise the potential for erosion to the drainage channel. Consideration should be given to the installation of a spillway at the Emergency Coal Stockpile Dam including provision of a safe sampling site for the LDP A outflow pipe.
is that the	MPL 334-REC-02b - The earthen bund
Emergency the drainage	adjacent to the container housing the water pump at the Emergency Coal Stockpile Dam should be reformed to prevent run-off from a disturbed area to
RS, 2013,	flow into the drainage channel at LDP A.
	Refer to <b>PA 10_0080-REC-05</b> (PA 10_0080, S3.24)

Condition Number	Condition	Comments and Evidence Sighted for Audit Period
34	Within a period of three months from the date of this authority or a period of three months from the date of service of the notice of renewal, or within such further time as the Secretary may allow the registered holder shall serve on each owner and occupier of the private land and on each occupier of the Crown land held under a pastoral lease within the subject area a notice in writing indicating that this authority has been granted or renewed and whether the authority includes the surface. The notice shall be accompanied by an adequate plan and description of the subject area.	MCW Environmental concur with the previous finding (URS, 2013) that noted: "This requirement was initiated well before operations were managed by Centennial Coal. As such, this was assumed to have been addressed at the time of the ML 334 being issued and was not assessed as audit". For this reason, this condition was assessed as not verified.
	If there are ten or more owners or occupiers affected the registered holder may serve the notice by publication in a newspaper circulating in the region where the subject area is situated. The notice shall indicate that this authority has been granted or renewed, state whether the authority includes the surface and shall contain an adequate plan and description of the subject area.	

	Compliance Status (C/O/NC/NA) and Recommendation
	Not Verified
s requirement s part of this	(Historical requirement)

October 2016

### 8.1 Additional Recommendations (not related to non-compliances)

The following table has been reproduced from **Appendix A**. For details on the requirement, and for further discussion of the issue, please refer directly to the table in **Appendix A**. Many recommendations are based around continuous improvement opportunities identified during the audit and do not necessarily represent immediate potential non-compliance issues.

#### Table 10-5 - Recommendations for Conditions Considered Compliant for Improved Compliance and Continuous Improvement

Approval & EPL Condition Number	Rec #	Recommendation
Project Appr	oval 10_0080	
Subsidence		
S3.1	PA 10_0080- REC-01	Update the Subsidence Management Plan WHS-PHMP-901 [November 2015] so that it includes reference to subsidence related conditions of PA 10_0080 and also how vertical subsidence within Zone A will be limited to a maximum of 20 millimetres (mm) and that extraction methods are to be limited to first workings only.
Greenhouse	Gas Emissions	
S3.16	PA 10_0080- REC-03	Reasonable and feasible measure to minimise the release of greenhouse gas emissions from the site should be included in the Regional Air Quality and Greenhouse Gas Management Plan. The measures should be implemented by the site.
Air Quality ar	nd Greenhouse	Gas Management Plan
S3.19	PA 10_0080- REC-04	In accordance with Condition 3.19(d) it is recommended that the measures to minimise Greenhouse Gas Emissions from the site be clearly stated or referenced to a corporate Centennial policy or Standard [Repeat Finding from 2013 IEA].
Water Manag	ement Plan	
S3.22	PA 10_0080- REC-05	The Water Management Plan (and sub plans) should be updated to reflect the changes to the EPL licenced discharge points (LDP A and LDP B) [Repeat finding from 2013], the transfer of surface water and the injection of surface water to underground workings.
Erosion and	Sediment Contr	ol Plan
S3.24	PA 10_0080- REC-06	Consideration should be given to the installation of erosion and sediment control structures to reduce the flow of surface water across the emergency coal stockpile pad towards the LDP A discharge point.
Groundwater	Monitoring Pro	gram
S3.26	PA 10_0080- REC-07	Implement the recommendations provided in the Annual Groundwater Management Report (GHD, 2016-A) and the Groundwater Bore Licence Audit (GHD, 2016-B).
Biodiversity I	Management Pla	an
S3.28	PA 10_0080- REC-08a	Consideration should be given to conducting a second weed survey of treated areas to determine and document the effectiveness of weed control.
	PA 10_0080- REC-08b	The Weed Action Plan should include a section/description documenting the effectiveness of the previous year's weed treatments.

Approval & EPL Condition Number Waste	Rec #	Recommendation	
S3 31		Surrender the Hunter Water Cornoration Trade Wastewater Agreement if disposal of	
00.01	REC-09	wastewater from the washbay oil/water separator to the municipal sewer is no longer required.	
Reporting - In	ncident Reportir	ng	
S5.7	PA 10_0080- REC-10	Update the Water management Plan to include the process for reporting exceedances of EPL and/or PA 10_0080 water criteria to relevant agencies (i.e. EPA, DP&E, and DRE).	
Environment	al Protection L	icence 366	
Waste			
L4.1	EPL 366- REC-02	Remove the rubbish from the clean water diversion drain behind the waste storage bund and include the location in the pit top inspections.	
Activities mus	st be carried ou	t in a competent manner	
01.1	EPL 366- REC-03	Develop and implement a procedure / process so that hazardous chemicals located in the Haz Chem Store are stored behind the painted line so that any leaks flow backwards towards the drain.	
Dust			
O3.4	EPL 366- REC-04	The mobile spray for the emergency coal stockpile should be commissioned as soon as possible. Measure to mitigate corrosion to the metal pipework should be investigated and implemented (e.g. replacement of metal pipework with PVC).	
Telephone Co	omplaints Line		
M7.2	EPL 366- REC-05	Update the Community Complaints Register to include the correct telephone number.	

Document or Area of Recommendation	Rec #	Recommendation
Section 3.7, Community Consultative Committee	MR-REC- 2016-01	Contact details, including telephone a number(s) for key members of the CCC should be maintained by Site management.
Table 7-1, Air Quality and Greenhouse Management Plan	MR-REC- 2016-02	Until such time as the Regional Air Quality and Greenhouse Gas Management Plan is approved, the Myuna Air Quality and Greenhouse Gas Management Plan should be updated to reflect GHG reporting is conducted at a corporate level.
Table 7-1, Water Management Plan	MR-REC- 2016-03	A drainage investigation be conducted to confirm the capacity of the stormwater network to carry flow from clean water diversions.
	MR-REC- 2016-04	To enable ongoing assessment of water quality discharged from Myuna the existing monitoring program to be maintained for the life of the Project with the following enhancements:
		<ul> <li>augment sampling analytes as per the SWMP.</li> <li>include geomorphic monitoring of Wangi Creek as per the SWMP.</li> </ul>
	MR-REC- 2016-05	Update the WMP and Figures to include the locations of LDP A and LDP B and remove references to LDP001 and LDP002.
Table 7-1, Pollution Incident Response Management Plan	MR-REC- 2016-06	To comply with Protection of the Environment (General) Regulation 2009 Clause 98C, ensure the figure appended to the PIRMP clearly and legibly show the location of potential pollutants on the premises.

#### Table 10-6 - Recommendations Relating to Management Plans and Site Observations

## 9 Limitations of Report

MCW Environmental Consulting Pty Limited (MCW Environmental) has conducted this Independent Environmental Audit (IEA) and generated this report in accordance with the usual care and thoroughness of the consulting profession for the use of Centennial Myuna Coal Pty Ltd and only those third parties who have been authorised in writing by MCW Environmental to rely on this Report.

It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this Report. This IEA report did not assess any aspects relating to safety at the site.

The IEA Report is prepared in accordance with the scope of work and for the purpose outlined in the MCW Environmental Proposal dated 23 April 2016 and the signed contract executed between MCW Environmental and Centennial Myuna Pty Limited.

Where this IEA Report indicates that information has been provided to MCW Environmental by third parties, MCW Environmental has made no independent verification of this information except as expressly stated in the Report. MCW Environmental assumes no liability for any inaccuracies in or omissions to that information.

This IEA Report was prepared between 23 May 2016 and 31 October 2016 and is based on the conditions encountered and information reviewed at the time of the site visit on 30 and 31 May 2016. MCW Environmental disclaims responsibility for any changes that may have occurred after the site visit.

This IEA Report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This IEA Report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.

Except as required by law, no third party may use or rely on this IEA Report unless otherwise agreed by MCW Environmental in writing. Where such agreement is provided, MCW Environmental will provide a letter of reliance to the agreed third party in the form required by MCW Environmental.

To the extent permitted by law, MCW Environmental expressly disclaims and excludes liability for any loss, damage, cost or expenses suffered by any third party relating to or resulting from the use of, or reliance on, any information contained in this IEA Report. MCW Environmental does not admit that any action, liability or claim may exist or be available to any third party.

Except as specifically stated in this section, MCW Environmental does not authorise the use of this IEA Report by any third party.

It is the responsibility of third parties to independently make inquiries or seek advice in relation to their particular requirements and proposed use of the site.

Appendix A Compliance Tables – Development Consent; Environmental Protection Licence, Mining Leases and Statement of Commitments

#### Red Type = MOD 1 February 2015

	Condition	Evidence Source	Comment / Finding
S2.1	<b>Obligation to Minimise Harm to the Environment</b> In addition to meeting the specific performance criteria established under this approval, 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	-	Other than where issues have been identified, in general Myuna appeared to be compliant with its obligation to minimise harm to the environment. The Environmental Management Strategy and associated management plans and procedures have been established and generally implemented to identify, plan for and manage environmental aspects and impacts related to the project.
S2.2	<ul> <li>The Proponent shall carry out the project general in accordance with the:</li> <li>a) EA;</li> <li>b) EA (MOD 1)</li> <li>c) Statement of Commitments; and</li> </ul>	Centennial (2011), Myuna Colliery Environmental Assessment Extension of Mining, February 2011.	Based on a high level review of these documents, Myuna is considered to have carried out the project in general accordance with the EA (2011), Statement of Commitments and Conditions of Approval. A detailed review of compliance with the EA was not undertaken.
	d) Conditions of this approval.	Centennial [2014] Environmental Assessment Myuna Colliery Section 75W Modification to Project Approval PA 10_0080, November 2014.	The Environmental Assessment (February 2011), Project Approval (including Statement of Commitments) were available on the company's website. The Consolidated Condition of Approval 10_0080 dated 1 February 2015 was available on the Myuna website.
		PA 10_0080 [MOD 1].	
S2.3	If there is any inconsistency between the above documents, the latter document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	-	Noted.



#### Compliant

Refer to the recommendations within this document and the audit report for areas of non-compliance and identified opportunities for improvement.

Compliant

Noted

	Condition	Evidence Source	Comment / Finding
S2.4	<ul> <li>The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:</li> <li>a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this approval; and</li> <li>b) the implementation of any actions or measures contained in these documents.</li> </ul>	DP&E (2014), Myuna Colliery Approval of Waste Management Plan, 21 January 2014. DP&E (2015), Myuna Colliery – Annual Review 2014, 10 September 2015. Centennial (2013-A), Myuna Colliery - Updated Water Management Plan – Comments 2, to DP&E [15/07/2013 @1:55pm]. Centennial (2013-A), Myuna Colliery - Updated Water Management Plan, to DP&E [28/08/2013 @2:01pm].	<ul> <li>Site management reported that there has been no known request from the Secretary concerning implementation of the plans during the audit period.</li> <li>Submission of changes to the majority of plans was made prior to approval of the plans during the previous IEA audit period.</li> <li>DP&amp;E provided feedback for a site inspection conducted on 19 August 2015 and the 2014 AEMR in a letter dated 10 September 2015. In their letter DP&amp;E requested:</li> <li>"Myuna provide an Executive Summary of significant activities, complaints incidents, breaches and non-compliances which occurred during the reporting period with future Annual Reviews.</li> <li>Provide further detail in regard to weed management onsite, including a location plan detailing areas of spraying and which weed species were targeted in future Annual Reviews.</li> <li>In accordance with Schedule 4, Condition 23, Myuna Colliery is required to develop a site water balance which must be included in future Annual Reviews. It is recommended that as a minimum the Input- Output model of the Water Accounting Framework developed by the Minerals Council of Australia be used in development of this site water balance.</li> <li>At the time of the desktop review of the AEMR and at the time of addressing this letter, the Myuna Colliery website did not contain a community complaints register nor evidence of monthly update as required under Schedule 5, Condition 11. This is noted as an administrative non-compliance with the consent and the Department requests this to be rectified by 31st October 2015".</li> <li>The DP&amp;E conducted site inspections in 2015 as part of the Annual Review process. The DP&amp;E conducted the 2015 Annual Review site inspection on 5 May 2016. Site management reported that DP&amp;E requested the site consider investigating hydrocarbons levels in the CHP Dam and at LDP B and compare them against ANZECC guidelines. Site management reported they did not think this was warranted given the barriers in the sediment dams. No correspondence was available</li></ul>
S2.5	Limits on ApprovalThe Proponent may carry out mining operations on the site until31December 2032.31	-	Noted.
S2.6	<ul> <li>Limits on Approval</li> <li>The Proponent shall not:</li> <li>a) extract more than 3 million tonnes of ROM coal from the site in any calendar year.</li> <li>b) transport any coal on public roads.</li> </ul>	Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2016) Annual Review January 2015 to December 2015. Site observations. Complaints Register.	<ul> <li>Myuna production figures for the audit period were available to MCW Environmental to review. The following ROM coal production was reported:</li> <li>a. Extraction: <ul> <li>i. 2015: 1,707,027 tonnes of ROM coal produced</li> <li>ii. 2014: 1,874,324 tonnes of ROM coal produced.</li> <li>iii. 2013: 1,635,662 tonnes of ROM coal produced</li> </ul> </li> <li>b. Coal is delivered direct to Eraring Power station via overland conveyor. The auditors observed the overland conveyor to Eraring Power station during the site inspection.</li> </ul>

Compliance Status & Risk Level & Recommendations

Compliant

Noted

Compliant

	Condition	Evidence Source	Comment / Finding
S2.7	Limits of Approval The Proponent shall ensure all coal produced from the site via the enclosed overland conveyor to Eraring Power Station.	Site observations. URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	The auditors observed the overland conveyor to Eraring Power station during the site inspection. As per the 2013 IEA (URS, 2013, Appendix A, p.1) "Coal produced during the audit period was transported by overland conveyor to Earing Power Station. Coal that cannot be conveyed to or received at Earing Power Station (such as through shutdown of the conveyor for maintenance) is temporarily stockpiled on-site. Eraring Power Station own and operate the conveyor from the colliery to Eraring Power Station".
S2.8	Hours of Operation	Site observations	Noted
	The Proponent may undertake mining operations 24 hours a day, 7 days a week.	Centennial (2014) Annual Review January 2013 to December 2013.	Site management reported that the mine operates 24hrs a day, seven days a week. The Complaints Register and Annual Reviews for 2013, 2014 and 2015 noted that there were no community complaints concerning the site during the audit period.
		Centennial (2015) Annual Review January 2014 to December 2014.	
		Centennial (2016) Annual Review January 2015 to December 2015.	
S2.9	Structural Adequacy	Site observations	Site management reported that no buildings were renovated, removed or rehabilitated during the audit period. No new structures were observed by the auditors during the site inspection.
	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 Annual Reviews for 2013, 2014 and 2015 noted that no buildings were
	<ul><li>a. the relevant requirements of the BCA; and</li><li>b. any additional requirements of the MSB where the building or structure is located on land with declared Mine Subsidence District.</li></ul>		This requirement has not been triggered.
S2.10	<b>Demolition</b> The proponent shall ensure that all demolition work is carried out in accordance with <i>Australian Standard AS 2601-2001: The Demolition of Structure</i> , or its latest version.	Site observations	Site management reported that no buildings were removed during the audit period. No evidence of demolished structures was observed by the auditors during the site inspection. The Annual Reviews for 2013, 2014 and 2015 noted that no buildings were renovated, removed or rehabilitated during the audit period. This requirement has not been triggered within the audit period.

# Compliance Status & Risk Level & Recommendations

#### Compliant

Noted

Not Triggered

	Condition	Evidence Source	Comment / Finding
S2.11	Operation of Plant and Equipment 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.	Work Orders: VM31746, VM35642, VM35644, VM35643. Site observations. Carbon Based [2016] Water Monitor Calibration LDP A, 29 February 2016. Carbon Based [2016] Water Monitor Calibration LDP B, 29 February 2016. Carbon Based [2015] Annual Weather Station Field Check, 30 June 2015. Carbon Based [2015] Quarterly Weather Station Field Check, 23 March 2015. Davis Instruments – Calibration Certificates 17 July 2014. AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B. AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01.	<ul> <li>PULSE is used to generate weekly work orders. The auditors sighted work orders including, but not limited to:</li> <li>VM31746 – environmental inspections, weekly contractor environmental monitoring, 20 May 2016.</li> <li>VM35642 – weekday environmental monitoring report, 23 May 2016.</li> <li>VM35643 – environmental weekly surface cleaning, 27 May 2016.</li> <li>Weekly surface cleaning work orders were noted to include management and operation of the coal pad dam water diesel pump, clean out of drive in sump at the Coal Handling Plant dam and maintenance and servicing of water catchment sumps and drains. Weekly surface inspections were noted to address inspections for leaking machinery, evidence of oil on floor in the bulk oil storage area and levels of silt in the sumps in the workshop. The weekly contractor environment monitoring checklists included the requirement to operate pumps. Other measures observed or noted included:</li> <li>Licenced discharge point calibration certificates.</li> <li>Weather station calibration certificates [Carbon Based [2015] and Davis Instruments].</li> <li>On-line environmental data for the water sensor at LDP B was observed by the auditors.</li> <li>HVAS Calibration Form: PM2.5 / PM10 / TSP dated 19 April 2016.</li> <li>Oil separators and oily water detention tanks, drains are serviced periodically through PULSE generated work order by an external contractor.</li> <li>Consultants are engaged to conduct sampling (air, noise, water).</li> <li>Only licensed contractors are used to conduct activities such as maintenance of flow meters.</li> <li>Training – staff are trained to use equipment prior to use.</li> <li>Mock emergency for the PIRMP was conducted on 17 December 2015</li> <li>Oil waste bins were observed at the workshop with secondary containment.</li> <li>The environmental Coordinator was reported to be studying for a Diploma in Leadership Management and SALT Legal Compliance. The course manual was sighted by MCW Environmental.</li> </ul>
\$2.12	Staged Submission of Strategies, Plans or Programs With the approval of the Secretary, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.	URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	Site management reported that management plans were initially submitted in one submission as detailed in the previous IEA [URS, 2013].
S2.13	<b>Continuation of Existing Management Plans</b> The Proponent shall continue to implement existing strategies, plans or programs that apply to existing activities until they are replaced by an equivalent strategy, plan or program approved under this approval.	-	Noted

Compliance Status & Risk Level & Recommendations

Compliant

Compliant

Noted

	Condition	Evidence Source	Comment / Finding
S3.1	Subsidence	Centennial [2015] Subsidence	Mine plans sighted confirm that extraction in the audit period has been first workings
	The Proponent shall ensure that vertical subsidence within Zone A is limited to a maximum of 20 millimetres (mm) and that extraction methods are limited to first workings only.	Management Plan WHS- PHMP-901, November 2015.	only. A Subsidence Management Plan [Centennial, 2015] had been prepared that outlined
		511 Panel Subsidence Stations (Wangi North) Graph of Survey Results, 5 May 2015.	<ul> <li>roles and responsibilities as well as the following areas of workings:</li> <li>Wangi Wangi North Side.</li> <li>Wangi Wangi South Side.</li> </ul>
		Centennial [2015] Myuna Colliery Subsidence Report Pulbah Island Lake Macquarie, 28 October 2015.	<ul> <li>Wangi Wangi East Side.</li> <li>Point Wolstoncroft.</li> <li>Morisset Peninsula.</li> <li>Pulbah Island.</li> </ul>
		Great Northern Seam Workings 2013 to May 2016 [MY11473].	It is noted the Subsidence Management Plan WHS-PHMP-901 [November 2015] did not reference the subsidence related conditions of PA 10_0080 and how vertical subsidence within Zone A is limited to a maximum of 20 millimetres (mm) and that
		Fassifern Workings 2013 to May 2016 [MY11474].	extraction methods are limited to first workings only. The Subsidence Management Plan WHS-PHMP-901 [November 2015] did not clearly state that extraction methods are limited to first workings only
		Graph of Survey Differences [10/02/2009/23/12/2009/20/ 12/2010/23/12/2010/23/12/201	Seedsman Geotechnics (2015) were requested by Centennial to review the proposed mine plans for first workings in the Great Northern Seam under the High Water Level Subsidence Control Zone (HWI SCZ) in the Wangi/Arcadia Valo/Fishing
		'' 17/12/2012/17/12/2013/15/01/2 015 01/02/2016.	Point and Point Wolstoncroft areas and also in the Fassifern seam under Morisset Peninsula and comment on their suitability with respect to long-term stability and subsidence. They concluded that "Subsidence at Myuna above the proposed
		Wangi Peninsula East Subsidence Monitoring Chart.	workings surface is predicted to be in the range of 10 mm to 13 mm" [Seedsman Geotechnics, 2015, p.11].
		Wangi Peninsula North Side Subsidence Monitoring Graph.	A graph of survey differences dated 10 February 2009 to 1 February 2016 was available for review.
		Wangi Peninsula South Side Subsidence Monitoring Graph.	A subsidence graph was reviewed for the Wangi Peninsula South Side that showed subsidence to be less that 20mm.
		Centennial (2014) Annual Review January 2013 to	A subsidence graph was reviewed for the Wangi Peninsula North Side that showed subsidence to be greater than 10mm but less that 20mm.
		December 2013. Centennial (2015) Annual	A subsidence graph was reviewed for the Wangi Peninsula East that showed subsidence to be less that 20mm.
		Review January 2014 to December 2014.	Supervision, Inspections and Monitoring are carried out in accordance with HSMS- SC-D-03 Supervision Arrangements and HSMS-SC-D-01 Mine Inspection Program, system components of the Myuna Health and Safety Management System.
		Centennial (2016) Annual Review January 2015 to December 2015.	The 2014 (p.32) and the 2013 (p.8) Annual Review stated that "results of subsidence monitoring programs in areas of Point Wolstoncroft and Pulbah Island continue to show nealigible subsidence of <20mm with this trend expected to continue".
		Seedsman Geotechnics [2015], Centennial Myuna High Water Level Subsidence Control Zones, March 2015.	Furthermore "Controls have been implemented to ensure that mining occurs according to the design dimensions and a mining panel inspection system has been implemented to monitor and report any deviation from the plan and the corrective action taken (Centennial, 2015, p.32).
S3.2	<b>Subsidence</b> The Proponent shall ensure that vertical subsidence within Zone B is limited to 650 mm and second workings are limited to partial pillar extraction within the Great Northern and Fassifern coal seams.	Refer to Sources in Condition S3.1	There has only been first workings extraction within Zone B during the audit period, and consequently any resulting subsidence movements are considered to have been very small, and less than 650mm.
\$3.3	<b>Subsidence</b> The Proponent shall seek approval from the DSC prior to mining within the Eraring Dam Notification Area.	-	Site management reported that there was no extraction within the Eraring Ash Dam Notification Area during the audit period therefore this requirement has not been triggered.

# Compliance Status & Risk Level & Recommendations

#### Compliant.

PA 10\_0080-REC-01 - Update the Subsidence Management Plan WHS-PHMP-901 [November 2015] so that it includes reference to subsidence related conditions of PA 10\_0080 and also how vertical subsidence within Zone A will be limited to a maximum of 20 millimetres (mm) and that extraction methods are to be limited to first workings only.

Compliant

	Condition		Evidence Source	Comment / Finding
S3.4	Environmental Performance Measures The Proponent shall ensure that the project does not cause any exceedances of the performance measures in Table 1, to the satisfaction of the Secretary. Table 1: Environmental Subsidence Impact Performance Measures		Hunter Land Management (2015), Groundwater Dependant Ecosystem Monitoring Baseline Assessment, 2 December 2015, V2.	<ul> <li>This condition is relevant to second workings as first workings would not trigger more than negligible impacts. There has only been first workings extraction in the audit period.</li> <li>An Endangered Ecological Communities (EEC) survey was conducted by RPS prior to the site inspection. The subsequent report will form the baseline EEC assessment for the site. The draft report was being reviewed by Centennial at the time of the site</li> </ul>
	Threatened species, populations or their habitats and endangered ecological communities.	Negligible impact or environmental consequences.		<ul> <li>inspection.</li> <li>Subsidence monitoring data for foreshore supports less than 20 mm of subsidence has occurred.</li> <li>Extraction Plan triggered for second workings, Condition 8, Schedule 3 which requires further investigation into these areas if second workings are required.</li> <li>MCW Environmental considers that threatened species, seagrass beds and benthic communities would not be affected by subsidence of less than 20 mm. Site management reported that plans and performance measures will be implemented for second workings.</li> </ul>
	Seagrass beds	<ul> <li>Negligible environmental consequences including:</li> <li>negligible change in the size and distribution of seagrass beds;</li> <li>negligible change in the functioning of seagrass beds; and</li> <li>negligible change to the composition or distribution of seagrass species within seagrass beds.</li> </ul>		
	Benthic communities	Minor environmental consequences, including minor changes to species composition and/or distribution.		

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#### S3.5 Offsets

If the Proponent exceeds the performance measures in Table 1 and the Secretary determines that:

- a) it is neither reasonable nor feasible to remediate the impact or environmental consequence; or
- b) remediation measures implemented by the Proponent have failed to satisfactorily remediate the impact or environmental consequence;

then the Proponent shall provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Secretary.

Noted

Not applicable to first workings, not triggered.

Compliance Status & Risk Level & Recommendations

Compliant

	Condition		Evidence Source	Comment / Finding
S3.6	Built Features Performance Measure         The Proponent shall ensure that the pro- exceedances of the performance measure of the Secretary.         Table 2: Environmental Subsidence Imp         Built Features         Key public infrastructure: Eraring Power Station Ash Dam         Other public infrastructure (including sewage pipes; power and telecommunications cables). Other built features (including jetties and boat moorings)         Public Safety         Public Safety	s oject does not cause any ures in Table 2, to the satisfaction bact Performance Measures Negligible impact or consequence. Always safe. Serviceability should be maintained wherever practicable. Loss of serviceability must be fully compensated. Damage must be fully repaired, replaced or fully compensated. Negligible additional risk.	Site observations 511 Panel Subsidence Stations (Wangi North) Graph of Survey Results, 5 May 2015. Centennial [2015] Myuna Colliery Subsidence Report Pulbah Island Lake Macquarie, 28 October 2015. Great Northern Seam Workings 2013 to May 2016 [MY11473]. Fassifern Workings 2013 to May 2016 [MY11474]. Graph of Survey Differences [10/02/2009/23/12/2010/23/12/201 1/ 17/12/2012/17/12/2013/15/01/2 01/02/2016.	Site management reported that there was no extraction within the Eraring Ash Dam Notification Area during the audit period. Extraction during the audit period has been first workings only, with negligible subsidence and no known impact on the safety or serviceability of public infrastructure, or additional risk to public safety in the mining lease.
S3.7	Any dispute between the Proponent and over the interpretation, application or im measures in Table 2 is to be settled by consultation with the MSB and the Exec Any decision by the Secretary shall be f dispute resolution under this approval.	d the owner of any built feature plementation of the performance the Secretary, following cutive Director Mineral Resources. inal and not subject to further	Wangi Peninsula East Subsidence Monitoring Chart. Wangi Peninsula North Side Subsidence Monitoring Graph. Complaints Register.	Site management reported that there have been no disputes which would trigger this condition during the audit period.



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Compliance Status & Risk Level & Recommendations

Compliant

Condition	Evidence Source	Comment / Finding
Extraction Plan	Centennial (2014), Myuna Colliery Environmental Assessment Section 75W Modification to Project Approval PA 10, 0080	This requirement has not been triggered as there has been no second workings extraction during the audit period. The 2011 EA (p.ix) states that 'an Extraction Plan, or equivalent document, which takes into account the existing information presented in this EA, will be developed for
The Proponent shall prepare and implement an Extraction Plan for all		
second workings on site to the satisfaction of the Secretary. This plan must:		
<ul> <li>a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;</li> </ul>	November 2014.	mining within Mining Zone B, in consultation with I&I, prior to secondary workings (partial and full extraction) being undertaken in Zone B'.
<ul> <li>b) be approved by the Secretary before the Proponent carries out any of the second workings covered by the plan;</li> </ul>	Colliery Environmental Assessment Extension of	
<ul> <li>c) include detailed plans of existing and proposed first and second workings and any associated surface development;</li> </ul>	Mining, February 2011.	
<ul> <li>d) include detailed performance indicators for each of the performance measures in Tables 1 and 2;</li> <li>a) measing period and distance of the performance of the pe</li></ul>		
<ul> <li>e) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information</li> </ul>		
<ul> <li>obtained since this approval;</li> <li>f) describe the measures that would be implemented to ensure</li> <li>compliance with the performance measures in Tables 1 and 2; and</li> </ul>		
manage or remediate subsidence impacts and/or environmental consequences:		
<ul> <li>g) include a Benthic Communities Management Plan, which has been prepared in consultation with OEH, DPI Fisheries and LMCC, which provides for the management of the potential impacts and/or</li> </ul>		
environmental consequences of the proposed second workings on benthic communities in Zone B, and which includes:		
<ul> <li>surveys of the lake bed to enable contours to be produced and changes in depth following subsidence to be accurately measured:</li> </ul>		
<ul> <li>benthic species surveys within Zone B, as well as control sites outside Zone B (at similar depths) to establish baseline</li> </ul>		
communities;		
<ul> <li>a program of ongoing seasonal monitoring of benthic species in both control and impact sites; and</li> </ul>		
depth and associated subsidence impacts and effects,		
disturbance, on benthic species number and benthic		
communities composition, incorporating the survey data collected;		
<ul> <li>include a Seagrass Management Plan, which has been prepared in consultation with OEH, DPI Fisheries and LMCC, which provides for</li> </ul>		
the management of the potential impacts and/or environmental consequences of the proposed second workings on seagrass beds,		
and which includes: identification of all seagrass beds (whether established		
before or after the date of this approval) which may be affected by the proposed second workings;		

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Compliance Status & Risk Level & Recommendations

	Co	ndition	Evidence Source	Comment / Finding
Continued S3.8	i)	<ul> <li><i>ntinued</i></li> <li>delineation of seagrass beds at the edge of Zone A that may experience subsidence effects from second workings in Zone B;</li> <li>a program of ongoing monitoring of seagrasses in both control and impact sites; and</li> <li>a program to predict and manage subsidence impacts and environmental consequences to seagrass beds to ensure the performance measures in Table 1 are met;</li> <li>include a Built Features Management Plan, which has been prepared in consultation with DRE, to manage the potential subsidence impacts and/or environmental consequences of the proposed second workings on built features, and which:</li> <li>addresses in appropriate detail all items of key public infrastructure and other public infrastructure and all classes of other built features;</li> <li>has been prepared following appropriate consultation with the owner/s of potentially affected feature/s;</li> <li>recommends appropriate remedial measures and includes commitments to mitigate, repair, replace or compensate for predicted impacts on potentially affected built features in a timely manner; and</li> <li>in the case of all key and other public infrastructure, reports external auditing for compliance with ISO 31000 (or alternative standard agreed with the infrastructure owner)</li> </ul>		
	j) k) l) m)	<ul> <li>and provides for annual auditing of compliance and effectiveness during secondary extraction which may impact the infrastructure;</li> <li>include a subsidence monitoring program, which has been prepared in consultation with DRE, OEH, and Fisheries NSW, to: <ul> <li>provide data to assist with the management of the risks associated with subsidence;</li> <li>validate the subsidence predictions;</li> <li>analyse the relationship between the predicted and resulting subsidence effects and predicted and resulting impacts under the plan and any ensuing environmental consequences; and</li> <li>inform the contingency plan and adaptive management process;</li> </ul> </li> <li>include a Public Safety Management Plan, which has been prepared in consultation with DRE, to ensure public safety in the mining area; include a Strata Management Plan which has been prepared in consultation with DRE;</li> </ul>		
Continued S3.8	Con n) o)	ntinued include a contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of any performance measure in Tables 1 and 2, or where any such exceedance appears likely; and include a program to collect sufficient baseline data for future Extraction Plans.		

Compliance Status & Risk Level & Recommendations
	Condition	Evidence Source	Comment / Finding
S3.9	First Workings The Proponent may carry out first workings within the site, other than in accordance with an approved Extraction Plan, provided that DRE is satisfied that the first workings are designed to remain stable and non- subsiding, except insofar as they may be impacted by approved second workings.	<ul> <li>681 Panel HWLSCZ.</li> <li>681 Panel Herringbones - 25m x 30m mains.</li> <li>682 Panel HWLSCZ.</li> <li>160525 681 Panel HWLSCZ.</li> <li>Seedsman Geotechnics [2015], Centennial Myuna High Water Level Subsidence Control Zones, March 2015.</li> <li>URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.</li> </ul>	<ul> <li>Data inputs and calculations for bord and pillar panel first workings were available for review for Panels 681 and 682.</li> <li>Seedsman Geotechnics (2015) were requested by Centennial to review the proposed mine plans for first workings in the Great Northern Seam under the High Water Level Subsidence Control Zone (HWLSCZ) in the Wangi/Arcadia Vale/Fishing Point and Point Wolstoncroft areas and also in the Fassifern seam under Morisset Peninsula and comment on their suitability with respect to long-term stability and subsidence and concluded that "Subsidence at Myuna above the proposed workings surface is predicted to be in the range of 10 mm to 13 mm" [Seedsman Geotechnics, 2015, p.11].</li> <li>URS [2013, Appendix A, p.8] noted that "First workings are designed in accordance with Sections 6.2 and 6.3 of the Statement of Commitments (Appendix 5 of the Project Approval) to remain "stable and non-subsiding". This design method was nominated in the revised Statement Of Commitments included in Centennial's response to submissions regarding the Environmental Assessment. There was no submission relating to the EA from DRE in regard to mine design or subsidence. Officials from DRE are frequently on site at Myuna and are well aware of the design approach and the observed performance".</li> </ul>
S3.10	Payment of Reasonable Costs	-	Noted – see above discussion
	The Proponent shall pay all reasonable costs incurred by the Department to engage suitably qualified experienced and Independent persons to review the adequacy of any aspect of an Extraction Plan.		

Compliance Status & Risk Level & Recommendations

### Compliant

Not Triggered

	Condition						Evidence Source	Comment / Finding	
S3.11	Noise Criteri The Proponer not exceed th land or on mo Table 3: Nois	<b>a</b> nt shall ensur e criteria in T pre than 25 pr e <i>limits dB(A</i>	re that the nois able 3 at any er cent of any )	e generated residence or privately-ow	by the proj n privately c ned land.	ject does owned	AECOM (2016-B), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015-A), Myuna Colliery Annual Noise Monitoring Report (AECOM, 2016, p.22) noted that: Colliery Annual Noise Monitoring Report (AECOM, 2016, p.22) noted that: Colliery Annual Noise Monitoring Report (AECOM, 2016, p.22) noted that: Colliery Annual Noise Monitoring Report (AECOM, 2016, p.22) noted that: Colliery Annual Noise Monitoring Report (AECOM, 2016, p.22) noted that:		
		Day	Emergency Day	Evening	Nig	Jht	Monitoring 2014, Ref: 60283157-RPNV-10_B.	during the daytime, evening and nighttime periods, however it was noted that extraneous noise sources, namely road traffic, contributed significantly to these noise levels".	
	Location	LAeq (5mins)	LAeq (5mins)	LAeq (15 min)	LAeq (15 min)	LA1 (1 min)	AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01. AECOM (2014), Myuna Colliery Quarterly Noise Monitoring June 2014. AECOM (2014), Myuna Colliery Quarterly Noise Monitoring September 2014. AECOM (2014), Myuna Colliery Quarterly Noise Monitoring December 2014. AECOM (2015) Myuna	<ul> <li>"Colliery noise was inaudible at all locations during the day, varied from audible to inaudible in the evening and was generally barely audible / audible at night. LAeq levels were largely controlled by extraneous noise sources such as passing traffic, whereas LA90 levels were controlled by insects or traffic during</li> </ul>	
	R1, R2 and R3 Summerhill Drive and Wangi Close, Wangi	35	40	35	35	45		AECOM (2014), Myuna Colliery Quarterly Noise Monitoring June 2014. AECOM (2014), Myuna Colliery Quarterly Noise Monitoring Contervention of the colling of t	the day or Colliery operations during the evening and night". AECOM (2015-A, p.22) also noted that "Measured on-site noise levels indicated noise levels at all receivers were compliant with EPL conditions during the evening and night-time monitoring periods. No non-compliances were recorded during the evening or night-time period. Due to the inaudibility of the Colliery at all locations during the day, daytime noise emissions are not considered an issue".
	Wangi R4, Donnelly Road,	35	44	40	38	49		A permanent noise logger was installed on-site and commenced operation in January 2014. The noise monitoring program uses a combination of real-time and attended monitoring to evaluate the noise from the site. The 2014 Annual Noise Monitoring Report (AECOM, 2015-A, p.22) noted that:	
	R5, R6, R7 and R8 Donnelly Road,	37	44	42	39	49	AECOM (2013), Myuna Colliery Quarterly Noise Monitoring March 2015. AECOM (2015), Myuna Colliery Quarterly Noise Monitoring June 2015.	<ul> <li>"LAeq noise levels higher than the project EPL noise limits were measured during the daytime, evening and nighttime periods, however it was noted that extraneous noise sources, namely road traffic, contributed significantly to these noise levels".</li> <li>"Colliery operations were subjectively observed to contribute little to the</li> </ul>	
	Arcadia Vale All other privately- owned land	35	40	35	35 45 AE Col Mo AE Col Mo AE Co Mo	AECOM (2015), Myuna Colliery Quarterly Noise Monitoring September 2015. AECOM (2015), Myuna Colliery Quarterly Noise Monitoring December 2015.	<ul> <li>measured LAeq noise levels during any period throughout the day. Definitive compliance with EPL noise limits was therefore difficult to determine through direct measurement due to the influence of extraneous noise events".</li> <li>The 2016 quarterly Noise Monitoring Report (AECOM, 2016-B, p.14) also noted that "Continuous noise monitoring data from a permanent noise logger installed on site was incorporated into a noise model created using SoundPLAN software in order to determine noise impacts at the eight assessment locations. By modelling on-site</li> </ul>		
	However, the agreement wi Proponent ha	se criteria do th the releva s advised the	not apply if th nt landowner to Department i	e Proponent o exceed the n writing of t	has a writt criteria, ar he terms of	itten AECOM (2016-B), M and the Colliery Quarterly Nc of this Monitoring March 20	AECOM (2016-B), Myuna Colliery Quarterly Noise Monitoring March 2016. noise levels, noise levels at receiver locations were call site noise levels, presented in Section 4.4. Measured of noise levels at all receivers were compliant with EPL co periods".	noise levels, noise levels at receiver locations were calculated corresponding to on- site noise levels, presented in Section 4.4. Measured on-site noise levels indicated noise levels at all receivers were compliant with EPL conditions during the all periods".	
	agreement.						Centennial (2014) Annual Review January 2013 to December 2013.	The Complaints Register and the 2013, 2014 and 2015 Annual Reviews note that there were no noise complaints concerning the site during the audit period.	
							Centennial (2015) Annual Review January 2014 to December 2014.	Given that there was no audible noise from the mine operations at receiver locations as determined by the independent noise consultants this condition was found to be compliant.	
							Centennial (2016) Annual Review January 2015 to December 2015.		
							Complaints Register.		

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Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
\$3.12	<b>Operating Conditions</b> The Proponent shall implement best management practice, including all reasonable and feasible noise mitigation measures, to minimise the construction and operational noise generated by the project.	AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B. Site observations.	<ul> <li>The natural topography of the pit top facilities noise emissions at nearby receivers. Measures observed to facilitate noise management included: <ul> <li>Enclosed bins.</li> <li>No outside handling of coal except during shutdown periods at Eraring Power Station.</li> <li>Restrictions on forklift loading hours at pit top.</li> </ul> </li> <li>The CHP and conveyor system is fully enclosed to mitigate potential noise impacts. Doors to the rotary breaker, crusher and crusher conveyor drive house remain closed at night. A coal plug is located in the bottom of the coal bins to minimise noise when being filled.</li> <li>A permanent full time noise monitoring location was installed in January 2014 to model potential noise impacts from site operations. Installation of the permanent fulltime noise logger provides further data concerning noise arising from site operations and will assist with future attended noise monitoring.</li> </ul>

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S3.13	<ul> <li>Noise Management Plan</li> <li>The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must: <ul> <li>a. be submitted for approval to the Secretary within 7 months of the date of this approval;</li> <li>b. describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval;</li> <li>c. outline procedures to manage responses to any complaints or issues raised by the owners of affected residences; and</li> <li>b. include a noise monitoring program that: <ul> <li>uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the project; and</li> <li>includes a protocol for determining exceedances of the relevant conditions of this approval.</li> </ul> </li> </ul></li></ul>	Centennial (2016), Noise Management Plan, May 2016. AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B. AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01. URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0. Letter - Centennial (2015), SSD 5144 and SSD 5145 – Consolidation of Management Plans, 30 October 2015 [Letter to DP&E].	<ul> <li>The Noise Management Plan has been reviewed and updated twice since the previous IEA (URS, 2013). The latest review was conducted in May 2016 as part of the Annual Review process; however, the plan had not been submitted to DP&amp;E for approval at the time of the site inspection.</li> <li>Centennial wrote to DP&amp;E on 30 October 2015 (Centennial, 2015) notifying the Department of their intent to adopt a regional approach to the development of the following management plans: Air Quality and Greenhouse Gas Management Plan / Bodiversity Management Plan / Heritage Management Plan / Noise Management Plan / Heritage Management Plan / Noise Management Plan / Vater Management Plan. Centennial noted that the plans would take into consideration the conditions, commitments and operations of their regional operations including Myuna Colliery.</li> <li>Preparation</li> <li>e) MCW Environmental sighted a letter from the DP&amp;E to Myuna dated 30 July 2012 that approved the Noise Management Plan in accordance with Condition 13 of Schedule 3 of the Myuna Project Approval. Myuna submitted the Noise Management Plan on 27 July 2012.</li> <li>f) Sections 7.1.2 and 7.1.3 outlined the measures that are implemented to ensure compliance with the conditions of this approval and EPL 366.</li> <li>g) Section 5.1.0 utilined the protocols for managing noise exceedances and community noise complaints.</li> <li>h) <ul> <li>sections 7.1.2 and 7.1.3 described that attended and real-time noise monitoring would be conducted. The real-time noise logger was installed in January 2014.</li> <li>a protocol for determining exceedances was included as Appendix A".</li> </ul> </li> <li>Implementation</li> <li>Quarterly noise monitoring is conducted at the site. The auditors sighted quarterly and annual attended noise reports for 2013, 2014 and 2015 conducted by AECOM (Australia) Pty Ltd.</li> <li>A permanent noise logger had been installed during the audit period in accordance with He NMP (Section 7.1.3, p.12); however, the NMP did not include eny deta</li></ul>
S3.14	<b>Construction Noise</b> The Proponent shall limit construction activities to 7am – 6pm weekdays and 8am to 1pm Saturdays with no construction operations on Sundays or Public Holidays. Construction noise shall be managed in accordance with EPA's Interim Construction Noise Guideline 2009.	Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2016) Annual Review January 2015 to December 2015. Complaints Register.	Site management reported that no construction activities have been conducted on- site during the audit period and none were observed during the site inspection.

## Compliance Status & Risk Level & Recommendations

Preparation – Compliant (pending approval from the Secretary)

Implementation - Non-compliant

Administrative Non-compliance

**PA 10\_0080-REC-02** - The Noise Management Plan should be updated to reflect the maintenance, operation, collection and use of modelling data of the on-site real-time noise logger.

Not Triggered

	Condition	Evidence Source	Comment / Finding
S3.15	<b>Odour</b> The Proponent shall ensure that no offensive odours, as defined under the POEO Act, are emitted from the site.	Site observations. Complaints Register.	No odours from site activities or operations were noted during the site inspection. No complaints were received during the audit period.
S3.16	Greenhouse Gas Emissions The Proponent shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site, to the satisfaction of the Secretary.	Centennial (2016), Air Quality and Greenhouse Gas Management Plan, May 2016. MY Greenhouse Report 2016.XIsm. Centennial (2016) Annual Review January 2015 to December 2015.	<ul> <li>The Air Quality Management and Greenhouse Gas Plan has been reviewed and updated four times since the previous IEA (URS, 2013). The latest review was conducted in May 2016 as part of the Annual Review process; however, the plan had not been submitted to DP&amp;E for approval at the time of the site inspection.</li> <li>Site management reported that there have been no GHG emission programs implemented during the audit period. Programs prior to the audit period were observed such as an air leak reduction program (December 2012).</li> <li>Section 7.2 of the Air Quality Management and Greenhouse Gas Plan notes that "Myuna will monitor greenhouse gas emissions and energy use in accordance with the National Greenhouse and Energy Reporting Act (NGER) requirements and the Colliery's Greenhouse Gas Emissions Management Plan. This includes:</li> <li>Emissions from combustion of fuel (diesel) used on-site (scope 1);</li> <li>Fugitive emissions from the extraction of coal (scope 1); and</li> <li>Electricity use (scope 2).</li> </ul> The following will be monitored at Myuna <ul> <li>Electricity use</li> <li>Diesel and oil and grease consumption</li> <li>Greenhouse gases from the Ventilation Shaft including:</li> <li>Carbon dioxide (CO<sub>2</sub>); and</li> <li>Methane (CH<sub>4</sub>)".</li> </ul> A spread sheet for 2016 for the period 1 January 2016 to 30 April 2016 how the site tracks the bullet points listed above. The spread sheet included planned inputs versus actual inputs. The 2015 Annual Review notes that a Regional Air Quality and Greenhouse Gas Management Plan which will encompass the Centennial Coal operations, Manadement Plan which will encompass the Centennial Coal operations, Manadeng, Myuna, Newstan and Northern Coal Services. Site management reported that the regional plan has been sent to DP&E for approval.

Compliance Status & Risk Level & Recommendations

Compliant

#### Compliant

**PA 10\_0080-REC-03** - Reasonable and feasible measure to minimise the release of greenhouse gas emissions from the site should be included in the Regional Air Quality and Greenhouse Gas Management Plan. The measures should be implemented by the site.

	Condition				Evidence Source	Comment / Finding
S3.17	Air Quality Crite The Proponent sl and mitigation me emissions genera Tables 4, 5 or 6 a 25 percent of any Table 4: Long-ter	eria hall ensure the easures are e ated by the pr at any resider y privately ow rm criteria for	nat all reasonable and employed so that part roject do not exceed t nce on privately-owne vned land. r particulate matter	feasible avoidance culate matter he criteria listed in d land or on more than	<ul> <li>Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016.</li> <li>Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016.</li> <li>Annual Return 2014.</li> <li>Myuna Spread Sheet 2016_04.XIs.</li> <li>Centennial (2014) Annual Review January 2013 to December 2013.</li> <li>Centennial (2015) Annual Review January 2014 to December 2014.</li> <li>Centennial (2016) Annual Review January 2015 to December 2015.</li> <li>Dust monitoring results are collected monthly at the location Carbon Based Environmental is contracted to undertake d high volume air sampler monitoring at the site.</li> <li>The March 2016 dust monitoring report noted that:</li> <li><i>"No 24-hour PM<sub>10</sub> results exceeded the short-term imp 50µg/m<sup>3</sup>;</i></li> <li><i>The current year to date PM10 annual average is below assessment criteria of 30µg/m<sup>3</sup>;</i></li> <li><i>Currently, the TSP site is below the long-term impact a 90µg/m<sup>3</sup>.</i></li> <li>Dust depositional data was available for review in the Myu April 2016. Depositional dust and HVAS data dated 17 Ju was available for review. The data indicated there were no average for depositional dust. PM<sub>10</sub> and TSP data was av April 2014 to 29 April 2016. There were no exceedances of A non-compliance was reported in the EPA 2014 Annual Fe criteria for a failure to collect and analyse the required num (refer to EPL 366, Condition M2). The monthly sample col 2014 was undertaken by a contractor. No result is recorded September and December 2014. Site management report collected from DG2 for the months of September and Decc transportation on a bush track between DG2 and DG1. Ar identified included a procedural review and subsequently and implemented for the secure transport of dust deposition</li> </ul>	<ul> <li>bust monitoring results are collected monthly at the locations specified in the EPL.</li> <li>bust monitoring results are collected monthly at the locations specified in the EPL.</li> <li>Carbon Based Environmental is contracted to undertake depositional dust gauge, high volume air sampler monitoring at the site.</li> <li>The March 2016 dust monitoring report noted that:</li> <li>"No 24-hour PM<sub>10</sub> results exceeded the short-term impact assessment criteria of 50µg/m<sup>3</sup>;</li> </ul>
	Pollutant	A	Averaging Period	<sup>d</sup> Criterion		<ul> <li>assessment criteria of 30µg/m<sup>3</sup>;</li> <li>Currently, the TSP site is below the long-term impact assessment criteria of 00µg/m<sup>3</sup>!</li> </ul>
	Total suspended particulate (TSP)	matter	Annual	<sup>a</sup> 90 µg/m <sup>3</sup>		90µg/m <sup></sup> . Dust depositional data was available for review in the Myuna spread sheet dated April 2016. Depositional dust and HVAS data dated 17 June 2013 to 19 April 2016 was available for review. The data indicated there were no exceedances of rolling average for depositional dust. PM <sub>10</sub> and TSP data was available for the period 5 April 2014 to 29 April 2016. There were no exceedances of PM <sub>10</sub> and TSP criteria. A non-compliance was reported in the EPA 2014 Annual Return against EPL 366 criteria for a failure to collect and analyse the required number of samples from DG (refer to EPL 366, Condition M2). The monthly sample collection and analysis for
	Particulate matter µm (PM <sub>10</sub> )	<sup>-</sup> < 10	Annual	<sup>a</sup> 30 μg/m <sup>3</sup>		
	Table 5: Short-te	rm criteria fo	r particulate matter			
	Pollutant	Δ	Averaging Period	<sup>d</sup> Criterion		2014 was undertaken by a contractor. No result is recorded for DG2 for the months September and December 2014. Site management reported that the sample jar
	Particulate matter µm (PM <sub>10</sub> )	<sup>.</sup> < 10	24 hour	<sup>a</sup> 50 µg/m <sup>3</sup>		collected from DG2 for the months of September and December was broken during transportation on a bush track between DG2 and DG1. An incident investigation identified included a procedural review and subsequently a container was designed and implemented for the secure transport of dust deposition sample jars.
Table 6: Lo	Table 6: Long-ter	rm criteria for	r deposited dust			Refer to Condition 18, Schedule 3 for further information concerning mitigation measures.
	Pollutant	Averaging Period	Maximum Increase	e In <sup>d</sup> Criterion vel		

Deposited Dust

Annual

<sup>b</sup> 2 g/m<sup>2</sup>/month

<sup>a</sup> 4 g/m<sup>2</sup>/month

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Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S3.18	Operating Conditions The Proponent shall implement best practice air quality management on site, including all reasonable and feasible measures to minimise off-site odour, fume and dust emissions generated by the project.	Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2016) Annual Review January 2015 to December 2015. Complaints Register. Site observations. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016. Myuna Spread Sheet 2016_04.XIs. Myuna Environmental Monitoring Reports – October 2013 to April 2016. Carbon Based (HVAS Calibration Form 26 July 2013. Carbon Based (HVAS Calibration Form 25 May 2016.	<ul> <li>Operational engineering dust controls include the following: <ul> <li>Sweeper truck at pit top hard stand locations.</li> </ul> </li> <li>Hard standing areas to the pit top and sealed internal roads (with the exception of the emergency stockpile road);</li> <li>Only very limited non hardstand areas exist;</li> <li>Conveyor belts are covered;</li> <li>Piped spray on stockpile road (spray heads observed during site inspection);</li> <li>Emergency coal stockpile is sprayed using a recently installed mobile spray that replaces the static spray heads on the upper emergency stockpile pad; however, was not operational as the pipework was due to be replaced due to corroded pipework. It is noted that coal is not stockpile used unless it cannot be received and processed at Eraring Power Station. The emergency coal stockpile was reported not to have been used a couple of times during the audit period due to the shutdown of the Eraring Power Station conveyor.</li> <li>A High volume Air Sampler (HVAS) was installed in July 2013. Monthly dust gauge results and the rolling average are reported in Environmental Monthly Reports and also by Carbon based Environmental Pty Ltd.</li> <li>Results of dust monitoring from 19 July 2013 through to 19 April 2016 were available for review and indicated that dust levels were below the limits specified in Tables 4, 5 and 6 of PA 10_0080 for the audit period.</li> <li>No complaints concerning the site were received during the reporting period.</li> <li>There were no dust generating activities observed at the time of the site inspection and limited sources of dust were noted. Weather conditions were dry and sunny at the time of the site inspection. The access road to the emergency stockpile area was unsealed, however; a dust suppression water system was located down one side that was reported to be turned on when the road was in use. Conveyors were enclosed.</li> </ul>

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Compliance Status & Risk Level & Recommendations

methane.

	Condition	Evidence Source	Comment / Finding
S3.19	<ul> <li>Air Quality and Greenhouse Gas Management Plan</li> <li>The Proponent shall prepare and implement an Air Quality &amp; Greenhouse Gas Management Plan for the project to the satisfaction of the Secretary. This plan must: <ul> <li>a) be prepared in consultation with EPA, and submitted for approval to the Secretary within 7 months of the date of this approval;</li> <li>b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, including the proposed air quality monitoring program, that: <ul> <li>uses a combination of volumetric sampling and dust deposition gauges to evaluate the performance of the project;</li> <li>monitors greenhouse gas emissions, particularly methane; and</li> <li>includes a protocol for determining exceedances with the relevant conditions of this approval;</li> </ul> </li> <li>d) describe the measures that would be implemented to minimise the relevant conditions of this approval; and dust deposition gauges to evaluate the performance of the project;</li> <li>monitors greenhouse gas emissions, particularly methane; and</li> <li>includes a protocol for determining exceedances with the relevant conditions of this approval;</li> </ul> </li> </ul>	Centennial (2016), Air Quality and Greenhouse Gas Management Plan, May 2016. MY Greenhouse Report 2016.XIsm. Centennial (2016) Annual Review January 2015 to December 2015. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016. Myuna Spread Sheet 2016_04.XIs. Myuna Environmental Monitoring Reports – October 2013 to April 2016. Letter - Centennial (2015), SSD 5144 and SSD 5145 – Consolidation of Management Plans, 30 October 2015 [Letter to DP&E].	<ul> <li>Preparation</li> <li>The Air Quality Management and Greenhouse Gas Plan has been reviewed and updated three times since the previous IEA (URS, 2013). The latest review was conducted in May 2016 as part of the Annual Review process; however, the plan had not been submitted to DP&amp;E for approval at the time of the site inspection.</li> <li>Centennial wrote to DP&amp;E on 30 October 2015 (Centennial, 2015) notifying the Department of their intent to adopt a regional approach to the development of the following management plans: Air Quality and Greenhouse Gas Management Plan / Biodiversity Management Plan / Heritage Management Plan / Noise Management Plan / Verter Management Plan. / Heritage Management Plan would take into consideration the conditions, commitments and operations of their regional operations including Myuna Colliery. Once approved the Centennial Regional Air Quality Management Plan had been prepared in accordance with the requirements of this condition.</li> <li>Section 5 of the May 2016 plan addressed the measures implemented on-site to meet compliance with the relevant conditions of this approval. Measures were noted to include:</li> <li>Sweeping of hardstand areas by vacuum truck;</li> <li>Dust suppression at the emergency coal stockpile;</li> <li>Traffic management (speed limits for vehicles and sealed roads); and</li> <li>Odour management measures.</li> <li>Section 7 of the May 2016 plan (pp.17-20) described the measures that would be implemented to measure compliance with relevant conditions and included, but was not limited to: dust deposition, HVAS sampling, greenhouse Gas Plan notes that "Myuna will monitoring. Protocols for dust exceedances and community dust complaints were included in Appendices 1 and 2 of the plan.</li> <li>Section 7.2 of the Air Quality Management and Greenhouse Gas Plan notes that "Myuna will monitor greenhouse gas emissions and energy use in accordance with the National Greenhouse Gas Emissions Management Plan. This include</li></ul>

Compliance Status & Risk Level & Recommendations

Preparation - Compliant Implementation – Compliant

**PA 10\_0080-REC-04** - In accordance with Condition 3.19(d) it is recommended that the measures to minimise Greenhouse Gas Emissions from the site be clearly stated or referenced to a corporate Centennial policy or Standard [Repeat Finding from 2013 IEA].

	Condition	Evidence Source	Comment / Finding
	Continued:	-	Continued:         Implementation         HVAS had been installed during the audit period and were observed during the site inspection by MCW Environmental.         Hard stand areas at the pit top were observed to be clean and tidy at the time of the site inspection.         Methane (CH4) emission data was sighted in greenhouse data spread sheet dated April 2016.         Monthly air monitoring reports prepared by Carbon Based Environmental that contained air quality results for depositional dust, PM10 and TSP were available for review.
S3.20	<ul> <li>Meteorological Monitoring</li> <li>During the life of the project, the Proponent shall ensure that there is a suitable meteorological station operating in the vicinity of the Myuna surface facilities site that:</li> <li>a) complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline; and</li> <li>b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the <i>INP</i>.</li> </ul>	Carbon Based Environmental (2015), Calibration Certificates - Annual Weather Station Field Check, 23 March 2015, 30 June 2016. Myuna Environmental Monitoring Reports – October 2013 to April 2016. URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	<ul> <li>The auditors sighted the on-site weather station and real-time on-line (VistaVisionData) data for 31 May 2016.</li> <li>This condition was closed-out during the previous IEA (URS, 2013).</li> <li>a) The previous IEA (URS, 2013, Appendix A, p,13) stated that "An email from Carbon Based Environmental Pty Ltd dated 26 June 2013 indicated that in the air consultants opinion the weather station meets the approved methods for sampling of air pollutants in New South Wales". Weather results and data are available in the monthly environmental monitoring data reports. Calibration certificates for the weather station dated 30 June 2015 stated that "The meteorological station meets the requirements of the Approved Methods for Sampling of Air Pollutants in New South Wales [2007]".</li> <li>b) A summary of rainfall and temperature data recorded at the on-site meteorological monitoring station was available in the monthly environmental monitoring data reports.</li> </ul>

Compliance Status & Risk Level & Recommendations

Condition	Evidence Source	Comment / Finding
	NSW Office of Water Licence 20BL172565, Renewed in December 2015. NSW Office of Water, 20BL173259. GHD (2016-A), Annual Groundwater Management Report, Myuna Colliery, April 2016. GHD (2016-B), Groundwater Bore Licence Audit, July 2016. GHD (2015), Annual Groundwater Management Report, Myuna Colliery, June 2015. Email – Centennial (20140, Application for Groundwater Licence to DPI Water [@09:15am], 3 November 2014. Application for Siphon borehole, November 2012.	<ul> <li>The following is noted concerning water licences at the site: <ul> <li>One borehole is located adjacent to the sediment ponds where water is directed into the underground workings to facilitate surface water management. The installation of this bore occurred during the audit period. No licence was available for directing water underground at this location.</li> <li>Portal - Water from the sediments ponds is piped down the drift and into the underground workings. No licence was available for directing water underground at this location.</li> </ul> </li> <li>An email from Centennial to DPI Water dated 3 November 2014 requested that the underground at this location.</li> <li>An email from Centennial to DPI Water dated 3 November 2014 requested that the Epeartment provide clarification concerning the applicability of two legislative clauses so that the site could determine whether a licence application was required to be submitted. No response from DPI Water to the site's email was available for review at the time of the site inspection.</li> <li>Site management reported that a licence for directing/injecting water underground is pending approval from DPI Water and that the application process for the licence is being managed by Centennial Corporate. A meeting was reported to have been arranged with DPI Water prior to the end of June 2016.</li> <li>GHD was engaged by Myuna to conduct an independent environmental audit of Centennial's compliance with the requirements of Myuna Bore Licence Number 20BL172565 (GHD, 2016-B). The licence holder must engage an independent expert, approved by DPI-Water, to undertake an audit of the groundwater conditions, all monitoring records and any related impacts." The GHD audit (GHD, 2016-B) identified four non-compliant conditions, eight compliant conditions and five conditions that were inot applicabile'. The audit report noted that there was a delay between granting of the licence in 2010 and issue of the licence from DPI Water at the time of the seite nspection.</li> </ul>

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Compliance Status & Risk Level & Recommendations

Not Verified

	Condition	Evidence Source	Comment / Finding
S3.21	Surface Water Discharges	Myuna Spread Sheet 2016_04.Xls.	The following non-compliances were noted concerning concentration levels for the audit period:
comply with the discharge limits (both volume and quality) set for the project in any EPL.	Myuna Environmental Monitoring Reports – October 2013 to April 2016.	<ul> <li>2013:</li> <li><u>22 November 2013:</u> TSS was recorded at 94 mg/L from LDP B during a rainfall event. The cause of the TSS exceedance was not identified.</li> </ul>	
		Centennial (2014) Annual Review January 2013 to December 2013.	<ul> <li>2014:</li> <li><u>28 February 2014</u>: Dam water was discharged at LDP A following a high rainfall event. The on-site weather station recorded rainfall of 302 mm on the 28 February 2014. Laboratory analysis of pH indicated a result of 6.3</li> </ul>
		Centennial (2015) Annual Review January 2014 to December 2014.	<ul> <li>which exceeded the lower concentration EPL 366 limit of 6.5.</li> <li><u>1 March 2014</u>: Dam water was discharged at LDP A following a high rainfall event. The on-site weather station recorded rainfall of 302mm for the 28</li> </ul>
		Centennial (2016) Annual Review January 2015 to December 2015.	Laboratory analysis for TSS indicated a result of 157 mg/L (i.e.107 mg/L greater than the TSS EPL criteria of 50 mg/L). • 2015:
		Annual Return 2015.	<ul> <li><u>2 April 2015</u>: TSS was recorded as 60 mg/L from LDP B. The solid matter</li> </ul>
		Annual Return 2015. Annual Return 2014.	<ul> <li><u>Collected in the sample was necorded as sooning to the PDF D.</u> The solid matter collected in the sample was analysed by the Hunter Water Corporation Laboratory as organic (algae and plant matter). The Myuna weather station recorded no rainfall on the 2 April 2015 therefore there were no unplanned discharge events on that day. Real-time monitoring of the parameters including turbidity, pH, EC and temperature has been undertaken at LDP B since July 2013. Turbidity levels recorded at LDP B on the 2 April ranged from 15 Formazin Turbidity Unit (FTU) to 18 FTU.</li> <li><u>4 April 2015</u>: TSS was recorded as 63 mg/L from LDP B. A total of 67.8mm of rainfall was recorded for the 24 hours preceding the sample collection from the on-site weather station. Site management reported that the CHP Dam had insufficient capacity to control surface run-off from the storm and overflowed into the clean water dams which then flowed through LDP B.</li> <li><u>22 May 2015</u>: TSS was recorded as 70 mg/L from LDP B. A total of 40 mm of rainfall was recorded for the four hours preceding the sample collection from the on-site weather station. Site management reported that the high intensity run-off from the rain event caused the CHP Dam dirty water to overflow into the clean water settlement ponds which then flowed through LDP B.</li> <li><u>2016</u>:</li> <li><u>16 March 2016</u>: TSS was recorded as 111 mg/L from LDP B. The increase in the discharge water turbidity, which site management reported to quickly peak and subside was identified to be from mineral solids that were washed in from the bank of the discharge channel at the discharge point during the rainfall oract.</li> </ul>
			One volume exceedance from LDP B was noted in the 2015 Annual Return.
			<ul> <li><u>21 April 2015</u>: 13,590 kL was discharged through LDP B exceeding the volume limit of 13,000 kL. The volume of mine water pumped to the surface to be discharged was reported to be 4, 519 kL. Site management reported that a large storm event caused a high volume of surface water run-off as well as a local power outage that led to on-site system and electronic communication failures. The power outage let to insufficient information being available to manage the volume of water being discharged from the site and prevented water being pumped to the underground workings from the CHP Dam via the Borehole. Site management reported that despite the power outage equipment at LDP B was monitoring the flow/volume; however, management was unable to view the data due to the power outage. Following the event a corrective action was to change the transfer of water from the CHP Dam water levels can be managed in the event of a power outage. Data from the on-site weather station observed during the site inspection indicated monitoring continued at LDP B during the power outage.</li> </ul>

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Compliance Status & Risk Level & Recommendations

Non-compliant

Low Risk

Condition	Evidence Source	Comment / Finding
·	'	Continued: Improvements to the water management system have been conducted by increasing the rate of transfer (from approximately 10 L/sec to approximately 50 L/sec) from the CHP Dam to the underground workings settlement reservoir. Site management reported that this has been achieved by the addition of a larger pipe to the automated pumping system and the construction of a Siphon line from the CHP Dam to the underground workings via a borehole. The new pipeline and Siphon was observed during the site inspection. Given the above exceedances noted above during the audit period this condition was found to be non-compliant.

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S3.22		GHD (2013), Water Management Plan, Myuna Colliery, July 2013. Letter – DP&E (2014), Myuna Colliery Approval of Water Management Plan, 23 January 2014. Site observations. Myuna Environmental Monitoring Reports – October 2013 to April 2016. Myuna Spread Sheet 2016_04.Xls. URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0. GHD (2015), Annual Groundwater Management Report, June 2015. GHD (2016), Annual Groundwater Management Report, April 2016. Letter - Centennial (2015), SSD 5144 and SSD 5145 – Consolidation of Management Plans, 30 October 2015 [Letter to DP&E].	<ul> <li>Preparation</li> <li>A Water Management Plan (WMP) prepared by GHD Pty Ltd was approved by the Secretary on 23 January 2014. MCW Environmental sighted a letter from DP&amp;E dated 23 January 2014 approving the WMP as required by conditions 22 to 27 of PA 10_0080.</li> <li>Site management reported that a regional Centennial WMP that has been prepared does not include Myuna; however, there are plans to include the site in the regional plan at the time of the site inspection and were likely to have this ready for review shortly. Centennial wrote to DP&amp;E on 30 October 2015 (Centennial, 2015) notifying the Department of their intent to adopt a regional approach to the development of the following management Plan. / Entrage Management Plan / Noise Management Plan / Biodiversity Management Plan. Centennial noted that the plans would take into consideration the conditions, commitments and operations of their regional operations including Myuna Colliey.</li> <li>The July 2013 WMP is considered to be out of date concerning activities conducted at the site as it still references former licenced discharge points LDP 001 and LDP 002 and doesn't include the reinjection of water to underground workings via the siphon at the CHP Dam or via the drift pipeline.</li> <li>The UMP was prepared by a suitably qualified and experienced persons whose appointment has been approved by the Secretary:</li> <li>b) The draft WMP was submitted for approval to the Secretary within seven months of the date of the approval.</li> <li>During the si</li></ul>

## Compliance Status & Risk Level & Recommendations

Preparation - Compliant

Implementation - Compliant

**PA 10\_0080-REC-05** - The Water Management Plan (and sub plans) should be updated to reflect the changes to the EPL licenced discharge points (LDP A and LDP B) [Repeat finding from 2013], the transfer of surface water and the injection of surface water to underground workings.

	Condition	Evidence Source	Comment / Finding
S3.23	<ul> <li>The Site Water Balance must:</li> <li>a) include details of: <ul> <li>sources and security of water supply;</li> <li>water use on site;</li> <li>water management on site;</li> <li>any off-site water transfers;</li> <li>groundwater transfers from the underground operations to the surface; and</li> </ul> </li> <li>b) investigate and implement all reasonable and feasible measures to minimise potable water use from the town water supply and to reuse and recycle water.</li> </ul>	GHD (2013) Balance and Salt Balance Assessment, July 2013. Site observations.	Preparation         A Water Management Plan (WMP) prepared by GHD Pty Ltd was approved by the Secretary on 23 January 2014. MCW Environmental sighted a letter from DP&E dated 23 January 2014 approving the WMP as required by conditions 22 to 27 of PA 10_0080.         The Water and Salt Balance Assessment (WSBA) forms part of the Water Management Plan and included:         a)         -       Section 2.1.4 (p.16) addressed sources and security of water supply;         -       Section 1.5 (p.3) addressed on-site water use;         -       Section 2 (pp.10-17) addressed off-site water transfers; and         -       Section 2.1.1 (p.10) addressed off-site water transfers; and         -       Section 2.1.2 (p.15), Section 3.1 (pp.18-19) and Section 4 (pp.31-42) addressed groundwater transfers from the underground operations to the surface.
			Implementation The 2013 WSBA did not reflect the activities of surface water management observed during the site inspection, such as the injection of water to underground workings and LDP A and LDP B.



Compliance Status & Risk Level & Recommendations

Preparation - Compliant Implementation – Compliant Refer to **PA 10\_0080-REC-05** (PA 10\_0080, S3.22)

	Condition	Evidence Source	Comment / Finding
S3.24	<ul> <li>Erosion and Sediment Control Plan</li> <li>The Erosion and Sediment Control Plan must: <ul> <li>a) be consistent with the requirements of Managing Urban Stormwater: Soils and Construction (Landcom 2004, or its latest version);</li> <li>b) identify activities that could cause soil erosion and generate sediment particularly in relation to activities near waterways;</li> <li>c) describe the location, function, capacity of erosion and sediment control structures;</li> <li>d) describe what measures would be implemented to maintain the structures over time; and</li> <li>e) describe the sediment and erosion control measures to be implemented for all activities undertaken at the site.</li> </ul> </li> </ul>	GHD (2013), Erosion and Sediment Control Plan, July 2013. Site observations.	<ul> <li>Preparation <ul> <li>A Water Management Plan (WMP) prepared by GHD Pty Ltd was approved by the Secretary on 23 January 2014. MCW Environmental sighted a letter from DP&amp;E dated 23 January 2014 approving the WMP as required by conditions 22 to 27 of PA 10_0080. The Erosion and Sediment Control Plan (ESCP) forms part of the Water Management Plan and included:</li> <li>a) References to Managing Urban Stormwater: Soils and Construction (Landcom 2004) were included throughout the document including but not limited to - p.18, p.19, p.20, p.28 and Appendix A;</li> <li>b) Section 2 (pp.5-6) identifies activities that could cause soil erosion and generate sediment (Figure 2-1) noting Figure 2-1 referenced LDP 001 and LDP 002;</li> <li>c) Section 3 (pp.7-17) c) describes the location, function, capacity of erosion and sediment control structures;</li> <li>d) Section 5.5 (maintenance) describes the measures that are implemented to maintain the structures;</li> <li>e) Sections 3 (pp.7-17) and Section 5 (pp.20-27) describes the sediment and erosion control measures to be implemented for activities undertaken at the site.</li> </ul> Implementation Figure 3-3 did not reflect the clean water pit and pipe network described by site management at the time of the site inspection. The First Flush Settlement Tank was shown in Figure 3-3 to report to LDP B; however, it is understood the drain was deliberately blocked during the audit period and water from the settlement tank is now pumped to the CHP Dam. In accordance with condition 3.24(d) the following inspection and maintenance documents were observed by the auditors:</li> <li>VM35643 – environmental inspections, weekly contractor environmental monitoring, 20 May 2016.</li> </ul> VM35644 – weekly surface environmental inspection for leaking machinery, evidence of elon floor in the bulk oil storage area and levels of silt in the sumps in the CHP Dam and maintenance and servicing of water catchment sump and the CHP Dam and maintenance and servicing of water catc

## Compliance Status & Risk Level & Recommendations

Preparation – Compliant Implementation – Compliant

**PA 10\_0080-REC-06** – Consideration should be given to the installation of erosion and sediment control structures to reduce the flow of surface water across the emergency coal stockpile pad towards the LDP A discharge point.

Refer to **PA 10\_0080-REC-05** (PA 10\_0080, S3.22) Refer to **MPL 334-REC-02a** and **MPL 334-REC-02b** (MPL 334, C.30)

	Condition	Evidence Source	Comment / Finding
S3.25	Surface Water Management Plan The Surface Water Management Plan must: a) include detailed baseline data on surface water flows and quality of	GHD (2012), Surface Water Management Plan, August 2012.	<b>Preparation</b> The Surface Water Management Plan (SWMP) had not been updated since the previous IEA (URS, 2013).
	<ul> <li>a) include detailed baseline data on surface water flows and quality of Wangi Creek;</li> <li>b) provide a geomorphic description of Wangi Creek up and downstream of the mine water discharge point;</li> <li>c) detail surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts;</li> <li>c) provide a program to monitor: <ul> <li>surface water discharges from the surface facilities sites;</li> <li>stream health, channel stability, water flows and water quality within Wangi Creek; and</li> <li>water quality of Lake Macquarie;</li> </ul> </li> <li>e) investigate mitigation and management measures to prevent/limit any incision and degradation of the channel of Wangi Creek from mine discharge water;</li> <li>f) include a detailed review of water management at the Myuna Colliery surface facilities site, with particular reference to the water storages within the dirty water management system and in consultation with EPA, to: <ul> <li>determine whether the capacity, integrity, retention time and management of the dirty water storages (particularly the CHP Dam) are sufficient to ensure that water discharged from the site meets all relevant ANZECC water quality criteria, including for metals and suspended solids;</li> <li>assess all reasonable and feasible options for reducing salt load and/or salt concentration for discharges into Wangi Creek;</li> <li>assess appropriate options to improve storage and retention times in accordance with The Blue Book - Managing Urban Stormwater (MUS): Soils and Construction (Landcom); and</li> <li>propose any other appropriate changes to the water management of sewage and surface rainfall runoff for the project, including quantifying the abatement potential of identified measures and their related costs and benefits.</li> </ul> </li> </ul>	Myuna Environmental Monitoring Reports – October 2013 to April 2016. Myuna Spread Sheet 2016_04.XIs. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016. Myuna Surface Water Model.XIsx. URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	A Water Management Plan (WMP) prepared by GHD Pty Ltd that included the SWMP as an Appendix, was approved by the Secretary on 23 January 2014. MCW Environmental sighted a letter from DP&E dated 23 January 2014 approving the WMP as required by conditions 22 to 27 of PA 10_0080. Given there were no changes to the SWMP during the audit period MCW Environmental considers that the findings from the previous IEA (URS, 2013, Appendix A, p. 17) remain valid noting that the plan refers to former licenced discharge points. Section 2.4.2 of the SWMP references LDP 002 and how " <i>The LDP002 is a small manually operated orifice designed to limit discharges to 1 ML/day in accordance with the volumetric limit of EPL 366. For rainfall events greater than 15 mm (within a 24 hour period), a wet weather condition exists whereby exceedances in TSS are permitted for discharges through LDP002". At the time of the site inspection discharge under a rain event is only allowed via LDP A (Point 10 on EPL 366) when rainfal lexceeds 140mm in any 24 hour period. As the SWMP has been approved by DP&amp;E as part of the Water Management Plan, Myuna are considered compliant with this condition. <b>Implementation</b> Section 2.4.2 of the SWMP discusses a future management option of an injection bore to manage the CHP Dam capacity; however, this had occurred at the time of the site inspection. An injection bore located adjacent to the settlement ponds acts as a sink for the pumped water from the CHP Dam where settlement of particles can occur on a much larger time frame than with the limitations at the surface. Clean water diversion drains were observed around the edge of the emergency coal stockpile area in accordance with Figure 2-3 of the SWMP. LDP A and LDP B had been installed and were in included on EPL 366. It was reported that the CHP Dam was due to be desilted and the side walls repaired and then applied with 'shotcrete'. Daily, Monthly and quarterly water sampling is conducted by Carbon Based Environmental. Monthly environmental reports for the </i>

Compliance Status & Risk Level & Recommendations

Preparation – Compliant

Implementation - Compliant

Refer to **PA 10\_0080-REC-05** (PA 10\_0080, S3.22)

p.23).

levels in key underground water storages on an annual basis as specified in Section 5.1 of the GMP. Monitoring of water quality within underground water storages and from transfer pipelines, as specified in Table 5-1 of the GMP, has been undertaken during December 2015 however routine quarterly monitoring was not undertaken. It is

recommended that monitoring is undertaken quarterly so that a clearer understanding of the differences in water quality within each seam can be established and recorded. This will assist in the ongoing management of water quality discharged at LDP B" (GHD, 2016,

Refer to Soil and Water Note, Appendix A PA 10\_0080 for further information.

Condition	Evidence Source	Comment / Finding	
<ul> <li>S3.26 Groundwater Monitoring Program must include:</li> <li>a) baseline data of groundwater levels (including alluvial and weathered rock aquifers), yield and quality in the region, and any privately owned groundwater bores that may be affected by mining operations on site;</li> <li>b) groundwater assessment criteria based upon analysis of baseline data for groundwater, surface water, including trigger levels for investigating any potentially adverse groundwater bores.</li> <li>c) a program to monitor and/or validate the impacts of the project of alluvial and coal seam aquifers, any groundwater bores.</li> </ul>	<ul> <li>GHD (2012), Groundwater Monitoring Program, August 2012.</li> <li>GHD (2015), Annual Groundwater Management Report, June 2015.</li> <li>GHD (2016-A), Annual Groundwater Management Report, April 2016.</li> <li>GHD (2016-B), Groundwater Bore Licence Audit, July 2016.</li> <li>Email – Centennial (2014, Application for Groundwater Licence to DPI Water [@ 09:15am], 3 November 2014.</li> <li>Bore Licence Certificate 20BL172565</li> <li>URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.</li> </ul>	<ul> <li>Preparation</li> <li>A Water Management Plan (WMP) prepared by GHD Pty Ltd was approved by the Secretary on 23 January 2014. MCW Environmental sighted a letter from DP&amp;E dated 23 January 2014 approving the WMP as required by conditions 22 to 27 of PA 10_0080. The Groundwater Monitoring Program (GMP) forms part of the Water Management Plan and included:</li> <li>a) Section 3 (p. 10-12) includes baseline data for groundwater levels (including alluvial and weathered rock aquifers), yield and quality in the region, and any privately owned groundwater bores that may be affected by mining operations on site.</li> <li>b) Section 4 (p. 13) provides groundwater assessment criteria.</li> <li>c) Section 5 (pp. 14-15) provides a program to monitor and/or validate the impacts of the project of alluvial and coal seam aquifers, any groundwater bores.</li> <li>Implementation</li> <li>Management of groundwater has not changed since the previous IEA (URS, 2013, Appendix A, p. 18) which noted that "Water in the underground workings is collected and then transferred to a number of underground storages to allow the setting of fines prior to being pumped to the surface. Underground vater quality is assessed once it is transferred to the surface via three pipelines. The captured water from each asm is sampled at the surface from each and the pipelines only when through site inspections, there has been a noticeable change in the water quality present within either a direct sample from a transfer pipeline or the Mine Water Settling Pond 2 water quality".</li> <li>Myuna was granted Bore Licence 20BL172565 in December 2010 for the purpose of dewatering up to 4,380 ML/year of groundwater from inee workings at the site. Three pipes from the portal discharge priot to direct surface water to underground working a licence from DPI Water Of 20 (Section 601) so that the site to DPI Wate</li></ul>	

Compliance Status & Risk Level & Recommendations

Preparation - Compliant

Implementation - Compliant

PA 10\_0080-REC-07 –Implement the recommendations provided in the Annual Groundwater Management Report (GHD, 2016-A) and the Groundwater Bore Licence Audit (GHD, 2016-B).

Condition	Evidence Source	Comment / Finding
		<i>Continued:</i> GHD was engaged by Myuna to conduct an independent environmental audit of Centennial's compliance with the requirements of Myuna Bore Licence Number 20BL172565 (GHD, 2016-B). The GHD audit (GHD, 2016-B) identified four non- compliant conditions, eight compliant conditions and five conditions that were 'not applicable'. The audit report noted that there was a delay between granting of the licence in 2010 and issue of the licence to Myuna in 2014 and that as a result a number of the requirements of the licence were not conducted within the specified timeframes. The report noted that the " <i>majority of these conditions have since been</i> <i>fulfilled</i> " (GHD, 2016, p.5), A total of five recommendations were identified in the report.



Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S3.27	<ul> <li>Surface and Groundwater Response Plan</li> <li>The Surface and Ground Water Response Plan must describe what measures and/or procedures would be implemented to:</li> <li>a) respond to any exceedances of the surface water, stream health, and groundwater assessment criteria; and</li> <li>b) mitigate and/or offset any adverse impacts on riparian vegetation located within and adjacent to the site.</li> </ul>	GHD (2012), Surface and Groundwater Response Plan, August 2012. GHD (2015), Myuna Colliery ANZECC Water Quality Assessment, May 2015. URS (2013), Myuna	Preparation A Water Management Plan (WMP) prepared by GHD Pty Ltd was approved by the Secretary on 23 January 2014. MCW Environmental sighted a letter from DP&E dated 23 January 2014 approving the WMP as required by conditions 22 to 27 of PA 10_0080. The Surface and Ground Water Response Plan (SGWRP) has not been updated since the previous IEA (URS, 2013). The SGWRP forms part of the Water Management Plan and included:
	Coaled within and adjacent to the site.	Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0. Myuna Environmental Monitoring Reports – October 2013 to April 2016.	<ul> <li>Section 4 – Actions to Support Specific Responses (pp.18-19) addressed the requirements to</li> <li>respond to any exceedances of the surface water, stream health, and groundwater assessment criteria; and</li> <li>mitigate and/or offset any adverse impacts on riparian vegetation located within and adjacent to the site</li> </ul>
		Myuna Spread Sheet 2016_04.XIs. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016. Hunter Land Management	Implementation The SGWRP included references to LDP A and LDP B and requirements for reporting non-compliances in the Annual Return. Responses to exceedances of water criteria are provided in Condition 21, Schedule 3 of PA 10_0080. Monthly water sampling is conducted by Carbon Based Environmental. Monthly environmental reports for the period October 2013 to April 2016 were available on the Myuna website. The reports contained monitoring information concerning surface water quality and water volume. Surface water data was available for review on ECD for the audit period. Surface water quality assessment criteria specified in the SGWRP (Table 2-1) was noted to be included in the surface water data spread sheet provided by the site. Quarterly Manganese monitoring results for March 2012 were available for review in accordance with the requirements of the SGWRP (Table 2-1).
		(2015), Groundwater Dependant Ecosystem Monitoring Baseline Assessment Myuna Colliery, 2 December 2015, V2. Annual Return 2015. Annual Return 2014. Annual Return 2013.	<ul> <li>In accordance with Table 3-2 of the SGWRP the auditors sighted work orders for weekly inspections including, but not limited to:</li> <li>VM31746 – environmental inspections, weekly contractor environmental monitoring, 20 May 2016.</li> <li>VM35642 – weekday environmental monitoring report, 23 May 2016.</li> <li>VM35644 – weekly surface environmental inspection</li> <li>VM35643 – environmental weekly surface cleaning, 27 May 2016.</li> <li>Actions / responses to triggers identified in Table 3-2 did not appear to have been fully implemented at the site. For example the compliance criteria for the Emergency Coal Stockpile Area noted that there should be "<i>no visible areas of erosion diverting runoff around the Emergency Coal Stockpile Sediment Dam</i>". During the site inspection evidence of erosion was observed on and around the edges of the stockpile pad. Table 3-2 also noted that the compliance criteria for Clean Water Diversion was that "<i>No debris (detritus) within diversion restricting capacity</i>"; however, during the site inspection rubbish was observed in the clean water diversion drain to the rear of the waste handling area (Photo 5-3).</li> <li>Annual Returns and monthly environmental reports were available for review as specified in Section 5.2 (p.20) in accordance with Table 3-1 of the SGWRP.</li> <li>Riparian vegetation was located at the boundary to the former Wangi Wangi Power Station. There are three monitoring locations (Downstream Wangi Creek, Midway of Wangi Creek and Upstream of LDP A). Site management reported that RPS conducted a groundwater dependant ecosystem study in the week prior to the audit and that Hunter Land Management Pty Ltd conducted the 2015 study (HLM, 2015).</li> </ul>

Compliance Status & Risk Level & Recommendations

Preparation - Compliant

Implementation - Compliant

Refer to MPL 334-REC-02a and MPL 334-REC-02b

	Condition	Evidence Source	Comment / Finding	
S3.28	<ul> <li>Biodiversity Management Plan</li> <li>The Proponent shall prepare and implement a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must: <ul> <li>a) be submitted to the Secretary within 7 months of the date of this approval;</li> <li>b) be prepared by a suitable qualified ecologist approved by the Secretary;</li> </ul> </li> <li>(a) have a particular focus on measures that would be implemented over the life of the mine to protect and enhance the Swamp Sclerophyll Forest on Coastal Floodplains endangered ecological community near Wangi Creek; and</li> <li>(b) include a detailed description of the measures that would be implemented over the life of the mine to ensure that native vegetation and habitat within the surface facilities sites (particularly the Swamp Sclerophyll Forest on Coastal Floodplains endangered ecological community near Wangi Creek) are properly managed, including procedures for: <ul> <li>weed management (both control and suppression);</li> <li>protection and enhancement of native vegetation and habitat;</li> <li>freal animal control;</li> <li>frea management (including asset protection zones); and</li> <li>management of public access.</li> </ul></li></ul>	Centennial (2016), Biodiversity Management Plan, May 2016. Letter – DP&E (2012), Myuna Colliery Approval of Biodiversity Management Plan, 3 September 2012. Hunter Land Management Plan, 2 Dependant Ecosystem Monitoring Baseline Assessment Myuna Colliery, 2 December 2015, V2. Hunter Land Management Pty Ltd Weed Action Plan 2016, February 2016. Hunter Land Management Pty Ltd Weed Action Plan 2015, February 2015. Hunter Land Management Pty Ltd Weed Action Plan 2014, November 2013. Hunter Land Management Pty Ltd Weed Action Plan 2014, November 2013. Bush Fire Hazard Reduction Certificate Environmental Approval Works, 29 October 2015 – Effective 22 October 2015 – Effective 22 October 2015 to 21 October 2018. Letter - Centennial (2015), SSD 5144 and SSD 5145 – Consolidation of Management Plans, 30 October 2015 [Letter to DP&E].	<ul> <li>Preparation The Biodiversity Management Plan has been revised and updated once since the previous IEA (URS, 2013) and was due to be sent to DP&amp;E for approval at the time of the site inspection. Centennial wrote to DP&amp;E on 30 October 2015 (Centennial, 2015) notifying the Department of their intent to adopt a regional approach to the development of the following management Plan. Centennial noted that the plans would take into consideration the conditions, commitments and operations of their regional operations including Myuna Colliery. MCW sighted a letter from the DP&amp;E to Myuna dated 3 September 2012 that approved the Biodiversity Management Plan in accordance with Condition 28 of Schedule 3. The following is noted concerning the Biodiversity Management Plan regional operations including Myuna Colliery. MCW sighted a letter from the DP&amp;E to Myuna dated 3 September 2012 that approved the Biodiversity Management Plan in accordance with Condition 28 of Schedule 3. The following is noted concerning the Biodiversity Management Plan had not been submitted for review at the time of the site inspection. </li> <li>a) A letter dated 8 August 2013 concerning the submission of the 2012 Biodiversity Management Plan had not been submitted for review at the time of the site inspection.</li> <li>b) The auditors sighted a letter dated 20 April 2013 from the Secretary approving qualified ecologists to prepare the original Biodiversity Management Plan.</li> <li>c) Section 4.3 (p.11) Section 5 (pp.16-26) of the Plan addressed measures that would be implemented over the life of the mine to ensure that native vegetation and habitat within the surface facilities are properly managed. Implementation Hunter Land Management Ply Ltd is engaged to conduct weed management activities. Weed Actions Plans were available for review and there was no update 2013. The plans provided a summary of actions for the preceding year including the area treated and the targeted weeds. The plans also detailed what works will be</li></ul>	
			reported that there has been no dumping of rubbish on-site during the audit period.	

No feral animal monitoring is conducted on-site. Fauna monitoring is to be implemented if subsidence is measured greater than 20 mm. This requirement has not yet been triggered in the Plan.

## Compliance Status & Risk Level & Recommendations

Preparation – Compliant (pending approval from the Secretary)

Implementation - Compliant

**PA 10\_0080-REC-08a** – Consideration should be given to conducting a second weed survey of treated areas to determine and document the effectiveness of weed control.

**PA 10\_0080-REC-08b** – The Weed Action Plan should include a section/description documenting the effectiveness of the previous year's weed treatments.

management reported that appropriate surveys would be conducted.

Comment / Finding
<ul> <li>Archaeological significance ranking outcomes</li> <li>Site specific management plans: All conditions 29)</li> <li>Cultural significance ranking outcomes</li> <li>Aboriginal Cultural Heritage Management Plan dated July 2016 with DP&amp;E to approval at the time of the site inspection.</li> <li>Non-Indigenous Cultural Heritage Management Plan dated August 2012</li> <li>MCW sighted a copy of the Centennial Coal's Northern Holdings Aboriginal Cultural Heritage Management Plan dated July 2016 prepared by RPS (East Australia) for approval at the time of the site inspection and addressed management to be with DP&amp;E for approval at the time of the site inspection and addressed management plan dated August 2012.</li> <li>MVM and the following site specific aspects were addressed in the Northern Holdings Aboriginal Cultural Heritage and angement plan dated Aboriginal Cultural Heritage for Aboriginal Cultural Heritage Management Plan.</li> <li>Overview of operations</li> <li>Registered Aboriginal parties</li> <li>Aboriginal heritage commitments and consent conditions (Schedule 3 Condition 29)</li> <li>Cultural significance ranking outcomes</li> <li>Site specific management measures</li> <li>The Non-Indigenous Cultural Heritage Management Plan dated August 2012 for Myuna operations was available for review. MCW sighted a letter from the DF&amp;E to Myuna acted 4 September 2012 approval.</li> <li>Centennial wrote to DP&amp;E on 30 October 2015 (Centennial, 2015) notifying the Department of their intent to adopt a regional approach to the development of the following management Plan. / Matage Management Plan / Meas Management Plan / Biodiversity Management Plan. / Cultural Heritage Management, Conservation and prot</li></ul>
Source S (2016 ce Lett Monitor the M 26 Mar (2012). Cultura nt Plan (2012). Cultura nt Plan (2012). Cultura nt Plan tal Ma Septer ntal Ma Septer ntal Ma Septer ntal Ma Son of M Cultura nt Plan tal Ma Septer ntal Septer ntal Septer

Compliance Status & Risk Level & Recommendations

Preparation – Compliant (pending approval from the Secretary)

Implementation - Compliant

	Condition	Evidence Source	Comment / Finding
S3.30	<ul> <li>Visual Amenity and Lighting</li> <li>The Proponent shall: <ul> <li>a) minimise visual impacts, and particularly the off-site lighting impacts, of the Myuna Colliery surface facilities site;</li> <li>b) take all reasonable and feasible measures to mitigate off-site lighting impacts from the project; and</li> <li>c) ensure that all external lighting associated on site complies with Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting,</li> </ul> </li> <li>to the satisfaction of the Secretary.</li> </ul>	Centennial (2011), Myuna Colliery Environmental Assessment Extension of Mining, February 2011. Complaints Register. Site observations.	The visual impact of the project from accessible viewing locations was determined (in the Environmental Assessment, 2011) to be low. The site inspection was conducted during daylight hours therefore an assessment of night time lighting was not conducted. No complaints had been received concerning outdoor lighting. Lights are left on at night as the mine operates 24hrs a day. MCW Environmental did not assess if outdoor lighting at Myuna complies with AS 4282. Outdoor lighting works are conducted by third party electricians. Myuna were not able to demonstrate that lighting does comply with AS4282; however, given no complaints have been received by the site in six years concerning light emissions this condition was found to be compliant.

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S3.31	Vaste The Proponent shall: a. minimise the waste generated by the project; and b. ensure that the waste generated by the project is appropriately stored, handled and disposed of. to the satisfaction of the Secretary.	<ul> <li>JR Richards (2016) Total Waste Management Report, April 2016.</li> <li>JR Richards (2015) Total Waste Management Report, December 2015.</li> <li>JR Richards (2014) Total Waste Management Report, December 2014.</li> <li>JR Richards (2013) Total Waste Management Report, December 2013.</li> <li>EPA Transport Certificate 2T00677152 [31-Jul-2015 to 30-Jul-2016] – J100 Waste Mineral Oils, dated 25 May 2015 for 4,000 L.</li> <li>EPA Transport Certificate 2T00677153 [31-Jul-2015 to 30-Jul-2016] – J100 Waste Mineral Oils, dated 13 April 2016 for 1,800 L.</li> <li>EPA Transport Certificate 2T00677143 [31-Jul-2015 to 30-Jul-2016] – J100 Waste Mineral Oils, dated 24 March 2016 for 1,600 L.</li> <li>EPA Transport Certificate 2T00702644 [17-Dec-2015 to 16-Dec-2016] – J100 Waste Mineral Oils, dated 31 March 2016 for 200 kg.</li> <li>Mine/Site Waste Review Form – 9 February 2015.</li> <li>Mine/Site Waste Review Form – 19 April 2016</li> <li>Mine/Site Waste Review Form – 22 February 2016.</li> <li>Myuna Spread Sheet 2016_04.Xls.</li> </ul>	<ul> <li>Site management reported that no requests have been made by the Secretary concerning waste issues.</li> <li>JR Richards Pty Ltd is engaged to manage waste streams at the site. JR Richards provide a monthly waste management report that includes data concerning disposal locations for specific waste streams. Two staff are employed on a full time basis to empty sumps and keep the pit top area clean and tidy.</li> <li>(a) Myuna operates a recycling waste collection system. Waste is separated into the following streams for recycling: cardboard, ferrous and non-ferrous metals, timber, waste oil, used batteries.</li> <li>Pallets go to recycling, painted and/or damaged pallets cannot be recycled are managed as general waste.</li> <li>Waste oil is collected for recycling off-site.</li> <li>Used batteries.</li> <li>Used batteries are collected or disposal off-site. The waste storage area was observed by the auditors. Rubbish was observed in the clean water diversion drain behind the storage area band.</li> <li>Inspections of waste streams and receptacles are conducted by JR Richards. Auditors sighted a selection of Waste Review forms.</li> <li>used batteries are stored under cover with secondary containment in a designated storage area prior to disposal off-site by an appropriately licensed waste disposal.</li> <li>EPA Transport Certificates were available for review for J100 waste mineral oils for off-site disposal.</li> <li>The site holds a Traded</li></ul>
			campe to taken to entergency economic area for arying and obtaing.

A clean earth storage area was observed during the site inspection that is used in frequently to separate clean soil from the stockpile area.

## Compliance Status & Risk Level & Recommendations

#### Compliant

**PA 10\_0080-REC-09** – Surrender the Hunter Water Corporation Trade Wastewater Agreement if disposal of wastewater from the washbay oil/water separator to the municipal sewer is no longer required.

	Condition		Evidence Source	Comment / Finding
S3.32	<ul> <li>Bushfire Management</li> <li>Proponent shall:</li> <li>a) review its existing bus equipment to ensure for to any fires on site; are b) assist the Rural Fire S possible if there is a fire</li> </ul>	shfire management procedures and fire fighting that the project is suitably equipped to respond nd Service and emergency services as much as ire in the surrounding area.	Centennial (2016), Bushfire Management Plan M-EMS-3- 005, Revision 10, May 2016. Bush Fire Hazard Reduction Certificate Environmental Approval Works, 29 October 2015 – Effective 22 October 2015 to 21 October 2018. Site observations.	<ul> <li>The site had recently reviewed and updated the Bushfire Management Plan (Centennial, 2016) for the site.</li> <li>Site management reported that the Rural Fire Service (RFS) conducted a site inspection to assess fuel loads during the audit period and identified an area on the northern-side of the site (between Wangi Creek and Donelly Road) that requires a hazard reduction burn. Site management reported that the burn is planned for winter period 2016; however, the site was in discussion with external parties as RFS requires that a control line be installed.</li> <li>Site management reported that there had been no bushfire incidents during the audit period and that staff are trained in mine firefighting (i.e. for underground operations). No records were sighted for firefighting training.</li> <li>Fire hydrants and firefighting equipment were observed around the site at the time of the site inspection. Slashing of weeds is conducted around asset protection zones.</li> <li>MCW Environmental are not fire management experts and no adequacy assessment of the site's preparedness for a bushfire has been conducted, nor any other assessment related to bushfire management.</li> </ul>
S3.33	<b>Rehabilitation Objectives</b> The Proponent shall rehabilitate the surface facilities sites to the satisfaction of the Executive Director Mineral Resources. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA, and comply with the objectives in Table 7. <i>Table 7: Rehabilitation Objectives</i>	Centennial (2015), Myuna Colliery Mining Operations Plan January 2016 to December 2022, 10 November 2015, V1. Letter – DP&E (2015), Approval for Myuna Colliery	Site management reported that there is no planned rehabilitation until the end of mining and then actions will commence to facilitate ongoing industrial land use at the site. It is expected that decommissioning, remediation and removal of mine related infrastructure and coal pads will occur prior to change to industrial land use under a suitable Mining Operations Plan approved by DRE The MOP notes that "The proposed final land use of light industrial / mixed use would require the site to be recorded Light Industrial (IN2) or Mixed Lise (B4) under the	
	Features	Objective	MOP, 7 December 2015.	<i>LMLEP 2014</i> °. A number of 'Domains' specified in the MOP will be returned to the predevelopment natural bushland
	Surface facilities sites. Project surface infrastructure. Community.	Safe, stable & non-polluting.         Final land use compatible with surrounding land uses.         To be decommissioned and removed, unless the Executive Director Mineral Resources agrees otherwise.         Ensure public safety.         Minimise the adverse socio-economic effects associated with mine closure.	2016-22 MOP – Rehabilitation Plan [Email to Centennial, 12/11/2015 @11:26am]. Email – Centennial (2015), Myuna 2016-22 MOP – Rehabilitation Plan [Email to DP&E, 02/12/2015 @3:31pm].	The auditors sighted historical rehabilitation adjacent the Eraring Power Station boundary that had good cover and was in good condition. An email from the site to DP&E dated 2 December 2015 noted the relevant section of the MOP / Rehabilitation Plan that addressed socio-economic effects associated wit mine closure. Centennial were responding to an email from DP&E dated 12 November 2015 requesting clarification where the socio economic objective was addressed in the MOP/ Rehabilitation Plan.
S3.34	<b>Progressive Rehabilitation</b> The Proponent shall carry that is, as soon as reasona	on out the rehabilitation of the site progressively, ably practicable following disturbance.	-	No works conducted during the audit period triggered the requirement for progressive rehabilitation.

Compliance Status & Risk Level & Recommendations

### Compliant

Not Triggered

Not Triggered

	Condition	Evidence Source	Comment / Finding
S3.35	<ul> <li>Rehabilitation Management Plan</li> <li>The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Executive Director Mineral Resources. This plan must: <ul> <li>a) be prepared in consultation with the Department, Fisheries NSW, LMCC, WSC and the CCC;</li> <li>b) be prepared in accordance with any relevant DRE guideline;</li> <li>c) provide for detailed mine closure planning, including measures to minimise socio-economic effects due to mine closure, to be conducted prior to the site being placed on care and maintenance;</li> <li>d) build, to the maximum extent practicable, on the other management plans required under this approval; and</li> <li>e) be submitted to the Executive Director Mineral Resources for approval within 12 months of the date of this approval.</li> </ul> </li> </ul>	<ul> <li>Email – DP&amp;E (2015), Myuna 2016-22 MOP - Rehabilitation Plan [to Centennial, 12 November 2015 @11:26am].</li> <li>Letter – DP&amp;E (2015), Approval for Myuna Colliery, MOP, 7 December 2015.</li> <li>Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan July 2013 to December 2015.</li> <li>Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015, V1.</li> <li>Letter – Centennial (2015), Centennial Myuna 2016 - 2022 Mining Operations Plan, 10 November 2015, Letters to CCC, DP&amp;E, DRE, LMCC, WSC .</li> <li>Letter – Centennial (2015), Myuna Colliery Final Land Use Options, 24 August 2015 [Letter to LMCC].</li> <li>Letter – LMCC (2015), Comment on Myuna Colliery Final Land Use Option, 4 September 2015 [Letter to Centennia]].</li> <li>Letter – DP&amp;E (2015), Straits Hillgrove Mine – Mining Operation Plan Amendment, 11 June 2015.</li> </ul>	<ul> <li>Preparation</li> <li>Myuna submitted a new MOP / Rehabilitation Plan for the period 1 January 2016 to 30 November 2022 to DRE during the audit period. DP&amp;E requested clarification from Myuna in an email dated 12 November 2015. Myuna responded to DP&amp;E in an email dated 2 December 2015 providing clarification to the Department. DRE approved the MOP on 7 December 2015. Site management reported that following approval of the MOP by DRE the document was provided to DP&amp;E however, no further comments were reported to have been received. The MOP was originally submitted within 12 months of the approval, however has since been updated. A response from DRE dated 22 January 2013 to June 2015. A letter dated 11 June 2015 from DRE to the site approved the Myuna Colliery Mining Operation Plan July 2015 to December 2015 Amendment.</li> <li>a) The auditors sighted correspondence from Myuna to the Community Consultation Committee, Wyong Shire Council and Lake Macquarie City Council dated 110 November 2015 seeking feedback on the Mining Operations Plan / Rehabilitation Management Plan January 2016 to December 2022. Site management reported that Fisheries NSW were not consulted and no evidence was available to confirm feedback had been sought from the Department.</li> <li>b) The Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015 appeared to have been prepared in general accordance with relevant DRE guidelines.</li> <li>c) Section 5.4 (pp.55-57) provided detail concerning mine closure planning.</li> <li>d) Topics such as water management were discussed in the MOP and management Plan. It is noted that Stage 1 of the Rehabilitation Management Plan was submitssion dated 5 June 2013 for Stage 2 of the Rehabilitation Management Plan. Was submitsed in January 2013 (i.e. within the approval timeframe)".</li> <li>No rehabilitation or meroval and renovation of buildings are proposed in the plan period. Myuna will continue to operate infrastructures are not planned during the curr</li></ul>

Compliance Status & Risk Level & Recommendations

Preparation – Compliant

Implementation - Compliant

	Condition	Evidence Source	Comment / Finding
	Continued:		<ul> <li>Continued:</li> <li>Implementation</li> <li>No buildings were renovated, removed or rehabilitated during the audit period.</li> <li>Rehabilitation of degraded areas caused by environmental weeds was systematically carried out during the reporting period, as part of land management practice.</li> <li>No rehabilitation trials, research or initiatives were undertaken during the audit period.</li> <li>Implementation was generally observed to be in accordance with the MOP, noting the MOP had only been in place for approximately 4 months at the time of the audit site inspection.</li> </ul>
S4.1	<ul> <li>NOTIFICATION OF LANDOWNERS</li> <li>As soon as practicable after obtaining monitoring results showing:</li> <li>a) an exceedance of any relevant criteria in schedule 3, the Proponent shall notify affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and</li> <li>b) an exceedance of any relevant air quality criteria in schedule 3, the Proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine owned land).</li> </ul>	-	Site management reported that no landowners were notified during the audit period as there were no air or noise related exceedances.
\$4.2	<ul> <li>INDEPENDENT REVIEW</li> <li>If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land.</li> <li>If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Proponent shall:</li> <li>a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to: <ul> <li>consult with the landowner to determine his/her concerns;</li> <li>conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and</li> <li>if the project is not complying with these criteria, then identify the measures that could be implemented to ensure compliance with the relevant criteria; and</li> </ul> </li> <li>b) give the Secretary and landowner a copy of the independent review.</li> </ul>	-	Not Triggered.
S4.3	<ul> <li>If the independent review determines that the project is complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary.</li> <li>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:</li> <li>a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until the project complies with the relevant criteria; or</li> <li>b) secure a written agreement with the landowner to allow Exceedances of the relevant criteria,</li> </ul>	-	Not Triggered.

Compliance Status & Risk Level & Recommendations

Not Triggered

Not Triggered

Not Triggered

	Condition	Evidence Source	Comment / Finding
S5.1	<ul> <li>Environmental Management Strategy</li> <li>The Proponent shall revise and implement an Environmental Management Strategy for the project to the Satisfaction of the Secretary. This strategy must: <ul> <li>(a) be submitted for approval to the Secretary within 7 months of the date of this approval;</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> <li>keep the local community and relevant agencies informed about the operation and environmental performance of the project;</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> <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></li></ul>	Centennial (2016), Environmental Strategy, May 2016.	<ul> <li>Site management reported that the May 2016 Environmental Management Strategy (the Strategy) had yet to be sent and approved as all revised and updated plans would be submitted together. The Strategy was updated twice during the audit period due to the modification to PA 10_0080 and comments from the 2015 Annual Review.</li> <li>The following was noted concerning the Strategy: <ul> <li>a) The original Strategy was submitted to the Director–General for approval on 4 September 2013. The Secretary approved the Strategy on 4 September 2012.</li> <li>b) Section 3 of the Strategy provided the strategic framework and included an overview of the Environmental Management System framework that included, but was not limited to the following sections: approvals and licences, roles and responsibilities, incident response and procedures/protocols. MCW Environmental consider these topics to generally provide the strategic framework for the environmental management of the site.</li> <li>c) Section 1.3.1 sets out the regulatory requirements of the project.</li> <li>d) Section 4.0 addressed procedures and controls but did not clearly describe the procedures that would be implemented. <ul> <li>section 4.1 described how to manage complaints. A protocol was provided in Appendix 2 illustrating how complaints are to be managed;</li> <li>section 4.9 addressed oncompliance reporting. Specific management plans detail further information concerning noncompliances. No reference was made to an overarching incident and/or non-compliance procedure.</li> <li>section 7.0 reference the Pollution Incident Response Management Plan (PIRMP).</li> </ul> </li> <li>f) <ul> <li>section 3.1 listed the plans and programs approved under the conditions of the approval.</li> <li>environmental monitoring was addressed in Section 6 of the Strategy.</li> </ul> </li> <li>Evidence of implementation of the Strategy included, but was not limited to observation of the Centennial website (Section 4.2), CCC (Section 4.3), Annual Reviews (Section 4.1), Annual</li></ul></li></ul>

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S5.2	<ul> <li>Management Plan Requirements</li> <li>The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include: <ul> <li>(a) detailed baseline data;</li> <li>(b) a description of: <ul> <li>any 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 measures;</li> </ul> </li> <li>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</li> <li>(d) a program to monitor and report on the: <ul> <li>impacts and environmental performance of the project;</li> <li>above);</li> </ul> </li> </ul> </li> <li>(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;</li> <li>(f) a protocol for managing and reporting any: <ul> <li>incidents;</li> <li>compliances with statutory requirements; and</li> <li>exceedances of the impact assessment criteria and/or performance criteria; and</li> </ul> </li> </ul>	Centennial (2016), Noise Management Plan, May 2016. Centennial (2016), Air Quality and Greenhouse Gas Management Plan, May 2016. GHD (2013), Water Management Plan, Myuna Colliery, July 2013. Centennial (2016), Biodiversity Management Plan, May 2016. Centennial (2012), Non- Indigenous Cultural Heritage Management Plan, August 2012. Centennial (2012), Northern Holdings Aboriginal Heritage Management Plan, July 2016. Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015, V1.	<ul> <li>Management plans were observed to have been prepared against the requirements of this Condition. The following plans required under this approval were available for the audit team to review:</li> <li>Noise Management Plan;</li> <li>Air Quality &amp; Greenhouse Gas Management Plan;</li> <li>Water Management Plan which includes: <ul> <li>Site Water Balance;</li> <li>Erosion &amp; Sediment Control Plan;</li> <li>Surface Water Management Plan;</li> <li>Groundwater Monitoring Program; and</li> <li>Surface &amp; Groundwater Response Plan.</li> </ul> </li> <li>Biodiversity Management Plan;</li> <li>Heritage Management Plan;</li> <li>Aboriginal Cultural Heritage Management Plan; and <ul> <li>Non-indigenous Cultural Heritage Management Plan; and</li> <li>Non-indigenous Cultural Heritage Management Plan.</li> </ul> </li> <li>Mining Operations Plan / Rehabilitation management Plan.</li> <li>The plans were observed to include baseline data specific to the issue(s) being addressed, for example the WMP included water balance data.</li> <li>The plans were observe to include the following: <ul> <li>a brief introduction that included a summary of the relevant statutory requirements including Project Approval. The ESCP included reference to the site's EPL and State legislation. Other plans were noted to include, but not be limited to references to the Project Approval and lease requirements;</li> <li>relevant limits or performance measures/criteria were noted to be included in the plans reviewed. For example the ESCP included sediment basin calculations.</li> <li>specific performance indicators were generally included in tables so that it was clear what threshold were and how they would be achieved. The plans appeared to provide sufficient information to understand the implementation of the project and management measures;</li> </ul> </li></ul>
			f) Protocols were available in the plans for issues such as incidents, complaints

- rrotocols were available in the plans for issues such as incidents, complaints non-compliances and exceedances, including but not limited to the Noise Management Plan, Environmental Strategy and Non-Indigenous Cultural Heritage Management Plan.
   g) Periods of review were provided in the plans, generally this was specified as 'event or 'time' based.

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S5.3	<ul> <li>Adaptive Management</li> <li>The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&amp;A Act or EP&amp;A Regulation.</li> <li>Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:</li> <li>(a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;</li> <li>(b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and</li> <li>(c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.</li> </ul>	Site observations.	<ul> <li>The following actions were taken (and observed by the auditors) following water quality criteria exceedance during the audit period:</li> <li>Discharge from the First Flush Settlement Tank [or Gross Settlement Pond (GSP)] had been diverted to the CHP Dam rather than directly to LDP B.</li> <li>Freeboard has been managed at the CHP Dam by directing water underground.</li> <li>Increasing the rate of transfer (approximately 10L/sec to 50L/sec) from the CHP Dam to the underground settlement reservoir. This was achieved by the addition of a larger pipe line and the construction of a siphon line from the CHP Dam to the underground workings via a borehole. The new pipeline was observed during the site inspection. The siphon was converted to manual operation following a power outage that prevented the operation of the electric pumps.</li> <li>The Emergency Stockpile Area dam pump and pipework were upgraded following a discharge at LDP A during the audit period.</li> </ul> Site management reported that the site was looking to increase the underground reservoir storage capacity and were preparing a model for this at the time of the site inspection. The site is also considering circulating mine water through CHP Dam to drop out sediment. Site management reported that the Secretary has not directed any remediation measures during the audit period. It is considered that following exceedances of performance criteria (i.e. water) the site has attempted to correct the root cause through engineered solutions (e.g. the siphon) and are therefore considered compliant with this condition.

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S5.4	<ul> <li>Annual Review</li> <li>By the end of March 2013, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must: <ul> <li>(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;</li> <li>(b) include a comparison of these results against the: <ul> <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 EA and EA (Mod 1);</li> </ul> </li> <li>(c) identify any non-compliance over the past year, and describe what actions were (or are being) taken to ensure compliance;</li> <li>(d) identify any tends in the monitoring data over the life of the project;</li> <li>(e) identify any tends in the potential cause of any significant discrepancies; and</li> </ul> </li> <li>(f) describe what measures will be implemented over the current financial year to improve the environmental performance of the project.</li> </ul>	Centennial (2016) Annual Review January 2015 to December 2015. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2014) Annual Review January 2013 to December 2013. Letter – Centennial (2016), Myuna Colliery AEMR, 24 March 2016 [Letter to DP&E]. Letter – DP&E (2015), Myuna Colliery Annual Review 2014, 10 September 2015 [Letter to Centennial]. Letter – DRE (2015), Myuna Colliery AEMR Review 2014, 21 August 2015. Letter – Centennial (2014), Myuna Colliery AEMR, 28 February 2014 [Letter to DP&E]. Letter – DP&E (2014), Centennial Myuna 2013 AEMR, 21 March 2014 [Letter to Centennial].	<ul> <li>The 2015 Annual Review was submitted to DP&amp;E on 24 March 2016 (Centennial, 2016). DP&amp;E conducted a site inspection on 5 May 2015; however, no formal feedback was available at the time of the site inspection concerning the inspection or Annual Review.</li> <li>DP&amp;E responded to Centennial on 10 September 2015 concerning the 2014 AEMR. The Department attended a meeting and site inspection at the site accompanied by the Division of Resources and Energy (DRE) on 19 August 2015. DP&amp;E noted the following concerning the AEMR in a letter dated 10 September 2015:         <ul> <li>"Please provide an Executive Summary of significant activities, complaints incidents, breaches and non-compliances which occurred during the reporting period with future Annual Reviews.</li> <li>Please provide further detail in regard to weed management onsite, including a location plan detailing areas of spraying and which weed species were targeted in future Annual Reviews.</li> <li>In accordance with Schedule 4, Condition 23, Myuna Colliery is required to develop a site water balance which must be included in future Annual Reviews. It is recommended that as a minimum the Input/Output model of the Water Accounting Framework developed by the Minerals Council of Australia be used in development of this site water balance.</li> <li>At the time of the desktop review of the AEMR and .at the time of addressing this letter, the Myuna Colliery website did not contain a community complaints register nor evidence of monthly update as required under Schedule 5, Condition 11. This is noted as an administrative non- compliance with the consent and the Department requests this to be rectified by 31st October 2015".</li> </ul> </li> <li>During their site inspection on 19 August 2015 DP&amp;E also noted the following:         <ul> <li>"The washdown sediment sump above the CHP dam contained visible hydrocarbon (photo 1 and 2). As this water is transferred to the undergrou</li></ul></li></ul>

The Annual Reviews for 2014, 2015 and 2016 were prepared in general accordance with points (a) to (f) of Condition 4, Schedule 5.

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S5.5	<ul> <li>Revision of Strategies, Plans and Programs</li> <li>Within 3 months of: <ul> <li>(a) the submission of an annual review under Condition 4 above;</li> <li>(b) the submission of an incident report under Condition 7 below;</li> <li>(c) the submission of an audit under Condition 9 below; and</li> <li>(d) any modification to the conditions of this approval (unless the conditions require otherwise),</li> </ul> </li> <li>the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review, the revised document must be submitted to the Secretary for approval."</li> </ul>	Centennial (2016), Noise Management Plan, May 2016. Centennial (2016), Air Quality and Greenhouse Gas Management Plan, May 2016. GHD (2013), Water Management Plan, Myuna Colliery, July 2013. Centennial (2016), Biodiversity Management Plan, May 2016. DRE (2016), Site Inspection Agenda. Centennial (2012), Northern Holdings Aboriginal Heritage Management Plan, July 2016.	<ul> <li>The only plans that underwent detailed revisions were the Water Management Plan and the Noise Management Plan following a variation to EPL 366. Site management reported that DP&amp;E requested all plans subject to change be re-submitted for approval regardless of the changes made.</li> <li>The following is noted: <ul> <li>a) Management plans were updated following the 2015 Annual Review; however, not all plans had been submitted for approval at the time of the site inspection as site management was waiting to submit the revised plans together.</li> <li>b) Site management reported that no plans were revised or updated following the submission of the 2013 Audit report under Condition 9 of PA 10_0080.</li> <li>d) Site management reported that plans were updated following a modification to PA 10_0080 in 2015.</li> </ul> </li> <li>Evidence of updated management plans was sighted during the audit noting that there were no significant changes to the plans other than updates to legislative requirements. It is understood no changes were made to management plans following the first IEA (URS, 2013).</li> <li>A site inspection agenda for the DRE site inspection on 5 May 2016 was available for review.</li> </ul>
S5.6	Community Consultative Committee The Proponent shall continue to operate a Community Consultative Committee (CCC) for the project in general accordance with the guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version), and to the satisfaction of the Secretary.	Letter – CCC Chair (2014), Myuna Colliery CCC, 10 September 2014 [Letter to DP&E]. Myuna Website (2016), Myuna, Online, Available at: <u>http://www.centennialcoal.com.</u> <u>au</u> / <u>Environment/Myuna.aspx</u> , Accessed 24 May 2016. Draft Minutes of Myuna Colliery Community Consultative Committee Meeting, 6 April 2016.	<ul> <li>Community Consultation Committee (CCC) meeting minutes were available online for the period June 2013 to March 2016. Minutes were available for the following months:</li> <li>2016 - March</li> <li>2015 - March, June, September</li> <li>2013 - June, September, December</li> <li>2013 - June, September, December (February outside audit period)</li> <li>It is noted that the guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007 (p.4) suggest that after the first two years of mining operations the committee meet at least twice per year.</li> <li>URS (2013, p. 29) noted that "A letter from Myuna to DP&amp;I dated 23 July 2012 was sighted informing of the appointment of a chairperson and nomination of CCC members. Myuna advertised for expressions of interest for the Myuna CCC on 2 July 2012 in the Lakes Mail and on the Centennial Coal Myuna Colliery Website. Expressions of interest closed on 19 July 2012". The draft minutes for the March 2016 meeting indicated that the CCC comprises of the following representatives:</li> <li>Chairman</li> <li>Community Representative (x3)</li> <li>Centennial Myuna Pty Ltd (x2)</li> <li>LMCC Representative</li> </ul>

Compliance Status & Risk Level & Recommendations

### Compliant

	Condition	Evidence Source	Comment / Finding
S5.7	Reporting - Incident Reporting	<u>2013</u>	The following provides a summary of incidents reported during the audit period:
	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	Letter – Centennial (2013), Written Notification of Environmental Incident at Myuna Colliery 22 November 2013, 29 November 2013.	<ul> <li>2013</li> <li>The site provided a written report to OEH of a discharge from LDP B on 22 November 2013 in a letter dated 29 November 2013. The report was available for review. On Friday, 22 November 2013 during a storm event TSS was recorded at 94mg/l from LDPB.</li> </ul>
	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.	Report – Centennial (2013), Notification of TSS exceedance discharge from Licenced Discharge Point B - Myuna Colliery, 29 November 2013. 2014	2014 The site provided a written report to the EPA of a discharge from LDP A on 28 February 2014 and 1 March 2014 in a letter dated 7 March 2014. The report was available for review. DP&E provided a written response to Centennial on 21 March 2014 noting the agency would not be taking any action for the incident; however, no letter or notification was sighted.
		Letter – Centennial (2014), Written Notification of Environmental Incident at Myuna, 7 March 2014.	• A letter from DP&E to the site dated 21 March 2014 acknowledged receipt of written notification of on 28 February 2014. The letter noted that the Department would not take any action for the incident.
		Report – Centennial (2014), Notification of Discharge from Licenced Discharge Point A - Myuna Colliery, 6 March 2014.	<ul> <li>2015</li> <li>The site provided two written reports to DP&amp;E, DRE and OEH of the discharge from LDP B on 2 and 4 April 2015 in a letter dated 14 April 2015. The report was available for review.</li> </ul>
		Letter – DP&E (2014), Discharge Incident 28 February 2014, 21 March 2014 [Letter to Centennial].	<ul> <li>The site provided a written report to DP&amp;E, DRE and OEH of a discharge from LDP B on 22 May 2015 in a letter dated 27 May 2015. The report was available for review.</li> <li>2016</li> </ul>
		Letter – DP&E (2014), Discharge Incident 28 February 2014, 21 March 2014. The site pro- LDP B on 1 available fo	<ul> <li>The site provided a written report to DP&amp;E, DRE and EPA of a discharge from LDP B on 16 March 2016 in a letter dated 16 March 2013. The report was available for review.</li> </ul>
		2015 Letter – Centennial (2015), Written Notification of Environmental Incident at Myuna Colliery 14 April 2015, 14 April 2015 [Letter to DP&E,	<ul> <li>The site wrote to the EPA on 27 April 2016 providing the findings of an investigation to the incident from LDP B on 16 March 2016. The letter identified that a stormwater drain) from the First Flush Settlement Tank) at the northern end of the car park was connected to LDP B at the time of the discharge and was not noted on any site plans. Rectification works included disconnecting the pipeline from LDP B and diverting it to the CHP Dam. The rectification works were observed during the site inspection.</li> </ul>
		Report – Centennial (2015), Notification of TSS Exceedance from Licenced Discharge Point B - Myuna Colliery, 14 April 2015 [For 4 April 2015].	It was not clear from PIRMP, the Strategy or management plans who to notify in the event of an exceedance of PA 10_0080 or EPL 366 water criteria. Centennial Standard - 012 External Environmental Reporting, Attachment 2 provided details on establishing if actual harm or material harm to the environment had occurred while the PIRMP addressed material harm. Neither document specified the reporting process for non-material harm exceedances/incidents.
		Letter – Centennial (2015), Written Notification of Environmental Incident at Myuna Colliery 22 May 2015, 27 May 2015 [Letter to DP&E, OEH, DRE].	Incidents are also reported to DP&E in the Annual Review at the end of the reporting period. Given the site has notified DP&E, DRE, OEH and EPA of the above incidents since 2013 this condition was found to be compliant.

## Compliance Status & Risk Level & Recommendations

#### Compliant

**PA 10\_0080-REC-10 -** Update the Water management Plan to include the process for reporting exceedances of EPL and/or PA 10\_0080 water criteria to relevant agencies (i.e. EPA, DP&E, and DRE).

	Condition	Evidence Source	Comment / Finding
		Report – Centennial (2015), Notification of TSS Exceedance from Licenced Discharge Point B - Myuna Colliery, 27 May 2015.	
		Report – Centennial (2015), Notification of TSS Exceedance from Licenced Discharge Point B - Myuna Colliery, 27 May 2015.	
		<u>2016</u>	
		Letter – Centennial (2016), Written Notification of Environmental Incident at Myuna Colliery, 27 March 2016.	
		Report – Centennial (2016), Notification of TSS Exceedance from Licenced Discharge Point B - Myuna Colliery, 21 March 2016.	
		Letter – Centennial (2016), Written Notification of Environmental Incident at Myuna Colliery, 27 April 2016.	
		Other Documents	
		Centennial (2016), Pollution Incident Response Management Plan, April 2016.	
		Centennial Standard - 012 External Environmental Reporting.	
<u> </u>	Penerting Pegular Penerting	Reporting.	The following deguments were evoluble on the Myune website:
00.0	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.	Online, Available at: <u>http://www.centennialcoal.com.</u> <u>au</u> <u>/Environment/Myuna.aspx</u> , Accessed 24 May 2016.	<ul> <li>a) Development and environment approvals;</li> <li>b) Environment management plans;</li> <li>c) Environmental assessments;</li> <li>d) Community consultation;</li> <li>e) Annual Reviews (2013, 2014);</li> <li>f) 2013 IEA; and</li> <li>g) Environmental monitoring data.</li> <li>GHG information was available in the Annual Review available on the Myuna website.</li> <li>Environment Protection Licence Monitoring Data was available on the Myuna</li> </ul>

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
S5.9	<ul> <li>Independent Environmental Audit</li> <li>By the end of June 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:</li> <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);</li> <li>(d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and</li> <li>(e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.</li> </ul>	Letter – DP&E (2016), Myuna Colliery (MP 10_0080) Independent Environmental Audit, 15 April 2016. URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	<ul> <li>The first Independent audit was conducted by URS Australia Pty Ltd (URS, 2013). URS were engaged to conduct the audit on 20 March 2013. The audit report and supporting documents (URS, 2013) address the requirements of Condition 5.9, Schedule 5 of DA 10_0080.</li> <li>a) Myuna commissioned URS to conduct the 2013 Independent Environmental Audit. The URS audit team was approved by the DP&amp;E to conduct the audit in letters to Myuna Colliery dated 6 May 2013 and 28 May 2013. The site inspection was conducted in June 2013. MCW Environmental auditors were approved by DP&amp;E to conduct the 2016 IEA on 15 April 2016.</li> <li>b) The 2013 IEA involved consultation with the following agencies: DP&amp;E, DRE and EPA. The 2016 IEA involved consultation with DP&amp;E, EPA, DRE, OEH, LMCC and the Chair of the CCC.</li> <li>c) The 2013 and 2016 IEA's assessed the environmental performance of the project against the requirements of MCoA 10_0080, EPL 366 the Consolidated Coal Lease 762 and plans and programs required by these approvals.</li> <li>d) The 2013 and 2016 IEA's included appropriate measures and/or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.</li> </ul>
S5.10	Independent Environmental Audit 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.	Letter - DP&E, 20 December 2013. URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	The 2013 IEA (URS, 2013) was submitted to DP&E on 30 October 2013. A letter from DP&E dated 20 December 2013 acknowledging receipt of the 2013 IEA. Given the late submittal of the 2013 IEA (URS, 2013) this condition was found to be non-compliant.
S5.11	<ul> <li>Access To Information</li> <li>Within 4 months of the date of this approval the Proponent shall: <ul> <li>(a) make copies of the following publicly available on its website:</li> <li>the documents referred to in condition 2 of Schedule 2;</li> <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> </ul> </li> </ul>	Centennial : http://centennialcoal.com.au/ Operations/OperationsList/ Myuna [Accessed 24 May 2016]	<ul> <li>a) Access to information appears to be in compliance with the requirements of this condition. The Myuna website: <u>http://centennialcoal.com.au/Operations/OperationsList/Myuna</u> [Accessed 24 May 2016] was reviewed and observed to contain the following information: <ul> <li>Development and Environment Approvals - Yes</li> <li>Environment Management Plans - Yes</li> <li>Subsidence Management Plans – No, however as first workings only were conducted during the audit period this was not required</li> <li>Environmental Assessment(s) - Yes</li> <li>Environmental Management Reports - Yes</li> <li>Independent Environmental Audit - Yes</li> <li>Environmental Monitoring Data - Yes</li> </ul> </li> <li>Community Consultation Committee minutes and the 2016 Complaints Register were available online for the audit period.</li> <li>Environmental Monitoring Data was available on the company's website from June 2013 through to April 2016.</li> </ul>

(b) keep this information up-to-date,

to the satisfaction of the Secretary.

# Compliance Status & Risk Level & Recommendations

### Compliant

Non-compliant Administrative Non-Compliance

### **Environmental Protection Licence 366 Compliance Register**

	Condition		Evidence Source	Comment / Finding	Compliance Status & Risk Level & Recommendations	
A1.1	This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.			Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014.	<ul> <li>Myuna operates at the address specified in the EPL and undertakes the scheduled activities specified (Mining for coal; Coal Works).</li> <li>The following ROM coal production was reported:</li> <li>2015: 1,707,027 tonnes of ROM coal produced</li> <li>2014: 1,874,324 tonnes of ROM coal produced.</li> </ul>	Compliant
	Scheduled Activity	Fee Based Activity	Scale	Centennial (2016) Annual Review January 2015 to	2013: 1,635,662 tonnes of ROM coal produced	
	Coal Works	Coal Works	>2,000,000 to 5,000,000 T handled	December 2015.		
	Mining for Coal	Mining for Coal	>2,000, 000 to 3,500,000 T produced			
A1.2	The licensee must not extract more than 3 million tonnes of Run of Mine (ROM) coal from the premises in any calendar year.		_		Compliant	
<b>P1</b> P1.1	The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.		MY11301, V2, 4 September 2014.	The plan referenced in the EPL was available for review and showed the location of the EPA identification points.	Compliant	
			_ Myuna Spread Sheet Monthly environmental monitoring reports from October 2014 to April 20 2016_04.Xls. Available on the Myuna website. The monthly reports contained results	Monthly environmental monitoring reports from October 2014 to April 2016 were available on the Myuna website. The monthly reports contained results for surface	Ormaliant	
P1.2	the purposes of of pollutants to w	the monitoring and/ vater from the point	for the setting of limits for discharges	Myuna Environmental Monitoring Reports – October 2012 to April 2016	water quality and air quality monitoring [depositional dust and High Volume Air Sampling (HVAS)].	Compliant
P1.3	3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.		Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016.	period May 2014 through to April 2016. HVAS data was available in the April 2016 Myuna spread sheet for the period 5 April 2015 to 29 April 2016. Surface water quality data for LDP A and LDP B was available in the April 2016 Myuna spread sheet for the period 1 June 2013 to 30 April 2016.	Compliant	
			Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016.			

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### Environmental Protection Licence 366 Compliance Register

	Condition	Evidence Source	Comment / Finding
L1.1	Pollution of Waters Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the <i>Protection of the</i> <i>Environment Operations Act 1997.</i>	<ul> <li>GHD (2013), Water Management Plan, Myuna Colliery, July 2013.</li> <li>GHD (2015) ANZECC Water Quality Assessment, May 2015.</li> <li>Myuna Spread Sheet 2016_04.XIs.</li> <li>Myuna Environmental Monitoring Reports – October 2013 to April 2016.</li> <li>Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016.</li> <li>Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016.</li> <li>EPA Reports - Centennial (2013 to 2015), Quarterly Report for additional monitoring as per Condition E1 of EPL 366 – July 2013, September 2013, December 2013, March</li> </ul>	<ul> <li>In general Myuna had effective means of controlling and managing clean and dirty water on site. LDP A and LDP B are the only discharge points and data collected at these locations represents the only water closcharges to the environment from the site. Wangi Creek is the only watercourse directly influenced by water discharged from the site and that the receptor of Wangi Creek is a marine environment. Other than LDP A and LDP B surface water quality samples are taken from the following three locations on a monthly basis: <ul> <li>Upstream (Wangi Creek).</li> <li>Downstream (Wangi Creek).</li> <li>Wangi Lake.</li> </ul> </li> <li>The site uses EPL 366 criteria, Australian Guidelines for Water Quality Monitoring and Reporting (2000) and statistical analysis of baseline data when setting and monitoring water quality trigger levels.</li> <li>Quarterly monitoring data for Manganese concentrations is required by Condition E1 of EPL 366.</li> <li>GHD (2015) was engaged to undertake a water quality assessment of discharge from the site into Wangi Creek, with a particular focus on the concentrations of metals in discharge water as required by Condition U1 of EPL 366. GHD (2015, p.36) noted that "<i>The majority of oil and grease results were reported to be at or below the LOR of 2,000 µg/L at the Wangi Lake monitoring site</i>".</li> <li>The Water Management Plan (GHD, 2013, P.26) provides recommended Site Specific Trigger Values (SSTV's) for pH, Electrical Conductivity (EC), TSS, Turbidty, Total Nitrogen (TN), Nitrogen Oxides, Total Phosphorous (TP), Aluminium, Arsenic, Boron, Copper, Iron, Lead, Manganese and Zinc.</li> <li>Refer to Condition L2, L3 and M2.3 for water analysis conducted at the site in addition to that required by the EPL.</li> </ul>
		2014, June 2014, September 2014, December 2014, April 2015, July 2015, September 2015, January 2016, April 2016.	It is noted that MCW Environmental auditors are not water specialists and have not assessed all data detailed above nor assessed all potential contaminant sources on site.

Compliance Status & Risk Level & Recommendations
	Condition	Evidence Source	Comment / Finding
L2.1	Concentration Limits For each monitoring/discharge point or utilisation area specified in the table's below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified in the EPL.	Myuna Spread Sheet 2016_04.XIs. Myuna Environmental Monitoring Reports – October 2013 to April 2016. Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2016) Annual Review January 2015 to December 2015. Annual Return 2015. Annual Return 2014. Annual Return 2013. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016.	<ul> <li>The following non-compliances were noted concerning concentration levels for the audit period:</li> <li>2013: <ul> <li>22 November 2013; TSS was recorded at 94 mg/L from LDP B during a rainfall event. The cause of the TSS exceedance was not identified.</li> </ul> </li> <li>2014: <ul> <li>1 March 2014: Dam water was discharged at LDP A following a high rainfall event. The on-site weather station recorded rainfall of 302 mm for the 28 February 2014. The discharge continued until 09:00am on 1 March 2014. Laboratory analysis for TSS indicated a result of 157 mg/L (i.e.107 mg/L greater than the TSS EPL criteria of 50 mg/L).</li> </ul> </li> <li>2015: <ul> <li>2 April 2015; TSS was recorded as 60 mg/L from LDP B. The solid matter collected in the sample was analysed by the Hunter Water Corporation Laboratory as organic (algae and plant matter). The Myuna weather station recorded in crintall on the 2 April 2015 therefore there were no unplanned discharge events on that day. Real-time monitoring of the parameters including turbidity. pH, EC and temperature has been undertaken at LDP B since July 2013. Turbidity levels recorded at LDP B on the 2 April ranged from 15 Formazin Turbidity Unit (FTU) to 18 FTU.</li> <li>4 April 2015; TSS was recorded as 60 mg/L from LDP B. A total of 67.8mm of rainfall was recorded for the 24 hours preceding the sample collection from the on-site weather station. Site management reported that the CHP Dam had insufficient capacity to control surface run-off from the storm and overflowed into the clean water dams which then flowed through LDP B.</li> <li>2 2016:</li> <li>2 2016:</li> <li>16 March 2016; TSS was recorded as 111 mg/L from LDP B. The increase in the discharge water turbidity, which site management reported that the high intensity run-off from the rain event caused the CHP Dam dify water to overflow into the clean water settlement ponds which then flowed through LDP B.</li> <li>2 2016:</li> <li>16 March 2016; TSS was recorded as 111 mg/L from LDP B. The increase in the dis</li></ul></li></ul>
L2.3	Concentration Limits	-	Refer to Condition L1.1.
	I o avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.		

# Compliance Status & Risk Level & Recommendations

Non-Compliant

Low Risk

**EPL 366-REC-01** - Monitor the effectiveness of the change to the water management system and if exceedances (i.e. TSS) continue, implement further measures to address the exceedances.

Non-Compliant Low Risk

Noted

	Condition						Evidence Source	Comment / Finding	
L2.4	Water and/or Land Concentration Limits Point 9				-	Refer to Conditions L2.1 to L2.4.			
	Pollutant	Unit	50 Percentile	90 Percentile	3 DGM	100 Percentile			
				Concentratio	on Limit				
	O&G	mg/L				10			
	рН	рН				6.5 - 8.5			
	TSS	mg/L				50			
	Point 10					·			
	Pollutant Uni	Pollutant Un	Unit	50 Percentile	90 Percentile	3 DGM	100 Percentile		
				Concentra	tion Limit				
	O&G	mg/L				10			
	pН	pН				6.5 - 8.5			
	TSS	mg/L				50			
L2.5	Discharge to waters from Point 10 is only permitted when rainfall exceeds 140 mm in any 24 hour period.		Myuna Weather Station Data for 28/02/2014.	Discharge from the Emergency Coal Stockpile Dam through LDP A occurred on the 28 February 2014 following recorded rainfall of 306 mm from the Myuna weather station on the same day. The discharge continued until 09:00 am on the 1 March 2014.					
								This was the only discharge from LDP A during the audit period.	
<b>L3</b> L3.1	<ul> <li>Volume and Mass Limits</li> <li>For each discharge point or utilisation area specified below (by a point number), the volume/mass of:</li> <li>(c) liquids discharged to water; or</li> <li>(d) solids or liquids applied to the area;</li> <li>must not exceed the volume/mass limit specified for that discharge point</li> </ul>					by a point harge point	Myuna Weather Station, Volume Mass/ 21 April 12:00am to 22 April 12:00am. Annual Return 2015.	A total of 13,590 kL was discharged through LDP B on 21 April 2016 exceeding the volume limit of 13,000 kL. The volume of mine water pumped to the surface to be discharged was reported to be 4, 519 kL. Site management reported that a large storm event caused a high volume of surface water run-off as well as a local power outage that led to on-site system and electronic communication failures. The power outage let to insufficient information being available to manage the volume of water being discharged from the site and prevented water being pumped to the underground workings from the CHP Dam via the Siphon. Site management	
	or area.							reported that despite the power outage equipment at LDP B was monitoring the flow/volume; however, management was unable to view the data due to the power	
	Point		Unit of Measur	e	Volum	imit		electrical operation to manual operation so that the CHP Dam water levels can be	
	9		Kilolitres per da	у	1	3,000		observed during the site inspection indicated monitoring continued at LDP B during the power outage.	
								Improvements to the water management system have been conducted by increasing the rate of transfer (from approximately 10 L/sec to approximately 50 L/sec) from the CHP Dam to the underground workings settlement reservoir. Site management reported that this has been achieved by the addition of a larger pipe to the automated pumping system and the construction of a Siphon line from the CHP Dam to the underground workings via a borehole. The new pipeline and Siphon was observed during the site inspection.	

Compliance Status & Risk Level & Recommendations

-

Compliant

Non-Compliant Low Risk

	Condition	Evidence Source	Comment / Finding
<b>L4</b> L4.1	Waste The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below. Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below. Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below. This condition does not limit any other conditions in this licence.	JR Richards (2016) Total Waste Management Report, April 2016. JR Richards (2015) Total Waste Management Report, December 2015. JR Richards (2014) Total Waste Management Report, December 2014. JR Richards (2013) Total Waste Management Report, December 2013. EPA Transport Certificate 2T00677152 [31-Jul-2015 to 30-Jul-2016] – J100 Waste Mineral Oils, dated 25 May 2015 for 4,000 L. EPA Transport Certificate 2T00677153 [31-Jul-2015 to 30-Jul-2016] – J100 Waste Mineral Oils, dated 13 April 2016 for 1,800 L. EPA Transport Certificate 2T00677143 [31-Jul-2015 to 30-Jul-2016] – J100 Waste Mineral Oils, dated 24 March 2016 for 1,600 L. EPA Transport Certificate 2T00702644 [17-Dec-2015 to 16-Dec-2016] – J100 Waste Mineral Oils, dated 31 March 2016 for 200 kg. Mine/Site Waste Review Form – 9 February 2015. Mine/Site Waste Review Form – 19 April 2016 Mine/Site Waste Review Form – 22 February 2016. Myuna Spread Sheet 2016_04.Xls.	Site management reported that no requests have been made by the Secretary concerning waste issues. Site management reported that no waste received at the premises during the audit period. No wastes that had an origin outside of the site was observed by auditors during the site inspection. Refer to PA 10_0080, Schedule 3, Condition 31 for further details concerning waste management at the site.
L4.2	The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.	Site observations	Site management reported that no waste was received at the premises during the audit period.

Compliance Status & Risk Level & Recommendations

#### Compliant

**EPL 366-REC-02** – Remove the rubbish from the clean water diversion drain behind the waste storage bund and include the location in the pit top inspections.

	Condition	Evidence Source	Comment / Finding
L4.3	Waste This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence.	Site observations. URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0. Letter – DP&E (2013), Myuna IEA 2012-2013 9PA 10_0080), 18 December 2013 [to Centennial]. Letter – Centennial (2014), Myuna IEA – Stockpile Waste Progress Report, 23 September 2014 [Letter to DP&E].	The previous IEA (URS, 2013, Appendix A, p.23) identified a large stockpile of waste at the emergency stockpile area that had been brought to the surface from underground. Waste from underground is collected in a large waste bin that was observed during the site inspection. A letter from DP&E dated 18 December 2013 concerning the 2013 IEA noted that the Department required details concerning the sorting procedure and the manner in which the stockpiled was dealt with so the Department could be satisfied that the site had complied with Condition 31 of PA 10_0080. A letter from Centennial to DP&E dated 23 September 2014 noted that the site employed an external waste contractor to separate the stockpile into separate waste streams (general waste, metal, wood and stone material). Centennial also noted that procedure 002003 Environmental – Surface Cleaning and Waste management was implemented on 6 June 2012 for " <i>waste sorting and disposal through appropriate waste streams on a weekly basis</i> ".

Compliance Status & Risk Level & Recommendations

Noted

	Condition					Evidence Source	Comment / Finding
<b>L5</b> L5.1	Noise The licensee m premises, inclu following criter more than 25%	nust ensure tha uding from eme ia measured in 6 of any private	at noise generat ergency stockpili dB(A) at any of ely-owned land.	ed by the acti ing do not exc the following	vities within the ceed the locations or on	AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015), Myuna	Quarterly noise monitoring is conducted at the site. The auditors sighted quarterly and annual attended noise reports for 2013, 2014 and 2015 conducted by AECOM (Australia) Pty Ltd. The 2015 Annual Noise Monitoring Report (AECOM, 2016, p.22) noted that: . "I Aca noise levels higher than the project EPL noise limits were measured
	Location	Day	Emergency Day	Evening	Night	Monitoring 2014, Ref: 60283157-RPNV-10_B.	during the daytime, evening and nighttime periods, however it was noted that extraneous noise sources, namely road traffic, contributed significantly to these noise levels".
		LAeq(5mins)	LAeq(5mins)	LAeq(15 min)	LAeq (15 min) / LAeq (1 min)	AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01.	<ul> <li>"Colliery noise was inaudible at all locations during the day, varied from audible to inaudible in the evening and was generally barely audible / audible at night. LAeq levels were largely controlled by extraneous noise sources such as passing traffic, whereas LA90 levels were controlled by insects or traffic during</li> </ul>
	R1: 2 Turrama St Wangi R2: 2 Moani St Wangi	35	40	35	35 45	AECOM (2014), Myuna Colliery Quarterly Noise Monitoring June 2014. AECOM (2014), Myuna Colliery Quarterly Noise Monitoring September 2014.	the day or Colliery operations during the evening and night". AECOM (2015-A, p.22) also noted that "Measured on-site noise levels indicated noise levels at all receivers were compliant with EPL conditions during the evening and night-time monitoring periods. No non-compliances were recorded during the evening or night-time period. Due to the inaudibility of the Colliery at all locations during the day, daytime noise emissions are not considered an issue".
	R3: 3 Sunset Cl Wangi					AECOM (2014), Myuna Colliery Quarterly Noise Monitoring December 2014.	A permanent noise logger was installed on-site and commenced operation in January 2014. The noise monitoring program uses a combination of real-time and attended monitoring to evaluate the noise from the site.
	R4: 93 Donnelly Rd Arcadia Vale	35	44	40	38 49	AECOM (2015), Myuna Colliery Quarterly Noise Monitoring March 2015. AECOM (2015), Myuna Colliery Quarterly Noise	<ul> <li>The 2014 Annual Noise Monitoring Report (AECOM, 2015-A, p.22) noted that:</li> <li>"LAeq noise levels higher than the project EPL noise limits were measured during the daytime, evening and nighttime periods, however it was noted that extraneous noise sources, namely road traffic, contributed significantly to these noise levels".</li> </ul>
	R5: 83 Donnelly Rd Arcadia Vale R6: 63 Donnelly Rd Arcadia Vale R7: 53 Donnelly Rd Arcadia Vale R8: Donnelly Road Arcadia Vale	37	44	42	39 49	Colliery Quarterly Noise Monitoring June 2015. AECOM (2015), Myuna Colliery Quarterly Noise Monitoring September 2015. AECOM (2015), Myuna Colliery Quarterly Noise Monitoring December 2015. AECOM (2016-B), Myuna Colliery Quarterly Noise Monitoring March 2016. Email: EPA (2015), Myuna Colliery Noise Monitoring [Sent 7 December 2015 @3:00pm] to Centennial.	<ul> <li>"Colliery operations were subjectively observed to contribute little to the measured LAeq noise levels during any period throughout the day. Definitive compliance with EPL noise limits was therefore difficult to determine through direct measurement due to the influence of extraneous noise events".</li> <li>The 2016 quarterly Noise Monitoring Report (AECOM, 2016-B, p.14) also noted that "Continuous noise monitoring data from a permanent noise logger installed on site was incorporated into a noise model created using SoundPLAN software in order to determine noise impacts at the eight assessment locations. By modelling on-site noise levels, noise levels at receiver locations were calculated corresponding to onsite noise levels, presented in Section 4.4. Measured on-site noise levels indicated noise levels at all receivers were compliant with EPL conditions during all periods".</li> <li>The Complaints Register and the 2013, 2014 and 2015 Annual Reviews note that there were no noise complaints concerning the site during the audit period.</li> <li>Given that there was no audible noise from the mine operations at receiver locations as determined by noise monitoring conducted by the independent noise consultants this condition was found to be compliant.</li> </ul>
	All other privately owned land	35	40	35	35 45		

The licensee may provide to the EPA written evidence of any agreement with a landholder which is subject to the above noise limits. The written evidence of any agreement may be submitted with a licence variation to remove the landholder from the above table. Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
L5.2	<ul> <li>For the purpose of condition L5.1:</li> <li>(a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and</li> <li>(b) Public Holidays;</li> <li>(c) Evening is defined as the period from 6pm to 10pm; and</li> <li>(d) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.</li> </ul>	-	Noted
L5.3	<ul> <li>The noise limits set out in condition L5.1 apply under all meteorological conditions except for any one of the following:</li> <li>(a) wind speeds greater than 3 metres/second at 10 metres above ground level; or</li> <li>(b) stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or</li> <li>(c) stability category G temperature inversion conditions.</li> </ul>	AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B. AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01. Refer to L5.1 for Quarterly Noise Report References.	Annual noise reports for 2013, 2014 and 2015 conducted by AECOM (Australia) Pty Ltd. were available for review. Based on a review of these reports, there has been no reason to trigger the use of this clause. Quarterly noise reports were noted to include the statement " <i>Meteorological data from the on-site weather station showed that conditions were acceptable in accordance with Condition L5.3 and L5.4 of the EPL</i> ". Site management reported that the on-site weather station data is available to the noise consultant when preparing reports for attended events.
L5.4	<ul> <li>For the purpose of condition L5.3:</li> <li>(a) the meteorological data to be used for determining meteorological conditions is the data recorded by the Eraring meteorological weather station or a weather station established at this site for the purposes of this Environment Protection Licence;</li> <li>(b) stability category temperature inversion conditions are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the <i>NSW Industrial Noise Policy'(EPA 2000)</i>.</li> </ul>	AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B. AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01. Myuna Weather Portal [Online] – Carbon Based Pty Ltd.	<ul> <li>a) The auditors observed the on-site weather station during the site inspection.</li> <li>b) The auditors observed on-site weather station information on the Centennial Coal Environmental Monitoring Portal. The display included, but was not limited to temperature, rainfall, sigma theta and vector speed information. The information was available for preceding days (i.e. greater than 24hrs).</li> </ul>
L5.5	For the purpose of determining the noise generated at the premises the licensee must use a Class 1 or 2 noise monitoring device as defined by AS IEC61672.1-2004 and AS IEC61672.2-2004, or other noise monitoring equipment accepted by the EPA in writing.	AECOM (2014), Myuna Colliery Quarterly Noise Monitoring June 2014. AECOM (2014), Myuna Colliery Quarterly Noise Monitoring September 2014. AECOM (2014), Myuna Colliery Quarterly Noise	The quarterly noise monitoring reports note that 'attended measurements were conducted at six of the monitoring locations using a Bruel & Kjaer Type 2260 Precision Sound Analyser. This instrument has Class 1 characteristics as defined in AS IEC 61672.1-2004 "Electroacoustics - Sound Level Meters". Measurements were conducted over 15-minute intervals. Calibration of the instrument was confirmed with a Bruel & Kjaer Type 4231 Sound Level Calibrator prior to, and at the completion of monitoring. No significant drift in calibration was noted during the measurement period. The sound level meter was programmed to store L <sub>1</sub> , L <sub>10</sub> , Leq and L <sub>90</sub> noise levels during each measurement period".

# Compliance Status & Risk Level & Recommendations

Noted

Not Triggered

Compliant

	Condition	Evidence Source	Comment / Finding	Compliance Status & Risk Level & Recommendations
L5.6	<ol> <li>To determine compliance:</li> <li>With the LAeq(15 min) noise limits in condition L5.1, the licensee must locate noise monitoring equipment; (a) within 30 metres of a dwelling facade (but not closer than 3 metres) where any dwelling on the property is situated more than 30 metres from the property boundary that is closest to the premises; (b) approximately on the boundary where any dwelling is situated 30 metres or less from the property boundary that is closest to the premises, or, where applicable, (c) within approximately 50 metres if the boundary of a national park or nature reserve.</li> <li>With the LA1(1 minute) noise limits in condition L5.1, the noise monitoring equipment must be located within 1 metre of a dwelling facade.</li> <li>With the noise limits in condition L5.1, the noise monitoring equipment must be located; (a) at the most affected point at a location where there is no dwelling at the location, or (b) at the most affected point within an area at a location prescribed by conditions L5.6 1(a) or L5.6 1(b).</li> </ol>	Monitoring December 2014. AECOM (2015), Myuna Colliery Quarterly Noise Monitoring March 2015. AECOM (2015), Myuna Colliery Quarterly Noise Monitoring June 2015. AECOM (2015), Myuna Colliery Quarterly Noise Monitoring September 2015. AECOM (2015), Myuna Colliery Quarterly Noise Monitoring December 2015. AECOM (2016-B), Myuna Colliery Quarterly Noise Monitoring March 2016.	The quarterly noise reports note that "LA1 (1min) noise levels measured at each receiver also exceed the EPL noise limits, however these levels are influenced largely by extraneous noise sources, namely traffic. Due to the inability to determine LA <sub>1</sub> (1min) noise contributions from the Colliery at the receiver location, as well as issues accessing monitoring locations 1m from the dwelling facades, an alternative method of determining compliance using the on-site logger and noise modelling has been used". There was no evidence of correspondence to demonstrate that the site had requested LA <sub>1</sub> (night noise monitoring) be conducted at receivers R1 to R8. Letters notifying individual residents R1 to R8 of the site's intention to conduct monitoring was sighted dated 13 December 2012.	Compliant
L5.7	<ul> <li>A non-compliance of condition L5.1 will still occur where noise generated from the premises in excess of the appropriate limit is measured;</li> <li>at a location other than an area prescribed by conditions L5.6 1(a) and L5.6 1(b), and /or</li> <li>at a point other than the most affected point at a location.</li> </ul>	-	The requirements of this Condition have not been triggered.	Not Trigged
L5.8	For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.	-	Noted	Noted
L6	Potentially Offensive Odour	Complaints Register.	The Complaints Register and the 2013, 2014 and 2015 Annual Reviews identified	Compliant
L6.1	No condition of this licence identifies a potentially offensive odour for the	2015 Annual Return.	that there were no complaints concerning the site during the audit period. No odours were noted during the site inspection.	
	Act 1997.	2014 Annual Return.		
		2013 Annual Return		
L6.2	The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.		The Complaints Register and the 2013, 2014 and 2015 Annual Returns identified that there were no complaints concerning the site during the audit period. No odours were noted and no activities likely to cause an offence odour were noted during the site inspection. Waste materials were stored in appropriate receptacles and removed from site on a regular basis.	Compliant

	Condition	Evidence Source	Comment / Finding
<b>01</b> 01.1	Activities must be carried out in a competent manner. This includes: (a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and (b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	<ul> <li>Site observations.</li> <li>2015 Annual Return.</li> <li>2014 Annual Return.</li> <li>2013 Annual Return.</li> <li>2013 Annual Return.</li> <li>VM31746 – environmental inspections, weekly contractor environmental monitoring, 20 May 2016.</li> <li>VM35642 – weekday environmental monitoring report, 23 May 2016.</li> <li>VM35644 – weekly surface environmental inspection</li> <li>VM35643 – environmental weekly surface cleaning, 27 May 2016.</li> <li>JR Richards (2016) Total Waste Management Report, April 2016.</li> <li>JR Richards (2015) Total Waste Management Report, December 2015.</li> <li>JR Richards (2014) Total Waste Management Report, December 2014.</li> <li>JR Richards (2013) Total Waste Management Report, December 2013.</li> <li>EPA Transport Certificates 2T00677152 / 2T00677153 / 2T00677143 / 2T00702644</li> <li>Mine/Site Waste Review Form – 9 February 2015.</li> <li>Mine/Site Waste Review Form – 19 April 2016</li> <li>Mine/Site Waste Review Form – 19 April 2016.</li> </ul>	<ul> <li>Based on the site inspection and review of documents, Myuna appeared to be compliant with this condition. The following discusses the documents and evidence that formed the basis of this assessment:</li> <li>Myuna did not receive a Penalty Infringement Notice (PIN) from EPA during the audit period.</li> <li>The Complaints Register and the 2013, 2014 and 2015 Annual Reviews identified that there were no complaints concerning the site during the audit period.</li> <li>PULSE is used to generate weekly work orders. The auditors sighted work orders for weekly inspections.</li> <li>The site installed new equipment during the audit period including a real-time noise logger and HVAS.</li> <li>Materials at the pit top were stored on sealed ground. Hazardous chemicals were stored in a dedicated store adjacent to a bunded bulk oil storage area. Chemicals were observed to be stored on bunded pallets. The floor of the store was observed to slope towards the rear of the store is potential that should product stored in front of the painted line leak, liquid may flow outside rather than to the internal drain.</li> <li>Weekly surface cleaning work orders were noted to include management and operation of the coal pad dam water diesel pump, clean out of drive in sump at the CHP Dam and maintenance and servicing of water catchment sumps and drains. Weekly surface of oil on floor in the bulk oil storage area and levels of silt in the sumps in the workshop.</li> <li>Improvements to the water management system have been conducted by increasing the rate of transfer (from approximately 10 L/sec to approximately 50 L/sec) from the CHP Dam to the underground settlement reservoir. Site management reported that this has been achieved by the addition of a larger pipe to the automated pumping system and the construction of a Siphon line from the CHP Dam to the underground workings via a borehole. The new pipeline and Siphon was observed during the site inspection.</li> </ul>

# Compliance Status & Risk Level & Recommendations

#### Compliant

**EPL 366-REC-03** – Develop and implement a procedure / process so that hazardous chemicals located in the Haz Chem Store are stored behind the painted line so that any leaks flow backwards towards the drain.

	Condition	Evidence Source	Comment / Finding
<b>O2</b> O2.1	Maintenance of plant and equipment All plant and equipment installed at the premises or used in connection with the licensed activity (a) must be maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	<ul> <li>Work Orders: VM31746, VM35642, VM35644, VM35643.</li> <li>Site observations.</li> <li>Carbon Based [2016] Water Monitor Calibration LDP A, 29 February 2016.</li> <li>Carbon Based [2016] Water Monitor Calibration LDP B, 29 February 2016.</li> <li>Carbon Based [2015] Annual Weather Station Field Check, 30 June 2015.</li> <li>Carbon Based [2015] Quarterly Weather Station Field Check, 23 March 2015.</li> <li>Davis Instruments – Calibration Certificates 17 July 2014.</li> <li>AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D.</li> <li>AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B.</li> <li>AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01.</li> </ul>	<ul> <li>PULSE is used to generate weekly work orders. The auditors sighted work orders including, but not limited to:</li> <li>VM31746 – environmental inspections, weekly contractor environmental monitoring, 20 May 2016.</li> <li>VM35642 – weekday environmental monitoring report, 23 May 2016.</li> <li>VM35643 – environmental weekly surface cleaning, 27 May 2016.</li> <li>Weekly surface cleaning work orders were noted to include management and operation of the coal pad dam water diesel pump, clean out of drive in sump at the Coal Handling Plant dam and maintenance and servicing of water catchment sumps and drains. Weekly surface inspections were noted to address inspections for leaking machinery, evidence of oil on floor in the bulk oil storage area and levels of silt in the sumps in the workshop. The weekly contractor environment monitoring checklists included the requirement t operate pumps. Other measures observed or noted included:</li> <li>Licenced discharge point calibration certificates.</li> <li>Weather station calibration certificates [Carbon Based [2015] and Davis Instruments].</li> <li>On-line environmental data for the water sensor at LDP B was observed by the auditors.</li> <li>HVAS Calibration Form: PM2.5 / PM10 / TSP dated 19 April 2016.</li> <li>Oil separators and oily water detention tanks, drains are serviced periodically through PUSE generated work order by an external contractor.</li> <li>Consultants are engaged to conduct sampling (air, noise, water).</li> <li>Only licensed contractors are used to conduct activities such as maintenance of flow meters.</li> <li>Training – staff are trained to use equipment prior to use.</li> <li>Mock emergency for the PIRMP was conducted on 17 December 2015.</li> <li>Oil waste bins were observed at the workshop with secondary containment.</li> <li>The environmental Coordinator was reported to be studying for a Diploma in Leadership Management and SALT Legal Compliance. The course manual was sighted by MCW Environmental.</li> </ul>
			April 2015 power outage. MCW Environmental did not assess all aspects of the mine that could be relevant to this condition.

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
<b>O3</b> O3.1	Dust The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Site observations. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016. Myuna Surface Water Model.XIsx.	<ul> <li>Potential dust sources were observed to include wind-blown dust from the emergency stockpile area, hardstand areas, and dust from coal/coal fines spills that may occur.</li> <li>The local topography lends itself to assisting with the control of airborne dust particles as pit top operations are located in a bowl/hollow.</li> <li>No windblown dust was observed during the site inspections. Weather conditions at the time of the site inspection were dry and sunny.</li> <li>Operational engineering dust controls include the following: <ul> <li>Sweeper truck at pit top hard stand locations.</li> <li>Hard standing areas to the pit top and sealed internal roads (with the exception of the emergency stockpile road);</li> <li>Only very limited non hardstand areas exist;</li> <li>Convevor belts are covered:</li> </ul> </li> </ul>
		Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2016) Annual Review January 2015 to December 2015. Complaints Register.	<ul> <li>Piped spray on stockpile road (spray heads observed during site inspection);</li> <li>Emergency coal stockpile is sprayed using a recently installed mobile spray that replaces the static spray heads on the upper emergency stockpile pad; however, was not operational as the pipework is due to be replaced du to corroded pipework. It is noted that the coal not stockpiled is not used unless coal cannot be received at Eraring Power Station. The emergency coal stockpile was reported not to have been used a couple of times during the audit period due to the shutdown of the Eraring Power Station conveyor.</li> <li>The Complaints Register and the 2013, 2014 and 2015 Annual Reviews note that there were no dust complaints concerning the site during the audit period.</li> </ul>
O3.2	Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission from the premises, of wind- blown or traffic generated dust.	Site observations.	Internal roads were observed to be sealed including the road to the emergency stockpile area. The emergency stockpile area was unsealed, however, was provided with perimeter water spray equipment. The local topography lends itself to assisting with the control of airborne dust particles as pit top operations are located in a bowl/hollow. Refer to Condition O3.1 for details concerning dust controls. Refer to PA 10_0080, Schedule 3, Condition 17 regarding dust results which indicate no exceedances of approval criteria.
O3.3	All trafficable areas, coal storage areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.	Site observations.	Internal roads were observed to be sealed including the road to the emergency stockpile area. The hardstand areas were also noted to be relatively free of dirt that may be a source of dust. Refer to Condition O3.1 for details concerning dust controls.

Compliance Status & Risk Level & Recommendations

### Compliant

Compliant

	Condition	Evidence Source	Comment / Finding		
O3.4	Coal stockpiles must be maintained in a condition that will minimise the generation and emission of dust on the premises.	Site observations.	The on-site emergency stockpile is used only when Eraring Power Station cannot accept coal via the overhead conveyor. In the event the Eraring Power Station is not operational, coal is transported to the emergency stockpile area from the pit top via covered trucks on an internal sealed road. The road to the stockpile area was observed to have a water spray pipeline adjacent to it at the time of the site inspection.		
			The emergency coal stockpile is sprayed if coal is required to be stockpiled. A new connection point for a mobile spray was observed during the site inspection. Site management reported that the hook-up point had not been connected as the condition of the underground pipework was not known due to potential corrosive water issues (i.e. high salinity).		
			Site management reported the stockpile had been used only on a number of occasions during the audit period. At the time of the site inspection a small amount of fines from site sumps was being dried out on the emergency stockpile area and a contractor was sorting reclaimed coal from historic stockpiles. The historic waste coal piles were observed to be vegetated therefore limiting the potential for windblown dust.		
O4.1	Emergency Response	Emergency Management System Response Plan EMS-	The site Emergency Management System Response Plan was sighted at the time of the site inspection		
	<ul> <li>The licensee must maintain, and implement as necessary, a current emergency response plan for the premises. The licensee must keep the emergency response plan on the premises at all times. The emergency response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment.</li> <li>If a current emergency response plan does not exist at the date on which this condition is attached to the licence, the licensee must develop an emergency response plan within three months of that date.</li> </ul>	System Response Plan EMS- SE-D-01-P-001. Pollution Incident Response Management Plan, April 2016. EWP0001 – Spill Response. HSMS-SE-D-09 Accident Investigation Report.	The site's Pollution Incident Response Management Plan (PIRMP), April 2016 was available for review at the time of the site inspection. Appendix 4 of the PRIMP included an incident response and reporting flow chart. Appendix 5 of the PIRMP included a spill protocol.		
O5.1	Other Operating Conditions	Site observations.	No vehicles carrying materials or wastes used in conducting the activities at the		
	The licensee must ensure that activities are conducted in an environmentally satisfactory manner. So as to minimise and prevent the pollution of air and water the licensee must:	MY-EWP-009 Transport of Equipment Off-site, January 2015.	MY-EWP-009 Transport of Equipment Off-site, January 2015.	MY-EWP-009 Transport of Equipment Off-site, January 2015.	The entrance to the site was observed to be sealed at the time of the site inspection. Hard stand areas at the pit top were observed to be clean and tidy at the time of the site inspection.
	<ul> <li>(a) ensure that vehicles or containers prior to leaving the premises are clean and sealed in a manner that will not cause materials or wastes used in conducting the activities at the premises to be tracked, thrown from, blown, fall, or cast from any vehicle or container onto a public road.</li> <li>(b) the licensee must have in place and implement procedures to ensure that vehicles and containers exiting the premises are in a condition to ensure that materials are not tracked, thrown, blown, fall or cast onto a public road.</li> </ul>		Site management reported that surface water drains from the car park and entrance to the site report to the First Flush Settlement Tank.		
			A procedure (MY-EWP-009 Transport of Equipment Off-site) was sighted with a stated objective of "To transport equipment from the Colliery in a clean condition and prevent leakage of fuels/ oil or grease during transport".		
O5.2	All above-ground tanks containing material that is likely to cause environmental harm must be bunded or have an alternative spill containment system in place.	Site observations.	Aboveground Storage Tanks (ASTs) containing material with the potential to cause environmental harm were observed to be stored in a dedicated bulk oil shed at the pit top area during the site inspection.		
			A double-skinned diesel AST with a capacity of 28,000 L was observed in the shed. A single skinned steel AST labelled as 'Combustible Class 2' was observed to be stored in a bunded area in the shed.		
			The shed was noted to be bunded with a grated drain across the entrance and a drain to the rear. Site management reported the drains report to the oil/water separator at the washbay. In the event of a spill/leak in the shed a valve can be operated opening the drain to the oil/water separator.		

Compliance Status & Risk Level & Recommendations

#### Compliant

**EPL 366-REC-04** – The mobile spray for the emergency coal stockpile should be commissioned as soon as possible. Measure to mitigate corrosion to the metal pipework should be investigated and implemented (e.g. replacement of metal pipework with PVC).

Compliant

Compliant

	Condition	Evidence Source	Comment / Finding
O5.3	The Licensee must transport all coal from the premises via the enclosed overland coal conveyor to Eraring Power Station.	Site observations.	The auditors observed the overland conveyor to Eraring Power station during the site inspection. No coal is transported by road (public or private) to Eraring Power Station.
			Coal produced during the audit period was transported by overland conveyor to Earing Power Station. Coal that cannot be conveyed to or received at Earing Power Station (such as through shutdown of the conveyor for maintenance) is temporarily stockpiled on-site. Eraring Power Station own and operate the conveyor from the colliery to Eraring Power Station.
<b>M1</b> M1.1	<b>Monitoring and Recording Conditions</b> The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Centennial (2015), Response to EPA Request for Additional Information, 22 September 2015 [Letter to EPA]. Myuna Spread Sheet 2016_04.XIs.	Monitoring results are compiled and stored on a spread sheet within the Centennial Lotus Notes Intranet. Monitoring results for monthly monitoring data were sighted and available for the audit period. Environmental reports containing environmental monitoring data prepared by external consultants were available for review. Reports included but were not limited to noise, water and air emission data.
M1.2	<ul> <li>Monitoring and Recording Conditions</li> <li>All records to be kept by this licence must be:</li> <li>(c) in a legible form, or in a form that can readily be reduced to a legible form;</li> <li>(d) kept for at least 4 years after the monitoring or event to which they relate took place; and</li> <li>(e) produced in a legible form to any authorised officer of the EPA who asks to see them.</li> </ul>	<ul> <li>Myuna Environmental Monitoring Reports – October 2013 to April 2016.</li> <li>Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016.</li> <li>Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016.</li> </ul>	Monitoring results are compiled and stored on a spread sheet within the Centennial Lotus Notes Intranet. Monitoring results for monthly monitoring data were sighted and available for the audit period as well as preceding years. It is considered that the monitoring records are maintained in compliance with the requirements of this condition and may be made available upon requests of an authorised officer. Records are maintained on the internal Myuna server. ECD is used to store records and data. A letter from Centennial to the EPA dated 22 September 2015 noted that the Regional Officer for the EPA requested further information on 11 September 2015 regarding rainfall data and dam storage design capacity following provision of written notification by Centennial of a discharge from LDP B on 22 May 2015. A letter from Centennial to the EPA dated 22 September 2015 included rainfall data for the 22 and 23 May 2015 as well as dam size requirements as requested by the EPA.
M1.3	<ul> <li>Monitoring and Recording Conditions</li> <li>The following records must be kept in respect of any samples required to be collected for the purposes of this licence:</li> <li>(a) the date(s) on which the sample was taken;</li> <li>(b) the time(s) at which the sample was collected;</li> <li>(c) the point at which the sample was taken; and</li> <li>(d) the name of the person who collected the sample.</li> </ul>	AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B. AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01.	The monthly water and dust monitoring reports contained chain of custody sheets, certificates of analysis and water monitoring field sheets. Monthly Environmental Monitoring Reports were available October 2013 to April 2016. Names, dates, times and points of sampling are included in the environmental monitoring spread sheet (Myuna Spread Sheet 2016_04.Xls).



# Compliance Status & Risk Level & Recommendations

### Compliant

Compliant

Compliant

	Condition	Evidence Source	Comment / Finding
M2 M2.1	Requirement to monitor concentration of pollutants discharged For each monitoring/discharge point or utilisation area specified in the table (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Myuna Environmental Monitoring Reports – October 2013 to April 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016. Myuna Spread Sheet 2016_04.Xls.	<ul> <li>Monitoring results for dust are compiled and stored on a spread sheet within the Centennial Lotus Notes Intranet. Monitoring results for depositional dust data were sighted from May 2014 to April 2016. HVAS data was available from 5 May 2015 to 29 April 2016. For the data reviewed TSS and PM<sub>10</sub> had been recorded every six days.</li> <li>A non-compliance was reported in the EPA 2014 Annual Return for a failure to collect and analyse the required number of samples from DG2. The monthly sample collection and analysis for 2014 was undertaken by a contractor. No result is recorded for DG2 for the months September and December 2014. Site management reported that the sample jar collected from DG2 for the months of September and December was broken during transportation on a bush track between DG2 and DG1. An incident investigation and a procedural review was undertaken and subsequently a container was designed and implemented for the secure transport of dust deposition sample jars.</li> <li>Carbon Based (2016, p.3) stated that "The depositional dust gauges are operated to the Australian Standard AS3580.10.1 "Methods for Sampling and Analysis of Ambient Air Method 10.1 Determination of Particulates—Deposited Matter—Gravimetric Method" (equivalent to EPA AM-19). Sampling occurs every 30 +/-2 days and each gauge is analysed for insoluble solids and ash residue. The results are reported as g/m2.month. The High Volume Air Samplers are operated to the Australian Standards AS2724.3 "Ambient Air—Particulate matter, Part 3: Determination of Total suspended particulates (TSP)—High Volume sampler Gravimetric method" (equivalent to EPA AM-15) and AS3580.9.6 (Methods for Sampling and Analysis of Sampling and Analysis of Ambient Air. Determination of Suspended Particulates—PM10 High Volume Air sampler with size selective inlet - Gravimetric method" (equivalent to EPA AM-15) and AS3580.9.6 (Methods for Sampling is Scheduled for 24 hours every 6 days to the DECCW (EPA) protocd".</li> <li>There was general compliance with th</li></ul>
M2.2	Points 3, 4, 5, 6 (Dust)		Refer to M2.1

#### Points 3, 4, 5, 6 (Dust) M2.2

Pollutant	Units	Frequen
Pollutant	Units	Fred

Pollutant	Units	Frequency	Sampling Method
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19

### Points 7 (High Volume Air Sampler)

Pollutant	Units	Frequency	Sampling Method
Total suspended solids	Micrograms per cubic metre	Every 6 days	AM-15

### Points 8 (High Volume Air Sampler)

Pollutant	Units	Frequency	Sampling Method
PM10	Micrograms per cubic metre	Every 6 days	AM-18

Compliance Status & Risk Level & Recommendations

Non-compliant

Low Risk

Non-compliant Low Risk

	Condition				Evidence Source	Comment / Finding
M2.3	Water and/ or Points 9 (LDP Pollutant Oil & grease pH Total suspended solids	Land Monitoring Re B), 10 (LDPA) Units Milligrams per litre pH Milligrams per litre	Frequency         Special Frequency 1         Special Frequency 1         Special Frequency 1         Special Frequency 1	Sampling Method Grab sample Grab sample Grab sample	Monitoring Reports – October 2013 to April 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016. Myuna Spread Sheet 2016_04.XIs.	Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water reports prepared by Carbon Based Environmental were available for March and April 2016. The reports stated that " <i>Surface waters are sampled in accordance with</i> <i>Australian Standards AS5667.1 "Guidance on the Design of Sample Programs,</i> <i>Sampling Techniques and the Preservation and Handling of Samples", AS5667.6</i> <i>"Water Quality Sampling—Guidance on sampling of rivers and streams". All</i> <i>laboratory analysis is conducted by a National Association of Testing Authorities</i> <i>(NATA) accredited laboratory"</i> and that " <i>Surface water sites include creeks and local</i> <i>streams. One (1) site LDPB is sampled daily for flow rate, odour, water colour, pH,</i> <i>Electrical Conductivity, Total Suspended Solids and Oil and Grease. Three (3) sites</i> <i>are sampled monthly for flow rate, odour, water colour, pH, Electrical Conductivity,</i> <i>Total Suspended Solids and Total Dissolved Solids. Additional analysis is conducted</i> <i>LDPB including Total Phosphorus, Magnesium and Silicon. Four (4) additional</i> <i>surface water sites are sampled quarterly"</i> (Carbon Based, 2016, p.3).
M2.4	Special Frequency 1         For Special Frequency 1 the licensee must monitor daily during discharge.         Special Frequency 1 the licensee must monitor daily during discharge.         Special Frequency 1         Testing methods - concentration limits         Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:			Juring	Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016. Carbon Based Environmental Pty Ltd (2015), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, December 2015. Myuna Spread Sheet 2016, 04.XIs	<ul> <li>For 'Special Frequency 1' Myuna must monitor daily.</li> <li>Daily surface water monitoring results for LDP B were available in the March and April 2016 and December 2015 Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water monitoring reports (Carbon Based 2016 and 2015). Monitoring results are compiled and stored on a spread sheet within the Centennial Lotus Notes Intranet.</li> <li>Laboratory results, including CoC,, field sheets, and certificates of analysis were available for LDP B for the following dates: 05/12/2013 / 02/12/2013 / 06/12/2016 / 08/12/2013 / 09/12/2013 / 10/12/2013 / 11/12/2013 / 12/12/2013 / 06/12/2013 / 14/12/2013 / 16/12/2013 / 17/12/2013 / 18/12/2013 / 19/12/2013 / 20/12/2013 / 21/12/2013 / 23/12/2013 / 24/12/2013 / 25/12/2013 / 26/12/2013 / 27/12/2013 / 28/12/2013 / 29/12/2013 / 30/12/2013 / 31/12/2013 , as well as June 2014 and March 2014.</li> <li>LDP A discharged only once during the audit period (28 February and 1 March 2014) following a rainfall event in excess of 140 mm in a 24hr period.</li> </ul>
<b>M3</b> M3.1				ne air required ce with:	Water and Dust Monthly Monitoring Results June 2014. Water and Dust Monthly Monitoring Results March	A review of the monitoring reports (Carbon Based, 2016) indicated that monitoring methods were consistent with the EPA approved methodology Australian Standards. The reports included a summary of results as well as laboratory reports and chain of custody documentation.
	<ul> <li>a) any methodology required by or under the Act to be used for the testing of the concentration of the pollutant; or</li> <li>b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or</li> <li>c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.</li> </ul>		2014. Water and Dust Monthly Monitoring Results December 2013.	Ambient dust monitoring, using depositional dust gauges is conducted in accordance with the requirements of Approved Method AM-19 (AS/NZS 3580.10.1:2003).		
M3.2	<ul> <li>Testing methods - concentration limits</li> <li>Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.</li> </ul>			ence, monitoring r applied to a oved Methods the EPA in	-	Site management reported that no other methods approved by EPA for the monitoring of pollutant concentrations discharged to waters apply to the site.

# Compliance Status & Risk Level & Recommendations

### Compliant

Compliant

Compliant

	Condition					Evidence Source	Comment / Finding	
<b>M4</b> M4.1	<ul> <li>Environmental Monitoring</li> <li>Requirement to monitor noise</li> <li>To determine compliance with condition L5.1, attended noise monitoring must be undertaken in accordance with conditions L5.5 and L5.6, and</li> <li>d) at each one of the locations listed in condition L5.1;</li> <li>e) occur annually within the reporting period of the Environment Protection Licence;</li> <li>f) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy (EPA 2000) for a minimum of 1.5 hours during the day; 30 minutes during the evening; and 1 hours during the night, and</li> <li>g) occur for three (3) consecutive days.</li> </ul>					AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B. AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01. Email: EPA (2015), Myuna Colliery Noise Monitoring [Sent 7 December 2015 @3:00pm] to Centennial. 2015 Annual Return.	The 2015 Annual Noise Report (AECOM, 2016, Appendix B) included an email from the EPA (EPA, 2015) that indicated Myuna had telephoned the EPA officer for the site to notify them that the site had inadvertently undertaken monitoring on the same day of the week for the first two quarterly monitoring periods. The first quarter and second quarter day, evening and night time noise monitoring were undertaken on the same week day. This condition came into effect with Licence Variation notice 1527732 issued on the 13 May 2015 which is in the second quarter of the Annual Return monitoring period. Myuna was advised by the EPA officer to include the incident as a non-compliance in the Annual Return for the period; however, recommend that the EPA treat the incident as a transitional phase and that the EPA would not take any action. The incident was included in the 2015 Annual Return.	
<b>M5</b> M5.1	Weather mon For each moni monitor (by sa specified in Co of measure, av opposite in the Point W1	Weather monitoring For each monitoring point specified in the table below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns. <b>Point W1</b>				Site observations. Carbon Based [2015] Annual Weather Station Field Check, 30 June 2015. Carbon Based [2015] Quarterly Weather Station Field Check, 23 March 2015.	The auditors sighted the on-site weather station and real-time on-line (VistaVisionData) data for 31 May 2016. The previous IEA (URS, 2013, Appendix A, p,13) stated that "An email from Carbon Based Environmental Pty Ltd dated 26 June 2013 indicated that in the air consultants opinion the weather station meets the approved methods for sampling of air pollutants in New South Wales". Weather results and data are available in the monthly environmental monitoring data reports. Calibration certificates for the weather station dated 30 June 2015 stated that "The meteorological station meets	
	Parameter	Units	Frequency	Averaging Period	Sampling Method	Myuna Environmental Monitoring Reports – October 2013 to April 2016.	the requirements of the Approved Methods for Sampling of Air Pollutants in New South Wales [2007]". The auditors were able to view weather station information on the Centennial Coal Environmental Monitoring Portal. The display included, but was not limited to: rainfall, wind direction, wind speed, air temperature, sigma theta and	
	Rainfall Wind	mm	Continuous Continuous	24 hour	AM-4	URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	relative humidity. Data was presented in real-time data via the Myuna weather portal.	
	direction Wind speed	Metre per	Continuous	1 hour	AM-2 & AM-4		monitoring station was available in the monthly environments.	monitoring station was available in the monthly environmental monitoring data reports.
	Air temperature	Second Degrees Celsius	Continuous	1 hour	AM-4			
	Sigm-theta	percentage	Continuous	15 mins	AM-2 & AM-4			
	Relative humidity	Relative percentage Continuous 1 hour AM-4						
M5.2	For the purpose of condition M5.1, Point W1 refers to a meteorological station established on the premises.				neteorological	Site observations.	The auditors observed the weather station on site. The weather station was installed in April 2011.	
M5.3	The licensee may use the meteorological station established at Eraring Power Station provided the licensee has authority from Eraring Energy to access data from the Eraring Power Station at all times. However, if this station is not available at any time then condition M5.2 applies.					Site observations.	Site management reported that the Eraring Power Station meteorological station is not used. The site uses its own meteorological station that was installed in April 2011.	
M5.4	The licensee n	nust fully comp	bly with condition	on M5 by 30 J	lune 2013.	Site observations.	The site uses its own meteorological station that was installed in April 2011.	

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# Compliance Status & Risk Level & Recommendations

Non-compliant

Administrative Non-compliance

Compliant

Compliant

Compliant

	Condition	Evidence Source	Comment / Finding
<b>M6</b> M6.1	Recording of pollution complaints The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2016) Annual Review January 2015 to December 2015. Complaints Register. 2015 Annual Return. 2014 Annual Return. 2013 Annual Return.	The Complaints Register and the 2013, 2014 and 2015 Annual Reviews note that there were no complaints concerning the site during the audit period. A Community Complaint procedure EWP-038 Community Complaints was available that describes the process for handling complaints. Complaints would be recorded in ECD.
M6.2	<ul> <li>Recording of pollution complaints</li> <li>The record must include details of the following: <ul> <li>(a) the date and time of the complaint;</li> <li>(b) the method by which the complaint was made;</li> <li>(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a not to that effect;</li> <li>(d) the nature of the complaint;</li> <li>(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and</li> <li>(f) if no action was taken by the licensee, the reasons why no action was taken.</li> </ul> </li> </ul>	-	Myuna operates an Environment and Community Enquiry Line for the purpose of receiving complaints in accordance with the requirements of this Condition. A Community Complaint procedure EWP-038 Community Complaints is available that describes the process for handling complaints. Complaints are recorded in ECD. Given there were no complaints to review this Condition was not triggered.
M6.3	<b>Recording of pollution complaints</b> The record of a complaint must be kept for at least 4 years after the complaint was made.	-	There have been no recorded complaints during the audit period therefore this requirement has not been triggered.
M6.4	<b>Recording of pollution complaints</b> The record must be produced to any authorised officer of the EPA who asks to see them.	-	There were no complaints recorded by Myuna during the audit period. This requirement has not been triggered.
<b>M7</b> M7.1	<b>Telephone Complaints Line</b> The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	2015 Annual Return. 2014 Annual Return. 2013 Annual Return.	Myuna Colliery operates an Environment and Community Enquiry Line (02) 4970 0270. The telephone number is available on the Centennial website ( <u>http://centennialcoal.com.au/Contact/Contact-Us.aspx</u> )
M7.2	<b>Telephone Complaints Line</b> The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	http://centennialcoal.com.au/ News/Centennials-News- Column.aspx]	Myuna Colliery operates an Environment and Community Enquiry Line (02) 4970 0270. The Complaints and Enquiry Line is advertised via the Centennial website and the Community Complaints Register was available on the Myuna website (accessed 16/06/2016 @10:25hrs). It is noted that the telephone number provided in the Complaints Register was 0 4910 0263.

Compliance Status & Risk Level & Recommendations

#### Compliant

Not Triggered

Not Triggered

Not Triggered

Compliant

Compliant

**EPL 366-REC-05** – Update the Community Complaints Register to include the correct telephone number.

	Condition			Evidence Source	Comment / Finding
M7.3	Telephone Complaints         The preceding two concerns         a) the date of the issue         b) if this licence is a reprotection of the Errequisition 1998, the on the licensee uncerns         The licensee must nominated available all times and is response during emergense of the nominated a telephone number. must not be an an an an anterest of the nominated at telephone number.	s Line ditions do not apply until a le of this licence or eplacement licence within nvironment Operations (s ne date on which a copy der clause 10 of that regu- inate a representative of s capable of providing im encies or any other incid representative and their ust be current at all times	3 months after: In the meaning of the savings and Transitional) of the licence was served ulation. the company that is mediate assistance or ents at the premises. The contact details, including	Pollution Incident Response Management Plan, April 2016.	Noted. The Environment and Community Coordinator is nominated representative for the site. In the absence of the Environment and Community Coordinator the Mine Manager or the Technical Services Manager are available. Contact details are available in the PIRMP
	Note: This condition doe issue of this licence.	es not apply until two (2)	weeks after the date of		
<b>M8</b> M8.1	issue of this licence.          Requirement to Monitor Volume or Mass         For each discharge point or utilisation area specified below, the licensee must monitor:         ()       the volume of liquids discharged to water or applied to the area;         ()       the volume of liquids discharged to the area;         ()       the mass of solids applied to the area;         ()       the mass of pollutants emitted to the air;         at the frequency and using the method and units of measure, specified below.         Point 9 <u>Frequency</u> <u>Vinit of Measure</u> <u>Sampling Method</u> <u>Daily during any</u> <u>Kilolitres per day</u> <u>Continuously</u>			2015 Annual Return. 2014 Annual Return. Centennial (2016) Annual Review January 2015 to December 2015. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2014) Annual Review January 2013 to December 2013.	The Centennial Weather Portal provides real-time data for volume of liquids discharged to water at LDP B Continuous flow monitoring data for LDP B showing the water sensor flow was available for review. A technical non-compliance resulted from a power outage due to battery failure between 22 and 27 January 2015. The volume of water discharged through LDP B was not recorded by the LDP B web based real-time monitor for the period 5:25pm 22 January 2015 to 2:55pm 27 January 2015. There are three mine water discharge lines which contribute to the discharge at LDP B. Each discharge line is metered. An approximate volume of discharge at LDP B was determined from the metered mine water discharge lines. The volume limit was not exceeded. On 21 April 2015 13,590 kL was discharged through LDP B exceeding the volume limit of 13,000 kL. The volume of mine water pumped to the surface to be discharged was reported to be 4, 519 kL. Site management reported that a large storm event caused a high volume of surface water run-off as well as a local power outage that led to on-site system and electronic communication failures. The power outage let to insufficient information being available to manage the volume of water being discharged from the site and prevented water being pumped to the underground workings from the CHP Dam via the Borehole. Site management reported that despite the power outage equipment at LDP B was monitoring the flow/volume; however, management was unable to view the data due to the power outage. Following the event a corrective action was to change the transfer of water from the CHP Dam water levels can be managed in the event of a power outage. But from the on-site weather station observed during the site inspection indicated monitoring continued at LDP B during the power outage.
<b>R1</b> R1.1	<ul> <li>Annual Return Documents</li> <li>The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:</li> <li>a) a Statement of Compliance; and</li> <li>b) a Monitoring and Complaints Summary.</li> <li>At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.</li> </ul>			2015 Annual Return. 2014 Annual Return. 2013 Annual Return.	Annual Return documents have been prepared and submitted by Myuna Colliery as required by this Condition R1.1. Auditors sighted signed Annual Returns for 2013, 2014 and 2015 that contained a Statement of Compliance and Monitoring and Complaints Summary.
R1.2	Annual Return Docum An Annual Return must except as provided belo	be prepared in respect o w.	of each reporting period,	2015 Annual Return. 2014 Annual Return. 2013 Annual Return.	Annual Return documents for the periods 2013, 2014 and 2015 were available for review.

# Compliance Status & Risk Level & Recommendations

Noted.

Compliant

Non-compliant Low Risk

Compliant.

	Condition	Evidence Source	Comment / Finding
R1.3	<ul> <li>Where this licence is transferred from the licensee to a new licensee:</li> <li>a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and</li> <li>b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.</li> </ul>	-	Noted. This requirement has not been triggered.
R1.4	<ul> <li>Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:</li> <li>(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or</li> <li>(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.</li> </ul>	-	Noted. This requirement has not been triggered.
R1.5	The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	EPA (2016), Licence Summary, Online, Available at: http://www.epa.nsw.gov.au, Accessed 24 May 2016.	<ul> <li>The Annual Return deadline is the 29 February of the current year.</li> <li>The EPA website indicated the Annual Returns for the audit period were received on the following dates:</li> <li>The 01-Jan-201 to 31-Dec-2015 Annual Return was received on 1 March 2016</li> <li>The 01-Jan-201 to 31-Dec-2014 Annual Return was received on 2 March 2015.</li> <li>The 01-Jan-201 to 31-Dec-2013 Annual Return was received on 27 February 2014.</li> </ul>
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	2015 Annual Return. 2014 Annual Return. 2013 Annual Return.	Annual Return documents for the years 2013, 2014 and 2015 were available for review.
R1.7	<ul> <li>Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:</li> <li>a) the licence holder; or</li> <li>b) by a person approved in writing by the EPA to sign on behalf of the licence holder.</li> </ul>	2015 Annual Return. 2014 Annual Return. 2013 Annual Return.	The Annual Return 2015 had been completed and signed (22/02/2016) by the Director and Company Secretary before the due date. The Annual Return 2014 had been completed and signed (26/02/2015) by the Chief Operating Officer and Company Secretary before the due date. The Annual Return 2013 had been completed and signed (25/02/2014) by the Chief Operating Officer and Company Secretary before the due date.
<b>R2</b> R2.1	<b>Notification of Environmental Harm</b> Notifications must be made by telephoning the Environment Line service on 131 555.	2013 Letter – Centennial (2013), Written Notification of Environmental Incident at Myuna Colliery 22 November	Site management reported that incidents are notified to the EPA when they are identified. A total of seven incidents were notified to the EPA during the audit period.

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<b>Compliance Status</b>	& Risk Level	&
Recommendations		

Not Triggered

Not Trigged

Compliant

Compliant

Compliant

	Condition	Evidence Source	Comment / Finding
R2.2	The licensee must provide written details of the notification to the EPA	2013, 29 November 2013 [Letter to OEH].	<u>2013</u>
	within 7 days of the date on which the incident occurred.	Report – Centennial (2013), Notification of TSS exceedance discharge from Licenced Discharge Point B - Myuna Colliery, 29 November 2013.	<ul> <li>The site provided a written report to the EPA of a discharge from LDP B on 22 November 2013 in a letter dated 29 November 2013. The report was available for review. On Friday, 22 November 2013 during a storm event TSS was recorded at 94mg/l from LDPB.</li> <li>2014</li> </ul>
		<u>2014</u>	<ul> <li>The site provided a written report to the EPA of a discharge from LDP A on 28</li> </ul>
		Letter – Centennial (2014), Written Notification of Environmental Incident at	February 2014 and 1 March 2014 in a letter dated 7 March 2014. The report was available for review. DP&E provided a written response to Centennial on 21 March 2014 noting the agency would not be taking any action for the incident.
		OEH].	2015
		Report – Centennial (2014), Notification of Discharge from Licenced Discharge Point A - Myuna Colliery, 6 March 2014.	<ul> <li>The site provided two written reports to the EPA of a discharge from LDP B on 2 and 4 April 2015 in a letter dated 14 April 2015. Site management reported that the two incidents occurred during the Easter public holiday weekend and that the samples collected on Thursday 2 April 2015 and Saturday 4 April 2015 by the consultant were delivered to the laboratory on Tuesday 7 April 2015. The</li> </ul>
		Letter – DP&E (2014), Discharge Incident 28 February 2014, 21 March 2014 [Letter to Centennial].	samples were analysed on the 9 April 2015. The Myuna Environmental Coordinator was notified of the exceedance by the laboratory/consultant on Saturday 11 April 2015. The incidents were notified to the EPA Environment Line on Sunday 12 April 2016 (EPA ref # 111198). The Myuna Environmental Coordinator received an acknowledgement of self-report from the EPA on
		<u>2015</u>	Monday 13 April 2015. An email from EPA Regional Officer addressed to the
		Letter – Centennial (2015), Written Notification of Environmental Incident at Myuna Colliery 14 April 2015, 14 April 2015 [Letter to DP&E, DRE, OEH].	Myuna Environmental Coordinator was also received on Monday 13 April 2015 (EPA, 2015) advising that a written report was required within seven days. The written report was issued to the EPA on 16 April 2015. The report was available for review.
			• The site provided a written report to the EPA of a discharge from LDP B on 22 May 2015 in a letter dated 27 May 2015. The report was available for review.
		Report – Centennial (2015),	<u>2016</u>
		Notification of TSS Exceedance from Licenced Discharge Point B - Myuna Colliery, 14 April 2015 [For 4 April 2015].	<ul> <li>The site provided a written report to the EPA of a discharge from LDP B on 16 March 2016 in a letter dated 22 March 2016. The report was available for review.</li> </ul>
			The site wrote to the EPA on 27 April 2016 providing the findings of an investigation to the incident from LDP B on 16 March 2016. The letter identified
		Letter – Centennial (2015), Written Notification of	that a stormwater drain (from the First Flush Settlement Tank) at the northern end of the car park was connected to LDP B at the time of the discharge and
		Environmental Incident at Myuna Colliery 22 May 2015,	was not noted on any site plans. Rectification works included disconnecting the pipeline from LDP B and diverting it to the CHP Dam. The rectification works
		27 May 2015 [Letter to DP&E, OEH, DRE].	were observed during the site inspection. An investigation report was available dated 21 March 2016 for a TSS exceedance at LDP B on 16 March 2016.
		Report – Centennial (2015), Notification of TSS	Written notification of exceedances was generally provided within seven days. It is noted that upon being made aware of the exceedances on 2 and 4 April 2015 the site
		Exceedance from Licenced Discharge Point B - Myuna Colliery, 27 May 2015	provided a written response to the EPA within seven days. It is noted that for the two April 2015 incidents nine days from the first sample being collected passed before the Myuna Environmental Coordinator was notified of the exceedances. An incident
		Email – EPA (2015), Incident Report, [Email to Centennial 13/04/2015 @ 01:21pm].	investigation form dated 17 April 2015 concerning the delay in obtaining the results was sighted by the auditors that identified that the contractor responsible for sampling would be instructed on acceptable turnaround times for surface water results. Site management reported to MCW Environmental that samples are now
		Incident Investigation Form – 17 April 2015.	delivered to the laboratory on the day the sample is taken and that there is generally a two day period before the samples are analysed and that the Environmental Coordinator is now copied into emails from the laboratory containing sample results.

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
		2016 Letter – Centennial (2016), Written Notification of Environmental Incident at Myuna Colliery, 27 March 2016 [Letter to EPA].	
		Report – Centennial (2016), Notification of TSS Exceedance from Licenced Discharge Point B - Myuna Colliery, 21 March 2016.	
		Letter – Centennial (2016), Written Notification of Environmental Incident at Myuna Colliery, 27 April 2016 [Letter to EPA].	
R3	Written Report	Refer to R2.2.	Refer to R2.2.
R3.1	<ul> <li>Where an authorised officer of the EPA suspects on reasonable grounds that:</li> <li>a) where this licence applies to premises, an event has occurred at the premises; or</li> <li>b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,</li> <li>c) and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.</li> </ul>		
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Refer to R2.2.	Refer to R2.2.

Compliance Status & Risk Level & Recommendations

### Compliant

	Condition	Evidence Source	Comment / Finding
R3.3	<ul> <li>The request may require a report which includes any or all of the following information:</li> <li>a) the cause, time and duration of the event;</li> <li>b) the type, volume and concentration of every pollutant discharged as a result of the event;</li> <li>c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;</li> <li>d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;</li> <li>e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;</li> <li>f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and</li> <li>g) any other relevant matters.</li> </ul>	2013 Report – Centennial (2013), Notification of TSS exceedance discharge from Licenced Discharge Point B - Myuna Colliery, 29 November 2013. 2014 Report – Centennial (2014), Notification of Discharge from Licenced Discharge Point A - Myuna Colliery, 6 March 2014. 2015 Report – Centennial (2015), Notification of TSS Exceedance from Licenced Discharge Point B - Myuna Colliery, 14 April 2015 [For 2 7 4 April 2015]. Report – Centennial (2015), Notification of TSS Exceedance from Licenced Discharge Point B - Myuna Colliery, 27 May 2015.	<ul> <li>The format of the written reports provided the following information:</li> <li>Discharge details;</li> <li>Time, date, nature, duration and location of the discharge;</li> <li>Location of the place where the discharge occurred;</li> <li>Nature, the estimated quantity or volume and the concentration of any pollutants involved;</li> <li>Circumstances in which the discharge occurred (including the cause of the discharge, if known); and</li> <li>Action taken to minimise the discharge.</li> </ul>
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	Email – EPA (2015), Incident Report 22 May 2015 TSS exceedance - Request for R3, 11 September 2015 [Email from EPA to Centennial @ 3:10pm 11/09/2015]. Letter – EPA (2015), Response to EPA Request for Additional Information, 22 September 2015 [Letter to EPA].	The Regional EPA officer requested information from Myuna in an email dated 11 September 2015 concerning rainfall data and dam storage design capacity following a reported TSS incident on 22 May 2015. A letter from Centennial to the EPA dated 22 September 2015 included rainfall data for the 22 and 23 May 2015 as well as dam size requirements.
R4	<ul> <li>Other Reporting Conditions</li> <li>Noise Monitoring Report</li> <li>The licensee must submit to the EPA a noise compliance assessment report at the end of each reporting period. The report must be submitted with the Environment Protection Licence Annual Return. The report must be prepared by a suitably qualified and experienced acoustical consultant which: <ul> <li>a) details the noise monitoring undertaken in accordance with condition M4;</li> <li>b) assess compliance with noise limits presented in condition L5.1, and c) outlines any management actions taken within the monitoring period to address any exceedences of limits contained in condition L5.1.</li> </ul> </li> </ul>	AECOM (2016), Myuna Colliery Annual Noise Monitoring 2015, Ref: 60283157-RPNV-15_D. AECOM (2015), Myuna Colliery Annual Noise Monitoring 2014, Ref: 60283157-RPNV-10_B. AECOM (2014), Myuna Colliery Annual Noise Monitoring 2013, Ref: 60283157.REP06.01.	Noise reports were available for the years 2013, 2014 and 2015. The reports included details of the noise monitoring undertaken, assessed compliance with noise limits presented in condition L5.1 and outlined management actions taken within the monitoring period.
G1.1	General Conditions A copy of this licence must be kept at the premises to which the licence applies.	Site observations.	A copy of the licence was available within the site office.

Compliance Status & Risk Level & Recommendations

### Compliant

Compliant.

Compliant

	Condition				Evidence Source	Comment / Finding	
G1.2	General Conditions The licence must be produced to any authorised officer of the EPA who asks to see it.			the EPA who	Site observations.	Copies of the licence were observed to be available on site and able to be provided to an authorised officer of the EPA upon request.	
G1.3	General Conditi	ons				Site observations.	A copy of the licence was available within the site office.
	The licence must the licensee work	t be availabl king at the p	e for inspection I remises.	by any emplo	oyee or agent of		
<b>G2</b> G2.1	Other general c Completed Pollu	onditions tion Studies	and Reduction F	Programs (Pf	RPs)	GHD (2015), Myuna Colliery ANZECC Water Quality Assessment, May 2015.	GHD (2015) was engaged by Centennial Myuna to undertake a water quality assessment of discharge from Myuna Colliery into Wangi Creek, with a particular focus on the concentrations of metals in water discharged from the mine site as required by Condition U1 (PRP 1) of EPL 366. It is noted that EPL 366 lists PRP 1
						Letter – Centennial (2015), EPL 366, Myuna Colliery PRP	completed as of 4 August 2015.
					<ul> <li>Assessment of Potential Impacts, 4 August 2015 [Letter to EPA].</li> </ul>	A letter from Centennial to the EPA dated 4 August 2015 indicated that raw water quality data had been provided to the EPA for the period January 2013 to February 2015 for LDP B as well as other raw water quality data.	
					-	Site management reported that the report (GHD, 2015) had been provided to the EPA but the EPA was in the process of compiling data from other sites in the region and it was unlikely that there would be an outcome in the near future.	
<b>E1</b> E1.1	Additional Monitoring The licensee must undertake a surface -water monitoring program in Wangi Bay as detailed in Table A.			program in	Myuna Spread Sheet 2016_04.Xls. Centennial (2016) Annual	The 2013, 2014 and 2015 Annual Reviews provided quarterly monitoring results for Wangi Bay. Monitoring results are compiled and stored on a spread sheet within the Centennial Lotus Notes Intranet. The spread sheet contains data for Manganese in accordance with the requirements of this Condition.	
	Pollutant/Unit of Measure	Filtration	Sample Location	No. of Samples	Frequency	December 2015. Centennial (2015) Annual	The monitoring of filterable Manganese is undertaken on a quarterly schedule. The monitoring results are submitted to the EPA. Site management reported that there has been a slight downward trend in Manganese concentrations recorded in Wangi
	Manganese (filterable)/mg/L	0.45um	At T2-5m and T2-10m as defined in Hydobiology Pty Ltd, 2004*	Two (2) samples collected each at T2-5m and at T2-10m	Quarterly	Review January 2014 to December 2014. Centennial (2014) Annual Review January 2013 to December 2013.	Bay over the four year period of monitoring.
	Note: * *as descr <i>Discharge from t</i> by Hydrobiology	ibed in Appo he Myuna C Pty Ltd, date	endix E of the re <i>colliery ANZECC,</i> ed March 2004.	port titled 'Ma ARMCANZ	anganese Study' prepared		
E1.2	by Hydrobiology Pty Ltd, dated March 2004. The licensee must submit a quarterly report to the Regional Manager, Hunter, detailing the results collected during the surface-water monitoring program detailed in condition E1.1 Environment		Centennial, Quarterly Report for Additional Monitoring as per Condition E1 of EPI 366 – March 2013, June 2013, September 2013, December 2013, March 2014, June 2014, September 2014, December 2014, March 2015, June 2015, September 2015, December 2015, March 2016.	Letter reports from Myuna to the Regional Manager, Hunter were available from September 2013 through to March 2016. The reports included results of the sampling conducted as well as the certificates of analysis.			

Compliance Status & Risk Level & Recommendations

#### Compliant

Compliant

Compliant

Compliant

# Statement of Commitments Compliance Register

	Condition	Evidence Source	Comment / Finding	
SoC -01	<ul> <li>Construction of the clean water diversions at the Surface Facilities Area undertaken in a manner that will minimise impacts to the surrounding environment.</li> <li>1. Construction will be undertaken during the hours 7am to 6pm Monday to Friday, and 8am to 1pm on Saturdays. No construction work will be undertaken on Sundays or Public Holidays.</li> </ul>	URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0. Complaints Register. Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2016) Annual Review January 2015 to December 2015.	No change since the previous IEA (URS, 2013, Appendix A, p.32). The clean water diversion was constructed in February 2013. Progressive rehabilitation to the clean water drain diversion drain was observed during the site inspection. It is noted that the Complaints Register and the 2013, 2014 and 2015 Annual Reviews (p.32) identified that there were no complaints concerning the site during the audit period. No evidence was sighted to indicate that these hours were not adhered to. Full verification of the requirement was not able to be performed given it was completed prior to the audit.	C
SoC -02	<ul> <li>Operations undertaken within the approved operating hours.</li> <li>2. Mining and associated operations will be undertaken 24 hours a day, 7 days a week.</li> </ul>	Site observations. Compliance Register.	Myuna operates 24hrs seven days a week.	С
SoC -03	<ul> <li>Subsidence levels managed within predicted maximum levels.</li> <li>Mining will be undertaken in accordance with the document titled 'Design Criteria and Mining Methods for Seams' provided as Attachment 1 to the Response to Submissions.</li> </ul>	Refer to PA 10_0080, Schedule 3, Condition 1 for further details.	Refer to PA 10_0080, Schedule 3, Condition 1 for further details.	C
SoC -04	4. An Extraction Plan, or equivalent document, which takes into account the existing information presented in this Environmental Assessment, will be developed for mining within subsidence Zone B, in consultation with the DP&I, prior to secondary workings being undertaken in Zone B.	Centennial (2014), Myuna Colliery Environmental Assessment Section 75W Modification to Project Approval PA 10_0080, November 2014. Centennial (2011), Myuna Colliery Environmental Assessment Extension of Mining, February 2011.	This requirement has not been triggered as there has been no second workings extraction during the audit period. The 2011 EA (p.ix) states that 'an Extraction Plan, or equivalent document, which takes into account the existing information presented in this EA, will be developed for mining within Mining Zone B, in consultation with I&I, prior to secondary workings (partial and full extraction) being undertaken in Zone B'.	N
SoC -05	<ul> <li>Operations carried out in a manner that minimises potential impacts to groundwater.</li> <li>5. Within 6 months of Project Approval, a variation to EPL 366 will be lodged with the Office of Environment and Heritage to: <ul> <li>a) Combine licensed discharge points LDP001 and LDP002 into a single licensed discharge point, LDP B, with a combined discharge volume of 13 ML/day;</li> <li>b) Establish a licensed discharge point at the Emergency Coal Stockpile Sediment Dam, LDP A, for event-based discharges where rainfall exceeds 140 millimetres in 24 hours.</li> </ul> </li> </ul>	URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	<ul> <li>No change since the previous IEA (URS, 2013, Appendix A, p.32).</li> <li>"EPL 366 was modified on 27 February 2013 to include a single discharge point LDP B with a volume /mass limit of 13,000 kilolitres per day (Condition L3.1 and EPA ID Point 9 of EPL 366).</li> <li>LDP A was established in the same EPL variation (EPA ID point 10) and has an event-based discharge when rainfall exceeds 140mm in any 24 hour period (Condition L2.5 of EPL 366)".</li> </ul>	С

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# Compliance Status & Risk Level & Recommendations

### Compliant

Compliant

Compliant

Not Triggered

### Statement of Commitments Compliance Register

	Condition	Evidence Source	Comment / Finding	
SoC -06	<ol> <li>The Proponent will undertake an investigation of water reuse options at Myuna Colliery within 6 months of Project Approval.</li> </ol>	URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	<ul> <li>No change since the previous IEA (URS, 2013, Appendix A, p.32).</li> <li>Site management reported that the cost of water reuse was considered to be too expensive. Issues listed below:</li> <li><i>"Site management reported an informal investigation into water use options was conducted. An internal presentation was prepared in April 2013 that identified three potential rainwater catchments with an approximate surface area of 6,500 m<sup>2</sup>. The investigation identified that approximately 70 kL of water is used on the surface daily and that the major uses consist of hosing of hard surfaces, vehicle wash-down and boot wash. The presentation included a two staged approach to conserving water consisting of:</i></li> <li>re-commissioning existing waters utilising the store and workshop catchment area; and</li> <li>commission a new water tank utilising office, bathhouse and Maintenance and Materials portal catchment areas" (URS, 2013, Appendix A, p.32).</li> </ul>	С
SoC -07	<ul> <li>Items and areas of Aboriginal sensitivity are not disturbed as a result of the proposed Project, where possible.</li> <li>7. If first workings and/or secondary extraction is to occur under the culturally sensitive sites recorded in Addendum A^ and Addendum B<sup>-</sup> of the EA*, an archaeological monitoring programme is to be developed for the potentially impacted site(s).</li> <li>Note: <ul> <li>~ = Restricted aboriginal cultural heritage site: information restricted to Centennial, DECCW and Department of Planning.</li> <li>~ = Restricted aboriginal cultural heritage site: information restricted to Centennial, DECCW and Department of Planning.</li> <li>~ = Appendix M of the EA Cultural Heritage Assessment (RPS Australia East Pty Ltd, 2011b)</li> </ul> </li> </ul>	Complaints Register Letter - RPS (2016), Heritage Due Diligence Letter Report Subsidence Monitoring Locations for the Morisset Peninsula, 26 March 2015. 511 Panel Subsidence Stations (Wangi North) Graph of Survey Results, 5 May 2015. Centennial [2015] Myuna Colliery Subsidence Report Pulbah Island Lake Macquarie, 28 October 2015. Wangi Peninsula East Subsidence Monitoring Chart. Wangi Peninsula North Side Subsidence Monitoring Graph	No secondary extractions occurred during the audit period. On this basis, items and areas of Aboriginal sensitivity have not been disturbed as a result of the project. A due diligence assessment for Aboriginal artefacts for the installation of subsidence monitoring points at Morisset Peninsula was conducted by RPS in March 2016 (RPS, 2016). Myuna is planning to mine under Pulbah Island during the next audit period. A presentation for a community consultation meeting with interested parties concerning plans to mine underneath the Pulbah Island in the Fassifern Seam was sighted. The proposed mining method to be used was Bord and Pillar First Workings only. Community letters dated 4 March 2016 and 5 May 2016 were sent to Biraban Local Aboriginal Land Council, Awabakal Descendants Traditional Owners Aboriginal Corporation, Awabakal Traditional Owners Aboriginal Corporation. Section 151 Licence dated 1 November 2011 to 31 October 2016 allows for the installation and monitoring of surface subsidence stations on Pulbah Island. No heritage items were reported to have been identified and/or disturbed during the audit period. In the event that any major development or change to the existing	C
SoC -08	<ul> <li>Items and areas of Aboriginal sensitivity are not disturbed as a result of the proposed Project, where possible.</li> <li>8. If there is evidence of Myuna Colliery mining induced damage to sandstone outcrops and rock overhangs as described in Addendum A and Addendum B of Appendix M to the EA, all mining works affecting qualified archaeologist and the relevant Aboriginal stakeholders will be engaged as required.</li> </ul>	Subsidence Monitoring Graph.	This requirement has not been triggered during the audit period. There was no reported damage to items and areas of Aboriginal sensitivity including sandstone outcrops and rock overhangs.	N

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# Compliance Status & Risk Level & Recommendations

### Compliant

Compliant

Not Triggered

# Statement of Commitments Compliance Register

	Condition	Evidence Source	Comment / Finding	
SoC -09	<ul> <li>Items and areas of Aboriginal sensitivity are not disturbed as a result of the proposed Project, where possible.</li> <li>9. Myuna Colliery will develop an Aboriginal Cultural Heritage Management Plan (ACHMP) for the identified Aboriginal heritage items within the Project Area, as well as, contingency strategies for any additional heritage issues which may arise. The ACHMP will comprise: <ul> <li>An assessment of the cultural significance of the Aboriginal heritage sites within the Project Area;</li> <li>Identification of roles and responsibilities (Centennial, Aboriginal stakeholders, heritage consultant); and</li> <li>Strategies for: <ul> <li>Management of identified Aboriginal heritage sites;</li> <li>Management of Aboriginal Heritage sites, should subsidence levels exceed the maximum predicted subsidence of 20 mm; and</li> <li>Management of additional sites, if identified.</li> </ul> </li> <li>The Myuna Colliery ACHMP will be developed in consultation with the relevant Aboriginal stakeholders and will adequately address Aboriginal cultural values.</li> </ul></li></ul>	Letter - RPS (2016), Heritage Due Diligence Letter Report Subsidence Monitoring Locations for the Morisset Peninsula, 26 March 2015. Centennial (2012), Northern Holdings Aboriginal Heritage Management Plan, July 2016. Centennial (2012), Non- Indigenous Cultural Heritage Management Plan, August 2012. Letter – DP&E (2012), Myuna Colliery Approval of Non- Indigenous Cultural Heritage Management Plan and Environmental Management Strategy, 4 September 2012. Letter - Centennial (2015), SSD 5144 and SSD 5145 – Consolidation of Management Plans, 30 October 2015 [Letter to DP&E].	<ul> <li>The following two heritage plans have been prepared:</li> <li>Northern Holdings Aboriginal Cultural Heritage Management Plan dated July 2016, with DP&amp;E for approval at the time of the site inspection.</li> <li>Non-Indigenous Cultural Heritage Management Plan dated August 2012</li> <li>MCW Environmental sighted a copy of the Centennial Coal's Northern Holdings Aboriginal Cultural Heritage Management Plan dated August 2012 prepared by RPS (East Australia) Pty Ltd. The Plan was reported by site management to be with DP&amp;E for approval at the time of the site inspection and addressed management of Aboriginal Cultural Heritage at Centennial's northern operations facilities including Myuna Colliery.</li> <li>For Myuna the following site specific issues were addressed in the Northern Holdings Aboriginal Cultural Heritage Management Plan:</li> <li>Overview of operations</li> <li>Registered Aboriginal parties</li> <li>Aboriginal heritage commitments and consent conditions</li> <li>Myuna Colliery Project Approval conditions (Schedule 3 Condition 29)</li> <li>Cultural significance ranking outcomes</li> <li>Archaeological significance ranking outcomes</li> <li>Site specific management measures</li> <li>The initial Northern Holdings Aboriginal Cultural Heritage Management Plan was approved by DP&amp;E on 26 November 2012. The Non-Indigenous Cultural Heritage Management Plan was approved by DP&amp;E on 4 September 2013.</li> </ul>	C
SoC -10	<ul> <li>Assess potential impacts from subsidence on benthic communities prior to secondary extraction.</li> <li>10. Prior to undertaking secondary workings in Zone B, Myuna has committed to the development of an Extraction Plan. In relation to the benthic community of the Lake, this plan will include: <ul> <li>a) Refining the predicted subsidence based on a detailed mine layout and design;</li> <li>b) An assessment of the likely impacts of subsidence related to the detailed mine layout and design (based on prediction) on benthic communities within the proposed mining area;</li> <li>c) An assessment of the consequences of these impacts on the availability of light to the benthic communities, including the proportion of the Lake bed likely to be affected; and</li> <li>d) Management strategies to avoid reducing light availability to the Lake bed where the proportion of the Lake bed likely to be affected is, following consultation with the Office of Environment and Heritage, considered significant.</li> </ul> </li> </ul>	-	This requirement has not been triggered during the audit period.	1
SoC -11	<ul> <li>Sufficient planning is undertaken for end of life of mine and rehabilitation.</li> <li>11. The proponent will develop and implement a Rehabilitation and Environmental Management Plan within 5 years of completion of mining.</li> </ul>	Refer to PA 10_0080, Schedule 3, Condition 35 for further details.	Refer to PA 10_0080, Schedule 3, Condition 35 for further details.	(

#### A70

# Compliance Status & Risk Level & Recommendations

### Compliant

Not Triggered

	Condition	Evidence Source	Comment / Finding
1	Notice to Landholders Within a period of three months from the date of grant/renewal of this lease or within such further time as the Minister may allow, the lease holder must serve on each landholder of the land a notice in writing indicating that this lease has been granted/renewed and whether the lease includes the surface. An adequate plan and description of the lease area must accompany the notice.	Newcastle Herald, Tuesday May 21, 2013 (p.25).	Myuna provided a draft Notice within the Newcastle Herald on 21 May 2013 (i.e. before the lease was granted). The date of issue could not be confirmed by Myuna. The draft notice contained relevant information as required by this Lease condition, including a plan outlining the boundaries of the Lease.
	If there are ten or more landholders affected, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this lease has been granted/renewed; state whether the lease includes the surface and must contain an adequate plan and description of the lease area.		
2	<ul> <li>Environmental Harm</li> <li>a) The lease holder must implement all practicable measures to prevent and/or minimise harm to the environment that may result from the construction, operation or rehabilitation of any activities under this lease.</li> <li>b) For the purposes of this condition: <ul> <li>i. Environment means components of the earth, including:</li> <li>A.Land, air and water, and</li> <li>B.Any layer of the atmosphere, and</li> <li>C.Any organic or inorganic matter any any living organism, and</li> <li>D.Human-made or modified ecosystems that include components referred to in paragraphs (A) – (C).</li> </ul> </li> <li>ii. Harm to the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission hat results in pollution, contributes to the extinction or degradation of any threatened species, populations or ecological communities and their habitats and causes impacts to places, objects and features of significance to Aboriginal people.</li> </ul>	-	Myuna management reported that there have not been any incidents that have caused, or threatened to cause, material harm to the environment or breaches of environmental protection legislation causing or threatening material harm to the environment (as defined in the <i>Protection of the Environment Administration Act</i> <i>1997</i> ) and therefore no incident report has been provided to the Department and any other relevant agencies.

Compliance Status & Risk Level & Recommendations

### Compliant

Not Triggered

	Condition	Evidence Source	Comment / Finding
3	<ul> <li>Mining Operations Plan</li> <li>a) Mining operations must not be carried out otherwise than in accordance with a Mining Operations Plan (MOP) which has been approved by the Director-General.</li> <li>b) The MOP must: <ul> <li>i. Identify areas that will be disturbed by mining operations.</li> <li>ii. Detail the staging of specific mining operations.</li> <li>iii. Identify how the mine will be managed to allow mine closure.</li> <li>iv. Identify how mining operations will be carried out in order to prevent and or minimise harm to the environment.</li> <li>v. Reflect the conditions of approval under: <ul> <li>The <i>Environment Planning and Assessment Act</i> 1979</li> <li>The <i>Protection of the Environment Operations Act</i> 1997.</li> <li>And any other approvals relevant to the development including the conditions of this lease; and</li> <li>Have regard to any relevant guidelines adopted by the Director-General.</li> </ul> </li> <li>c) The leaseholder may apply to the Director-General to amend an approved MOP at any time.</li> <li>d) It is not a breach of this condition if: <ul> <li>The operations constituting the breach were necessary to comply with a lawful order or direction given under the Mining Act 1992, the Environment Operations Act 1997, Mine Health and Safety Regulation 2006 or the Occupational Health and Safety Regulation 2006 or the Occupational Health and Safety Regulation 2007 (Coal Mine Health and Safety Regulation 2006 or the Occupational Health and Safety Regulation 2007 or the pricetor-General.</li> </ul> </li> <li>e) A MOP ceases to have effect 7 years after the date of approval or other such period as identified by the Director-General.</li> </ul></li></ul>	Letter – DP&E (2015), Approval for Myuna Colliery, MOP, 7 December 2015. Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan July 2013 to December 2015. Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015, V1. Letter – Centennial (2015), Centennial Myuna 2016 - 2022 Mining Operations Plan, 10 November 2015, Letters to CCC, DP&E, DRE, LMCC, WSC . Letter – Centennial (2015), Myuna Colliery Final Land Use Options, 24 August 2015 [Letter to LMCC]. Letter – LMCC (2015), Comment on Myuna Colliery Final Land Use Option, 4 September 2015 [Letter to Centennial]. Letter – DP&E (2015), Straits Hillgrove Mine – Mining Operation Plan Amendment, 11 June 2015. Email – DP&E (2015), Myuna 2016-22 MOP – Rehabilitation Plan [Email to Centennial, 12/11/2015 @11:26am]. Email – Centennial (2015), Myuna 2016-22 MOP – Rehabilitation Plan [Email to DP&E, 02/12/2015 @3:31pm].	<ul> <li>Myuna submitted a new MOP / Rehabilitation Plan for the period 1 January 2016 to 30 November 2022 to DRE during the audit period. DRE approval he MOP on 7 December 2015. The MOP was originally submitted within 12 months of the approval however, has since been updated. A response from DRE dated 22 January 2013 approved the staged approach and approved the plan for the period of January 2013 to June 2015. A letter dated 11 June 2015 from DRE atted 22 January 2013 approved the staged approach and approved the plan for the set approval however, has since been updated. A response from DRE dated 22 January 2013 to June 2015. A letter dated 11 June 2015 from DRE to the site approval the Myuna Colliery Mining Operation Plan July 2015 to December 2015 Amendment.</li> <li>The auditors sighted correspondence from Myuna to the Community Consultation Committee, Wyong Shire Council and Lake Macquarie City Council dated 10 November 2015 setking feedback on the Mining Operations Plan Zhethabilitation Management Plan January 2016 to December 2022, 10 November 2015 appeared to have been prepared in general accordance with relevant DRE guidelines.</li> <li>Section 5.4 (pp.55-57) provided detail concerning mine closure planning.</li> <li>Topics such as water management were discussed in the MOP and management plans were included as appendices.</li> <li>The previous IEA (URS, 2013, Appendix A, p.25) stated "URS sighted a letter of submission dated 5 June 2013 for Stage 2 of the Rehabilitation Management Plan. It is noted that Stage 1 of the Rehabilitation Management Plan was submitted in January 2013 (i.e. within the approval timeframe)".</li> <li>No rehabilitation or removal and renovation of buildings are proposed in the plan period.</li> <li>Myuna awill continue to operate infrastructure to support mining throughout the duration of the current MOP period from 2016 to 2022. Rehabilitation dany exploration drill sites will be undertaken at the completion of these sites during the current MOP period in consultation with th</li></ul>



Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
4	<ul> <li>Environmental Management Report</li> <li>a) The lease holder must lodge Environmental Management Reports (EMR) with the Director-General annually or at dates otherwise directed by the Director-General.</li> <li>b) The EMR must: <ul> <li>i. Report against compliance with the MOP;</li> <li>ii. Report on progress in respect of rehabilitation completion criteria;</li> <li>iii. Report on the extent of compliance with regulatory requirements; and</li> <li>iv. Have regard to any relevant guidelines adopted by the Director-General.</li> </ul> </li> </ul>	Centennial (2016) Annual Review January 2015 to December 2015. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2014) Annual Review January 2013 to December 2013. Letter – Centennial (2016), Myuna Colliery AEMR, 24 March 2016 [Letter to DP&E]. Letter – DP&E (2015), Myuna Colliery Annual Review 2014, 10 September 2015 [Letter to Centennial]. Letter – Centennial (2014), Myuna Colliery AEMR, 28 February 2014 [Letter to DP&E]. Letter – DP&E (2014), Centennial Myuna 2013 AEMR, 21 March 2014 [Letter to Centennial].	The site uses the Annual Review as the Environmental Management Report. Reports were available for 2013, 2014 and 2015. The Annual Reviews for 2013, 2014 and 2015 were prepared in general accordance with points (b) i to iv (f). Refer to Section of the Report for further details concerning AEMR site inspections.
5	Environmental Incident Report	-	Myuna management reported that there have not been any incidents that have

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- a) The lease holder must report any environmental incidents. The report must
  - Be prepared according to any relevant Department i.

  - guidelines. ii. Be submitted within 24hrs of the environmental incident occurring.
- b) For the purposes of this condition, environmental incident includes
  - Any incident causing of threatening to cause material harm to the environment.
  - Any breach of conditions 1 to 9 and 11 to 24. ii.
  - Any breach of environment protection legislation, or iii.
  - iv. A serious compliant from landholder or the public.
- c) For the purposes of this condition, harm to the environment is material if:
  - It involves actual or potential harm to the health or safety of i. human beings or to ecosystems that is not rivial, or
  - It results in actual or potential loss or property damage of an ii. amount, or amounts in aggregate, exceeding \$10,000, where loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

#### 6 Additional Environmental Reports

Additional environmental reports may be required from time to time as directed in writing by the Director-General and must be lodged as instructed.

caused, or threatened to cause, material harm to the environment or breaches of environmental protection legislation causing or threatening material harm to the environment (as defined in the Protection of the Environment Administration Act 1997) and therefore no incident report has been provided to the Department and any other relevant agencies.

Site management reported that no direction from the Director-General has been received during the audit period for additional environmental reports.



Compliance Status & Risk Level & Recommendations

#### Compliant

Not Triggered

Not Triggered

	Condition	Evidence Source	Comment / Finding
7	Rehabilitation Any disturbance as a result of activities under this lease must be rehabilitated to the satisfaction of the Director-General.	Letter – DP&E (2015), Approval for Myuna Colliery, MOP, 7 December 2015. Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan July 2013 to December 2015. Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015, V1.	No buildings were renovated, removed or rehabilitated during the audit period. Rehabilitation of degraded areas caused by environmental weeds was systematically carried out during the reporting period, as part of land management practice. No rehabilitation trials, research or initiatives were undertaken during the audit period. No rehabilitation or removal and renovation of buildings are proposed in the plan period. Myuna will continue to operate infrastructure to support mining throughout the duration of the current MOP period from 2016 to 2022. Rehabilitation of any exploration drill sites will be undertaken at the completion of these sites during the MOP period in consultation with the landowner and in accordance with the relevant mining lease. Rehabilitation of water management structures are not planned during the current MOP period. Dams and water management structures will continue to be used to manage water on-site.
8	<ul> <li>Subsidence Management <ul> <li>a) The lease holder shall prepare a Subsidence Management Plan prior to commencing any underground mining operations which will potentially lead to the subsidence of land.</li> <li>b) Underground mining operations which will potentially lead to subsidence include secondary extraction panels such as long walls or miniwalls, associated first workings (gate-roads, installation roads and associated main headings, etc), and pillar extractions, and are otherwise defined by the Applications for Subsidence Management Approvals guidelines (EDGI 7).</li> <li>c) The lease holder must not commence or undertake underground mining operations that will potentially lead to subsidence other than In accordance with a Subsidence Management Plan approved by the Director-General, an approval under the Coal Mines Regulation Act 1982, or the document New Subsidence Management Plan Approval Process - Transitional Provisions (EDPOO).</li> <li>d) Subsidence Management Plans are to be prepared In accordance with the Guideline for Applications for Subsidence Management Approvals.</li> <li>e) Subsidence Management Plans as approved shall form part of the Mining Operations Plan required under Condition 2 and will be subject to the Annual Environmental Management Report process as set out under Condition 3. The SMP is also subject to the requirements for subsidence monitoring and reporting set out in the document New Approval Process for Management of Coal Mining Subsidence - Policy.</li> </ul> </li> </ul>	Centennial [2015] Subsidence Management Plan WHS- PHMP-901, November 2015.	<ul> <li>Mine plans sighted confirm that extraction in the audit period has been first workings only.</li> <li>A Subsidence Management Plan [Centennial, 2015] had been prepared that outlined roles and responsibilities as well as the following areas of concern: <ul> <li>Wangi Wangi North Side.</li> <li>Wangi Wangi South Side.</li> <li>Wangi Wangi East Side.</li> <li>Point Wolstoncroft.</li> <li>Morisset Peninsula.</li> <li>Pulbah Island.</li> </ul> </li> <li>For further details concerning subsidence refer to PA 10_0080, Schedule 3, Condition 1.</li> </ul>
9	<ul> <li>Working Requirement</li> <li>The lease holder must: <ul> <li>a) ensure that at least 298 competent people are efficiently employed on the lease area on each week day except Sunday or any week day that Is a public holiday,</li> </ul> </li> <li>OR <ul> <li>b) Expend on operations carried out In the course of prospecting or mining the lease area, an amount of not less than \$5,215,000 per annum whilst the lease is in force.</li> </ul> </li> <li>The Minister may at any time or times, by instrument in writing served on the lease holder, Increase or decrease the expenditure required or the number of people to be employed.</li> </ul>	Site observations.	<ul> <li>a) The site operates 24 hrs a day, seven day a week and at the time of the site inspection employed 220 staff.</li> <li>b) Site management reported that costs were greater than \$5 million to operate the site under its current operating requirements.</li> <li>The Minister has not issued any directions regarding an increase or decrease in required expenditure.</li> </ul>



Compliance Status & Risk Level & Recommendations

Not Triggered

Compliant

	Condition	Evidence Source	Comment / Finding
10	<ul> <li>Blasting <ul> <li>a) <u>Ground Vibration</u> <ul> <li>The lease holder must ensure that the ground vibration peak particle velocity generated by any blasting within the lease area does not exceed 10 mm/second and does not exceed 5 mm/second in more than 5% of the total number of blasts over a period of 12 months at any dwelling or occupied premises as the case may be, unless determined otherwise by the Department of Environment and Conservation.</li> <li>b) <u>Blast Overpressure</u> <ul> <li>The lease holder must ensure that the blast overpressure noise level generated by any blasting within the lease area does not exceed 120 dB (linear) and does not exceed 115 dB (linear) in more than 5% of the total number of blasts over a period of 12 months, at any dwelling or occupied premises, as the case may be, unless determined</li> </ul> </li> </ul></li></ul></li></ul>	Centennial (2016), Noise Management Plan, May 2016. Complaints Register.	Site management reported that the most recent shot blasting was on 8 August 2015 and that shot blasting is an infrequent event. The Noise Management Plan (2016, p.8) states that "Vibration from underground shot firing is predicted to be negligible and below levels of human perception at the nearest residential locations. Notwithstanding this, all shots will be planned and designed to achieve the required outcomes with minimal impacts on the surrounding residential receivers". The Complaints Register identified that there were no complaints concerning the site during the audit period concerning blasting or vibration
	Safety Operations must be carried out in a manner that ensures the safety of persons or stock in the vicinity of the operations. All drill holes shafts and excavations must be appropriately protected, to the satisfaction of the Director-General, to ensure that access to them by persons and stock is restricted. Abandoned shafts and excavations opened up or used by the lease holder must be filled in or otherwise rendered safe to a standard acceptable to the Director-General.	Site observations	Surface operations at the site are surrounded by security fencing to prevent unauthorised access and to ensure the safety of persons within the vicinity of pit top operations. The site operates 24hrs a day and is always occupied with site personnel. Visitors are required to sign in at the main site office upon entry. It was observed during the audit that there is no livestock kept within the vicinity to the surface operations. There are no surface operations outside of the fenced surface operations area. The disused Wangi Wangi Power Station is located adjacent to the main entrance to the site. The power station is fenced and security of the buildings and land is the responsibility of the owner. Myuna are not responsible for the Wangi Wangi Power Station.



# Compliance Status & Risk Level & Recommendations

### Compliant

	Condition	Evidence Source	Comment / Finding
12	Prevention of Soil Erosion and Pollution Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil	Myuna Spread Sheet 2016_04.Xls. Myuna Environmental	Myuna operate under EPL 366 that regulates the levels of pollution in water discharges. A review of the EPL is provided in this report (Appendix A). The review found overall compliance with the EPL 366.
	contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For	Monitoring Reports – October 2013 to April 2016.	Refer to EPL 366, Condition L1.1 and Conditions L2.1 to L2.5 for further information.
	the purpose of this condition, water shall be taken to include any watercourse, water body or ground waters. The lease holder must observe and perform any instructions given by the Director-General in this regard.	Centennial (2014) Annual Review January 2013 to December 2013.	
		Centennial (2015) Annual Review January 2014 to December 2014.	
		Centennial (2016) Annual Review January 2015 to December 2015.	
		Annual Return 2015.	
		Annual Return 2014.	
		Annual Return 2013.	
		Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016.	
		Carbon Based Environmental Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016.	
13	13 <b>Transmission lines, Communication lines and Pipelines</b> Operations must not interfere with or impair the stability or efficiency of any transmission line, communication line, pipeline or any other utility on the lease area without the prior written approval of the Director-General and subject to any conditions stipulated.	Fassifern Workings 2013 to May 2016 [MY11474].	The site operates on a subsidence limit of less than 20 mm in accordance with PA 80_0010, Schedule 3, Condition 1.
		Graph of Survey Differences [10/02/2009/23/12/2009/20/ 12/2010/23/12/2010/23/12/201 1/ 17/12/2012/17/12/2013/15/01/2 015 01/02/2016.	No interference, impairment or stability issues of utilities were reported by site management.
			A graph of survey differences dated 10 February 2009 to 1 February 2016 was available for review.
			A subsidence graph was reviewed for the Wangi Peninsula South Side that showed subsidence to be less that 20mm.
		Wangi Peninsula East Subsidence Monitoring Chart.	A subsidence graph was reviewed for the Wangi Peninsula North Side that showed subsidence to be greater than 10mm but less that 20mm.
		Wangi Peninsula North Side Subsidence Monitoring Graph.	A subsidence graph was reviewed for the Wangi Peninsula East that showed subsidence to be less that 20mm.
		Wangi Peninsula South Side Subsidence Monitoring Graph.	Supervision, Inspections and Monitoring are carried out in accordance with HSMS- SC-D-03 Supervision Arrangements and HSMS-SC-D-01 Mine Inspection Program,
		Centennial (2014) Annual Review January 2013 to December 2013.	The 2014 (p.32) and the 2013 (p.8) Annual Review stated that "results of subsidence monitoring programs in areas of Point Wolstoncroft and Pulbah Island continue to
		Centennial (2015) Annual Review January 2014 to December 2014.	show negligible subsidence of <20mm with this trend expected to continue". Furthermore "Controls have been implemented to ensure that mining occurs according to the design dimensions and a mining panel inspection system has been implemented to monitor and report any deviation from the plan and the corrective
		Centennial (2016) Annual Review January 2015 to December 2015.	action taken" (Centennial, 2015, p.32).

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# Compliance Status & Risk Level & Recommendations

Non-compliant

Low Risk

	Condition	Evidence Source	Comment / Finding
14	<ul> <li>Roads and Tracks</li> <li>a) The lease holder must pay to the relevant roads authority in control of the road or track the reasonable costs incurred by the roads authority in making good any damage to roads or tracks caused by operations carried out under this lease less any amount paid or payable from the Mine Subsidence Compensation Fund.</li> <li>b) During wet weather the use of any road or track must be restricted so as to prevent damage to the road or track.</li> <li>c) Existing access tracks should not be used for all operations where reasonably practicable. New access tracks must be kept to a minimum and be positioned in order to minimise damage to the land, watercourse or vegetation.</li> <li>d) Temporary access roads must be rehabilitated and revegetated to the satisfaction of the Director-General as soon as reasonably practicable after they are no longer required under this lease.</li> </ul>	Site observations.	There are no operations outside the surface operations that affect roads, or that may cause damage to roads. The auditors considered this requirement is not triggered by the Myuna operations.
15	<ul> <li>Trees and Vegetation</li> <li>a) The lease holder must not fell trees, strip bark or cut timber on the lease without the consent of the landholder who is entitled to the use of the timber.</li> <li>b) The lease holder must contact Forests NSW and obtain any required permit, licence or approval before taking timber from any Crown land within the lease area.</li> </ul>	Site observations.	Site management reported that there has been no felling of trees on site that would require authority of a landholder. Site management reported that a number of trees were blown over in a storm event in April 2015 and had to be removed. Given there is no surface disturbance from the coal mine outside to the surface operations area, the impact of vegetation is minimal and hence this requirement has not been triggered.
17	<ul> <li>Resource Recovery</li> <li>a) Notwithstanding any description of mining methods and their sequence or of proposed resource recovery contained within the Mining Operations Plan, if at any time the Director-General is of the opinion that minerals which the lease entities the lease holder to mine and which are economically recoverable at the time are not being recovered from the lease area, or that any such minerals which are being recovered are not being recovered to the extent which should be economically possible or which for environmental reasons are necessary to be recovered, he may give notice in writing to the lease holder requiring the holder to recover such minerals.</li> <li>b) The notice shall specify the minerals to be recovered and the extent to which they are to be recovered, or the objectives in regard to resource recovery, but shall not specify the processes the lease holder shall use to achieve the specified recovery.</li> <li>c) The lease holder must, when requested by the Director-General, provide such information as the Director-General may specify about the recovery of the mineral resources of the lease area.</li> </ul>	-	Site management reported that there has been no relevant request from the Director- General within the audit period and as such this requirement has not been triggered.
18	Indemnity The lease holder must indemnify and keep indemnified the Crown from and against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses which may be brought against the lease holder or which the lease holder may incur in respect of any accident or injury to any person or property which may arise out of the construction, maintenance or working of any workings now existing or to be made by the lease holder within the lease area or in connection with any of the operations notwithstanding that all other conditions of this lease shall in all respects have been observed by the lease holder or that any such accident or injury shall arise from any act or thing which the lease holder may be licensed or compelled to do.	-	Site management reported that there have been no claims, actions, suits or demands brought against the lease holder and as such this requirement has not been triggered.



Compliance Status & Risk Level & Recommendations

Not Triggered

Not Triggered

Not Triggered

Not Triggered

	Condition	Evidence Source	Comment / Finding
21	<b>Single Security (extended)</b> The single security given and maintained with the Minister by the lease holder for the purpose of ensuring the fulfilment by the lease holder of obligations under Mining Purposes Lease 191 (Act 1973), Mining Purposes Lease 334 (Act 1973), and Mining Lease 1370 (Act 1992), is extended to apply to this lease.	-	Noted. Security under Mining Purposes Lease is discussed in the Compliance Checklist for the Lease in this report.

Compliance Status & Risk Level & Recommendations

Noted

	Condition		Evidence Source	Comment / Finding
22	Prescribe	d Dam	-	There has been no mining within the Notification Areas of Eraring Ash Dam and Dora
	a) Notwit not mi notifica Dams any co	hstanding any Mining Operations Plan, the lease holder must ne within any part of the lease area which is within the ation area of the Eraring Ash and Dora Creek Effluent Pond without the prior written approval of the Minister and subject to onditions he may stipulate.		Creek Effluent Pond during the audit period hence this requirement has not been triggered.
	b) Where must: i.	e the lease holder desires to mine within the notification area he at least twelve (12) months before mining is to commence or such lesser time as the Minister may permit, notify the Minister of the desire to do so. A plan of the mining system to		
	ii.	be implemented must accompany the notice; and provide such information as the Minister may direct.		
	paragi paragi with if:	raph (ii), grant approval unless sub-paragraph (i) of this raph has been complied with. (i) This sub-paragraph is complied		
	i.	the Dams Safety Committee as constituted by Section 7 of the Dams Safety Act 1978 and the owner of the dam have been notified in writing of the desire to mine referred to in paragraph (B).		
	ii. 	the notifications referred to in clause (a) are accompanied by a description or plan of the area to be mined.		
	III. 	the Director-General has complied with any reasonable request made by the Dams Safety Committee or the owner of the dam for further information in connection with the mining proposal.		
	iv.	the Dams Safety Committee has made its recommendations concerning the mining proposal or has Informed the Minister in writing that it does not propose to make any such recommendations; and		
	V.	<ul> <li>where the Dams Safety Committee has made</li> <li>recommendations the approval is in terms that are: <ul> <li>in accordance with those recommendations; or</li> <li>where the Minister does not accept those</li> <li>recommendations or any of them – in accordance</li> <li>with a determination under sub-paragraph (ii) of this</li> </ul> </li> </ul>		
	vi.	Where the Minister does not accept the recommendations of the Dams Safety Committee or where the Dams Safety Committee has failed to make any recommendations and has not informed the Minister in writing that it does not propose to make any recommendations, the approval shall be in terms that are, in relation to matters dealing with the safety of the		
		<ul> <li>as determined by agreement between the Minister and the Minister administering the Dams Safety Act 1978: or</li> </ul>		
		<ul> <li>in the event of failure to reach such agreement - as determined by the Premier.</li> </ul>		
	d) The M time o	inister, on notice from the Dams Safety Committee, may at any r times:		
	i. ii.	cancel any approval given where a notice pursuant to Section 18 of the Dams Safety Act 1978 is given. suspend for a period of time, alter, omit from or add to any		
		approval given or conditions imposed.		



Compliance Status & Risk Level & Recommendations

Not Triggered

	Condition	Evidence Source	Comment / Finding
23	Suspension of Mining Operations The holder of a mining lease may not suspend mining operations in the mining area other than in accordance with the consent of the Minister.	-	Noted
24	Cooperation Agreement The lease holder must make every reasonable attempt, and be able to demonstrate their attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as: · Access arrangements · Operational interaction procedures · Dispute resolution · Information exchange · Well location.	-	Site management reported that there are no overlapping titles and therefor this condition has not been triggered.
25	<ul> <li>Special Conditions</li> <li>Barrier Conditions</li> <li>Unless with the prior consent of the Minister, and subject to such conditions as he may impose, the lease holder shall not carry out any mining within the highwater level subsidence control zone defined:</li> <li>a) On the surface by the highwater level of Dora Creek and Lake Macquarie and a point 2.44 metres in elevation above that highwater level;</li> <li>b) In the seam by a line defined by an angle of draw of 35<sup>0</sup> drawn landwards from the line drawn vertically beneath a point 2.44 metres in elevation above the highwater level of Dora Creek and Lake Macquarie;</li> <li>c) In the seam by a line defined by an angle of draw of 35<sup>0</sup> drawn waterwards from the line drawn vertically beneath the highwater level of Dora Creek and Lake Macquarie;</li> </ul>	Letter – DRE (2015), Interim Approval to Special Condition 25 of Mining Lease 1632, 19 May 2015. Letter – DRE (2015), Suspension of High Water Level Subsidence Control Zones for ML 1632 and ML1370 – Myuna Colliery, 20 July 2016	Sighted interim approval letter from Director Mine Safety Operations and Chief Inspector dated 19 May 2015 for first workings in response to Myuna's application to mine within the High Water Level Subsidence Control Zone. The letter ceased to have effect from 31 July 2015. A letter from the Secretary to Centennial dated 20 July 2016 stated that " <i>in</i> <i>accordance with the provisions of Section 168(1) of the Mining Act 1992, the Minister</i> <i>has suspended the High Water Level Subsidence Conditions for ML1632 and</i> <i>ML1370 for the remaining term of their titles</i> ". Myuna management reported that the site had mined through the HWLSCZ within the audit period and that the HWLSCZ is no longer an "approved" area.
26	The lease holder shall not work any seam of coal within the consolidated coal lease area without leaving, if the Minister, by order, given in writing to the lease holder, so directs, a barrier of such width or a protective pillar or pillars of such size or sizes as specified in the order, against any surface improvements or any feature whether natural or artificial.	-	MCW Environmental considers this Condition not to be an environmental issue concerning the Mining Purpose Lease 334 and has therefore not been audited.
27	Unless with the consent of the Minister first had and obtained and subject to such conditions as he may impose the lease holder shall not work any seam of coal by underground methods within the consolidated coal lease area within the barrier defined as follows: The land within the zone beneath and adjacent to the Main Northern Railway enclosed by an angle of draw of 350 from the vertical plane of the boundary parallel to and thirty (30) metres horizontally distant from the outermost rails of the railway track(s), such angle of draw being measured outwards from the point on the vertical plane of the said boundary at the surface or at the level of the horizontal plane of the railway track, whichever may be the higher, to the floor of the coal seam in which mining operations are being carried out.	-	MCW Environmental considers this Condition not to be an environmental issue concerning the Mining Purpose Lease 334 and has therefore not been audited.

# Compliance Status & Risk Level & Recommendations

Noted

Not Triggered

Compliant

Not Applicable

Not Applicable

	Condition	Evidence Source	Comment / Finding
28	<ul> <li>a) Before commencing to win or work any coal within the marginal zone/s defined in paragraph (b) of this condition or under : <ul> <li>i. any freeway;</li> <li>ii. any pipeline licence granted under the Pipelines Act, 1967; and</li> <li>iii. any water reservoirs, pumping stations and waste water treatment works owned by the Hunter District Water Board the lease holder shall notify the Chief Inspector of Coal Mines of his intention to do so and shall submit a plan of the system whereby such coal is proposed to be won or worked and shall obtain the written approval of the Chief inspector of Coal Mines to such system. No such coal shall be won or worked except in accordance with the system approved in writing by the Chief inspector of Coal Mines as altered added to or omitted from as hereinafter provided. In connection with every such submission the lease holder shall do such asts and furnish such information as the Chief inspector of Coal Mines may at any time cancel any approval to a system approved by him.</li> </ul> b) For the purposes of paragraph (a) of this condition the marginal zone is the area contained by an angle of draw of 35'measured outwards from:- <ul> <li>i. the external boundaries of the easements for any freeway and pipeline;</li> <li>ii. the floor of the coal seam in which mining operations are being carried out.</li> </ul> The lease holder unless with the consent of the Minister and subject to such conditions as the Minister may impose shall not mine for, work, win or remove any coal from those parts of the subject area; and b) Within the marginal zone which Is the area contained by an angle of draw of 35'measured outwards from:- <ul> <li>a) Beneath the main buildings of the Wangi Wangi Power Station constructed on the excepted surface of the subject area; and</li> <li>b) Within the marginal zone which Is the area contained by an angle of draw of 35'measured outwards from the avernal walls of the subject area; and</li> </ul></li></ul>	<ul> <li>511 Panel Subsidence Stations (Wangi North) Graph of Survey Results, 5 May 2015.</li> <li>Centennial [2015] Myuna Colliery Subsidence Report Pulbah Island Lake Macquarie, 28 October 2015.</li> <li>Great Northern Seam Workings 2013 to May 2016 [MY11473].</li> <li>Fassifern Workings 2013 to May 2016 [MY11474].</li> <li>Graph of Survey Differences [10/02/2009/23/12/2009/20/ 12/2010/23/12/2010/23/12/201</li> <li>1/ 17/12/2012/17/12/2013/15/01/2 015 01/02/2016.</li> <li>Wangi Peninsula East Subsidence Monitoring Chart.</li> <li>Wangi Peninsula North Side Subsidence Monitoring Graph.</li> <li>Centennial (2014) Annual Review January 2013 to December 2013.</li> <li>Centennial (2015) Annual Review January 2014 to December 2014.</li> <li>Centennial (2016) Annual Review January 2015 to December 2015.</li> <li>Seedsman Geotechnics [2015], Centennial Myuna Hinb Water</li> </ul>	As advised by Myuna and confirmed from the available mine plans, there has been no working within the marginal zones or beneath any surface infrastructure covered by this condition
30	Any approval or consent previously given by the Minister to the effect that the lease holder may mine for, work, win or remove coal from any part of the subject area, including any approval or consent given pursuant to any barrier condition contained in leases consolidated into this lease, shall be deemed to be a consent given subject to the same conditions of that approval or consent under this lease.	Zones, March 2015.	MCW Environmental considers this Condition not to be an environmental issue concerning the Mining Purpose Lease 334 and has therefore not been audited.
31	<b>DETAILS OF LANDS, PURPOSES AND ADDITIONAL CONDITIONS</b> The lease holder shall be limited to the following operations and conditions within the areas specified as Items 1, 2 & 3 and shown in Diagram A of Plan B (M27157) annexed hereto.	-	MCW Environmental considers this Condition not to be an environmental issue concerning the Mining Purpose Lease 334 and has therefore not been audited.
32	With regard to Condition No. 31 and the Diagram A Plan B of plan catalogued M27157, the lease holder shall use the shaft on the subject area for ventilation purposes only, unless with the consent of the Minister first had and obtained and subject to such conditions as he may impose,	-	MCW Environmental considers this Condition not to be an environmental issue concerning the Mining Purpose Lease 334 and has therefore not been audited.

Compliance Status & Risk Level & Recommendations

Not Triggered

Not Triggered

Not Applicable

Not Applicable

Not Applicable
## Mining Lease 1632 Compliance Register

	Condition	Evidence Source	Comment / Finding
33	Any approval or consent previously given by the Minister in terms of Condition 32 of this schedule, including any approval or consent given pursuant to any such condition contained in Consolidated Coal Lease 762 (Act 1992), shall be deemed to be a consent given subject to the same conditions of that approval or consent under this lease.	-	MCW Environmental considers this Condition not to be an environmental issue concerning the Mining Purpose Lease 334 and has therefore not been audited.

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Compliance Status & Risk Level & Recommendations

Not Applicable

	Condition	Evidence Source	Comment / Finding
1	The registered holder shall not prospect or mine for coal within the subject area of the lease	-	The auditors considered this Condition not to be an environmental issue concerning the Mining Purposes Lease 334. The Condition was therefore not audited.
			Site management reported that there had been no exploration activities during the audit period.
2	Shafts, Drifts, Adits a) Any ventilation shaft on the subject area, shall be used for ventilation	Site observations.	Site management reported that ventilation shafts are solely used for ventilation purposes.
	<ul> <li>b) The Minister may consent, subject to such conditions as the Minister may impose to the use of any such shaft for other than ventilation purposes.</li> </ul>		
3	Operations shall be conducted in such a manner as not to cause any danger to persons or stock and the lease holder shall provide and maintain adequate protection to the satisfaction of the Minister around each shaft or excavation opened up or used by the lease holder.	Site observations.	MCW conducted a site inspection and noted that the perimeter of the pit top was fenced. The perimeter of the lease area along Summerhill Drive and adjacent to Wangi Wangi Power Station was also observed to be fenced. Fences have been constructed to keep people out of shafts and drifts. No new shafts or drifts had been constructed during the audit period.
4	Dumps and Coal Preparation Plant The lease holder shall comply with any direction, given or which may be	Site observations.	Site management reported that the Inspector has not issued any directions regarding stabilisation and revegetation of any dumps of coal, minerals, mine residues, tailings or overburden situated on the subject area
	given by the Inspector regarding the stabilisation and revegetation of any dumps of coal, minerals, mine residues, tailings or overburden situated on the subject area.		Coal produced during the audit period was transported by overland conveyor to Earing Power Station. Coal that cannot be conveyed to or received at Earing Power Station is stockpiled on-site. Eraring Power Station own and operate the conveyor from the colliery to Eraring Power Station.
5	The registered holder shall comply with any direction given or which may be given by the Minister regarding the spraying of coal dumps on the property.	Site observations.	Site management reported that this conditions was tot triggered for the main pit top area during the audit period
			The Minister has not provided any direction regarding the spraying of coal dumps on the property.
			No coal dumps were observed during the site inspection.
6	Dams and Escape of Water Settling dams or other dams constructed or to be constructed on the subject area shall be constructed, maintained and sealed to the satisfaction of the Inspector	URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	As identified in the previous IEA (URS, 2013) settling dams for water treatment are located in the lease area. The construction of the dams was not reviewed as part of the audit. No evidence of whether these dams were constructed to the satisfaction of the Director was available for review.
			MCW concur with the previous finding that compliance with the condition is not verified as construction information was not available for review.
7	The registered holder shall provide and maintain efficient means to prevent contaminated waters discharging or escaping from the subject area onto	Site observations.	Myuna operates under EPL 366 that specifies a discharge volume/mass of 13,000 kL per day from LDP B.
	surrounding areas.		Improvements to the water management system have been conducted by increasing the rate of transfer (from approximately 10 L/sec to approximately 50 L/sec) from the CHP Dam to the underground settlement reservoir. Site management reported that this has been achieved by the addition of a larger pipe to the automated pumping system and the construction of a Siphon line from the CHP Dam to the underground workings via a borehole. The new pipeline and Siphon was observed during the site inspection.
8	Dust and Conveyor Systems The registered holder shall take such precautions as are necessary to	Refer to Appendix A, EPI 366, Condition O3.1 for further details.	Refer to Appendix A, EPI 366, Condition O3.1 for further details.

Compliance Status & Risk Level & Recommendations
Not Triggered
Compliant
Compliant
Compliant
Not Triggered
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Compliant

	Condition	Evidence Source	Comment / Finding	Compliance Status & Risk Level & Recommendations
9	The registered holder shall carry out regular inspections of above-ground conveyor systems and shall promptly remove any spillages.	Site observations.	Pit top areas were observed to be generally clean and orderly, with minimal evidence of spills at the time of the site inspection. Coal produced during the audit period was transported by overland conveyor to Earing Power Station. Coal that cannot be conveyed to or received at Earing Power Station is stockpiled on-site. Eraring Power Station own and operate the conveyor from the colliery to Eraring Power Station. PULSE is used to generate week work orders for environmental inspections and weekly surface cleaning.	Compliant
			site including sumps, the diesel bay, sweeping, emptying of bins. Albin Civil were observed to be reclaiming old coal by sorting through waste stockpiles at the emergency stockpile during the site inspection.	
10	Management and Rehabilitation of Lands	Site observations	During the site inspection there was no evidence of fences that had been interfered with, however, not all fences were observed during the site inspection.	Compliant
	The registered holder shall not interfere in any way with any fences on or adjacent to the subject area unless with the prior written approval of the owner thereof or the Minister and subject to such conditions as the Minister may stipulate.		No complaints had been received during the audit period concerning fences.	
11	The registered holder shall observe any instruction given or which may be given by the Minister with a view to minimising or preventing public inconvenience or damage to public or private property.	-	Site management reported that no directions have been issued by the Minister during the audit period.	Not Triggered
12	Subject to any specific condition of this authority providing for rehabilitation of any particular part of the subject area affected by mining or activities associated therewith, the registered holder shall:	Site observations	Not triggered for the main pit top area as the mine is operational and rehabilitation has yet to commence.	Not Triggered
	<ul> <li>a) Shape and revegetate to the satisfaction of the Minster, any part of the subject area in the opinion of the Minister have been damage or</li> </ul>		Site management reported that the Minister has not required any shaping or revegetation of the subject area in the audit period.	
	<ul> <li>b) Reinstate and make safe, including sealing and/or fencing any excavation within the subject area.</li> </ul>		Excavations of the clean stormwater diversion drain were completed by the time of the audit.	
13	If required to do so by the Minister and within such time as may be stipulated by the Minister the lease holder shall carry out the satisfaction of the Minister surveys of structures, buildings and pipelines on adjacent landholdings to determine the effect of operations on any such structures, buildings and pipelines.	-	Site management reported that no directions have been issued by the Minister during the audit period.	Not Triggered
14	<ul> <li>b) The registered holder shall each year once operations have commenced, submit for the Minister's approval an 'Annual Environmental Management Report' relating to the operations of the</li> </ul>	Centennial (2014) Annual Review January 2013 to December 2013.	The 2013, 2014 and 2015 Annual Reviews were available for review and from the Myuna website. No comments were received from the Minister concerning the Annual Reviews.	Compliant
	lease holder on the subject area.	Centennial (2015) Annual Review January 2014 to December 2014.	Refer to Appendix A, PA 10_0080, Schedule 5, Condition 4 further details.	
		Centennial (2016) Annual Review January 2015 to December 2015.		
14	c) The date by which the report must be submitted will be determined by the Minister after consulting the registered holder.	Centennial (2014) Annual Review January 2013 to December 2013.	The 2013 Annual Review was submitted on 28 February 2014 (Centennial, 2014). DRE approved the 2013 Annual Review in a letter dated 14 October 2014 following a site inspection on 8 October 2014.	Compliant
		Centennial (2015) Annual Review January 2014 to December 2014	DP&E provided feedback for a site inspection conducted on 19 August 2015 and the 2014 AEMR in a letter dated 10 September 2015. In their letter DP&E requested:	
		Centennial (2016) Annual	The 2014 Annual Review was submitted to DP&E on 31 March 2015.	
		Review January 2015 to December 2015.	The 2015 Annual Review was submitted to DP&E on 24 March 2016 (Centennial, 2016).	

Recommendations
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Compliant
Compliant

	Condition	Evidence Source	Comment / Finding
14	<ul> <li>d) The report shall comprise:</li> <li>v. A plan showing short, medium and long-term mining plans;</li> <li>vi. A rehabilitation report (in respect of open cut operations) and/or a surface environmental management report (in respect of underground operations).</li> <li>vii. A review performance in terms of Environment Protection Authority and department of Water Resources Licence and approval conditions (related to the Clean Air Act 1961, the Clean Waters Act 1970, the Noise Control Act 1975, the Environmentally Hazardous Chemical Act 1985, the Pollution Control Act 1970 and the Water Act 1912) applicable to the subject area.</li> <li>viii. A review of performance in terms of Development Consent conditions for the subject area.</li> <li>ix. A listing of any variations obtained to approvals applicable to the subject area during the previous year.</li> </ul>	Letter – DRE (2014), AEMR Review 2013, 14 October 2013.	<ul> <li>The following is noted:</li> <li>e) Mining plans for the reporting period were outlined in Section 2.4 of the Annual Review. Section 6 addressed activities for the next reporting year but did not clearly address medium and long-term mining plans.</li> <li>f) Rehabilitation was addressed in Section 5 of the Annual Review.</li> <li>g) Compliance with current regulatory requirements were addressed throughout the Annual Review, in particular in Section 3.</li> <li>h) Development consent conditions were addressed throughout the AEMR, in particular in Section 3.</li> <li>i) Section 1.1 addressed approvals applicable to the subject area during the previous year.</li> </ul>
14	d) The Minister, may by notice in writing, direct the registered holder to undertake any operations or remedial actions in such manner and within such period as may be specific in that notice so as to ensure that operations on the subject area conform to the requirements of relevant statutory approvals or licences.	-	Site management reported that no directions have been issued by the Minister during the audit period.
15	If so directed by the Minister the registered holder shall rehabilitate to the satisfaction of the Minister and within such time as may be allowed by the Minister any leans within the subject area which may have been disturbed by mining or prospecting operations whether such operations were or were not carried out by the registered holder.	-	Site management reported that no directions have been issued by the Minister to rehabilitate lands during the audit period.
16	Upon completion of operations on the surface of the subject area or upon the expiry or sooner determination of this authority or any renewal thereof, the registered holder shall remove from such surface such buildings, machinery, plant, equipment, constructions and works as may be directed by the Minister and such surface shall be rehabilitated and left in a clean, tidy and safe condition to the satisfaction of the Minister.	-	Not triggered for the main pit top area during the audit period
17	If so directed by the Minister the registered holder shall rehabilitate to the satisfaction of the Minister and within such time as may be allowed by the Minister any leans within the subject area which may have been disturbed by mining or prospecting operations whether such operations were or were not carried out by the registered holder.	-	Site management reported that no directions have been issued by the Minister to rehabilitate lands during the audit period.
18	The registered holder shall maintain the subject area in a clean and tidy condition at all times.	Site observations.	JR Richards Pty Ltd is engaged to manage and waste streams at the site. JR Richards provide a monthly waste management report that includes data concerning disposal of waste streams at the site. The reports also include details of the disposal locations for specific waste streams. Two staff are employed on a full time basis to empty sumps and keep the pit top area clean and tidy. Albin Civil Pty Ltd is engaged on a fulltime basis to manage waste around the site including sumps the dissel bay sweeping emptying of bins. Albin Civil ware
			observed to be reclaiming old coal by sorting through waste stockpiles at the emergency stockpile during the site inspection.

# Compliance Status & Risk Level & Recommendations

Administrative Non-compliance

**MPL 334-REC-01** - Include medium and long-term mining plans in the AEMR.

Not Triggered

Not Triggered

Not Triggered

Not Triggered

	Condition	Evidence Source	Comment / Finding
19	The registered holder shall take all precautions against causing outbreak of fire on the subject area.	URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0. Centennial (2016), Bushfire Management Plan M-EMS-3- 005, Revision 10, May 2016. Bush Fire Hazard Reduction Certificate Environmental Approval Works, 29 October 2015 – Effective 22 October 2015 to 21 October 2018. Site observations.	<ul> <li>MCW Environmental concur with the findings of the previous IEA (URS, 2013) that noted the following precautions to be in place at the site:</li> <li>The site is fully fenced to restrict access.</li> <li>Buffer zones are located around the pit top.</li> <li>No smoking is allowed on site.</li> <li>Spraying of emerging fireweed in the adjustment paddock is conducted.</li> <li>Hot work procedures were reported to have been implemented and include precautions to reduce risk of fire.</li> <li>A ring main fire hydrant system is installed as per Coal Mine Regulations.</li> <li>The site had recently reviewed and updated the Bushfire Management Plan (Centennial, 2016) for the site.</li> <li>Site management reported that the Rural Fire Service (RFS) conducted a site inspection to assess fuel loads during the audit period and identified an area on northern-side of the site (between Wangi Creek and Donelly Road) that requires a hazard reduction burn. Site management reported that the burn is planned for winter period 2016; however, the site was in discussion with external parties as RFS requires that a control line be installed.</li> <li>Site management reported that there had been no bushfire incidents during the audit period and that staff are trained in mine firefighting (i.e. for underground operations). No records were sighted for firefighting training.</li> <li>Fire hydrants and firefighting equipment were observed around the site at the time of the site inspection. Slashing of weeds is conducted around asset protection zones.</li> <li>MCW Environmental are not fire management experts and no adequacy assessment of the site's preparedness for a bushfire has been conducted, nor any other assessment related to bushfire management.</li> </ul>
20	Where the registered intends to conduct operations in or adjacent to any river, stream, creek, tributary, lake, dam or reservoir the subject of a proclamation under the Fisheries and Oyster Farms Act 1935, relating to or prohibiting the taking of species of fish, the registered holder shall, not less than seven days before commencement of such operations give notice in writing to the District Inspector of Fisheries setting out details of such operations and the river, stream, creek, tributary, lake, dam or reservoir that shall or may be affected nearby.	-	No operations in or adjacent to any river, stream, creek, tributary, lake, dam or reservoir the subject of a proclamation under the Fisheries and Oyster Farms Act 1935, relating to or prohibiting the taking of species of fish have been conducted in the audit period.

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Compliance Status & Risk Level & Recommendations

#### Compliant

	Condition	Evidence Source	Comment / Finding
21	Where the registered holder shall provide and maintain to the satisfaction of the Minister efficient means to prevent contamination, pollution, erosion or siltation of any river, stream, creek, tributary, lake, dam, reservoir, watercourse, groundwater or catchment area or any undue interference to fish or their environment and shall observe any instruction given or which may be given by the Minister with a view to preventing or minimising the contamination, pollution, erosion or siltation of any river, stream, creek, tributary, lake, dam, reservoir, watercourse, groundwater or catchment area, or any undue interference to fish or their environment.	Myuna Spread Sheet 2016_04.Xls. Myuna Environmental Monitoring Reports – October 2013 to April 2016. Centennial (2014) Annual Review January 2013 to December 2013. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2016) Annual Review January 2015 to	Myuna operate under EPL 366 that regulates the levels of pollution in water discharges. A review of the EPL is provided in this report (Appendix A). The review found overall compliance with the EPL 366. Notwithstanding this, the following incidents were recorded concerning water during the audit period: Refer to EPL 366, Condition L1.1 and Conditions L2.1 to L2.5 for further information. Site management reported that no directions had been given by the Minister relating to this requirement during the audit period.
		December 2015. Annual Return 2015. Annual Return 2014. Annual Return 2013. Carbon Based Environmental	
		Pty Ltd (2016), Depositional Dust, High Volume Air Samplers PM10 and TSP and Surface Water, March 2016. Carbon Based Environmental Pty Ltd (2016), Depositional	
		Dust, High Volume Air Samplers PM10 and TSP and Surface Water, April 2016.	
22	The registered holder shall carry out operations in such a manner as to interfere as little as possible with flora and fauna and shall not cut or damage any tree, shrub or other vegetative cover except such as may	Site observations.	Observations during site inspections indicated that works were being conducted generally within the existing operational footprint and that no new vegetation clearing had been conducted in the audit period.
	directly obstruct or prevent the carrying out of the operations.		Site management reported that a number of trees were blown over in a storm event in April 2015 and had to be removed.
			Hunter Land Management Pty Ltd is engaged to conduct weed management activities. Weed Actions Plans were available for review for 2016, 2015, 2014 and 2013. The plans provided a summary of actions for the preceding year including the area treated and the targeted weeds. The plans also detailed what works will be conducted in following year.
23	The registered holder shall plant such grasses, trees or shrubs or such other vegetation as may be required by the Minister and care of same during the currency of this authority or any renewal thereof, to the satisfaction of the Minister.	-	Site management reported that no directions had been received by the Minister during the audit period.
24	The lease holder must not fell trees, strip bark or cut timber on the lease without the consent of the landholder who is entitled to the use of the timber, or if such a landholder refuses consent or attaches unreasonable conditions to the consent, without the approval of a warden.	-	It is understood that no trees were felled for the installation of the stormwater diversion drain or for other activities conducted during the audit period.
25	The registered holder shall maintain an arboreal screen to the satisfaction of the Minister within such parts of the subject area as may be specified by the Minister and shall plant such trees or shrubs as may be required by the Minister to preserve the arboreal screen in a condition satisfactory to the Minister.	-	Site management reported that no directions had been received by the Minister during the audit period. The pit top is screened from Summerhill Drive through a combination of the topography and surrounding bushland.

Compliance Status & Risk Level & Recommendations

Non-compliant

Low Risk

Compliant

Not Triggered

Not Triggered

	Condition	Evidence Source	Comment / Finding
26	The registered holder shall cover the top dressing material, to the Minister's satisfaction, such parts of the subject area as may be stipulated by the Minister and shall plant and maintain, to the Minister's satisfaction such grasses, trees or shrubs or such other vegetation as may be required by the Minister.	-	Site management reported that no directions had been received by the Minister during the audit period.
27	<b>Soil Erosion</b> The registered holder shall conduct operations in such a manner as to not cause or aggravate soil erosion and the registered holder shall observe and perform any instructions given of which may be given by the Minister with a view to minimising or preventing soil erosion	-	No directions had been received by the Minister during the audit period. No areas of significant erosion or sedimentation from mining activities were observed. Sediment control fences at the waste storage area were observed to require attention.
28	The registered holder shall ensure that any topsoil or other material suitable for topdressing purposes which may be distributed during operations shall be removed separately for replacement as far as may be practicable and the registered holder shall plant or sow such grasses, shrubs or trees in the replaced surface material as may be considered necessary by the Minister to control or prevent soil erosion.	-	Site management reported that no directions had been received by the Minister during the audit period. Site management also reported that minor repairs to internal roads and sumps will be completed in the next audit period.
29	In the event of any excavations being made the registered holder shall ensure that such are refilled and the topsoil previously removed is replaced and levelled. All such refilling and levelling shall be done to the satisfaction of the Minister.	Site observations	Site management reported that there had been no significant excavations at the site during the audit period and none were observed during the site inspection.
30	The registered holder shall ensure that the run off from any disturbed areas including the overflow from any depression of ponded area is discharged in such a manner that it will not cause erosion.	Site observations.	LDP A is located at the Emergency Coal Stockpile Dam for event based discharges from a small diameter pipe into an unlined drainage channel that flows to Wangi Creek. No erosion control devices were observed at the outlet of LDP A to minimise the impact of discharged water to the base and/or bank or the receiving channel. The distance between the end of the outflow pipe and the base of the channel was estimated to be greater than two meters.
			No dedicated spillway was observed at the dam to facilitate water management in the event of the dam overtopping.
			It was observed that there was no dedicated sampling site for the outflow pipe of LDP A and that when collecting a sample a person may be required to climb down the steep bank beneath the outflow. AS/NZS 5667.1.1998, <i>Water quality – sampling Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples</i> Section 3.6 (p.9) states that " <i>Sampling from unsafe sites, such as unstable banks, should be avoided if possible. If this is unavoidable, the operation should be conducted by a team using appropriate precautions rather than one person</i> ". A metal gantry/walkway with attached steps was observed adjacent to the container housing the water pump at the Emergency Coal Stockpile Dam. Site management reported that the intention was that the gantry would be installed at the LDP A outflow to provide a safe sampling site.
			A gap was observed between the earthen bund adjacent to the container housing the water pump at the Emergency Coal Stockpile Dam. The gap provided a potential pathway for run-off from a disturbed area to flow into the drainage channel at LDP A.
			Given the installation of erosion control structures at LDP A is a repeat finding from the previous IEA (URS, 2013, Appendix A, p.82) this condition was found to be non-compliant.

# Compliance Status & Risk Level & Recommendations

Not Triggered

Compliant

Not Triggered

Not Triggered

Non-compliant

Low Risk

**MPL 334-REC-02a** – Erosion controls should be installed beneath the outflow to LDP A to minimise the potential for erosion to the drainage channel. Consideration should be given to the installation of a spillway at the Emergency Coal Stockpile Dam including provision of a safe sampling site for the LDP A outflow pipe.

**MPL 334-REC-02b** – The earthen bund adjacent to the container housing the water pump at the Emergency Coal Stockpile Dam should be reformed to prevent run-off from a disturbed area to flow into the drainage channel at LDP A.

Refer to **PA 10\_0080-REC-05** (PA 10\_0080, S3.24)

	Condition	Evidence Source	Comment / Finding
31	<b>Roads</b> The registered holder shall pay to Lake Macquarie City Council, Department of Conservation and Land Management or the Chief Executive, Roads and Traffic Authority the cost incurred by such Council or Department or Chief Executive of making good any damage caused by operations carried on by or under the authority of the registered holder to any road adjoining or traversing the surface or the excepted surface, as the case may be of the subject area.	-	Site management reported that there had been no reported damage caused by operations during the audit period.
32	PROVIDED HOWEVER that the amount paid by the registered holder as aforesaid shall be reduced by sum of money if any as may be paid to the said Council the Department of Conservation and Land Management or the Chief Executive, Roads and Traffic Authority as the case may be from the Mine Subsidence Compensation Fund constituted under the Mine Subsidence Compensation Act 1961, in settlement of a claim for compensation for the same damage.	-	Noted
33	Catchment Areas a) Operations shall be carried out in such a way as not to cause any pollution of the Lake Macquarie Catchment Area.	GHD (2015), Myuna Colliery ANZECC Water Quality Assessment, May 2015. Centennial, Quarterly Report for Additional Monitoring as per Condition E1 of EPI 366 – March 2013, June 2013, September 2013, December 2013, March 2014, June 2014, September 2014, December 2014, March 2015, June 2015, September 2015, December 2015, March 2016. Myuna Spread Sheet 2016_04.Xls. Centennial (2016) Annual Review January 2015 to December 2015. Centennial (2015) Annual Review January 2014 to December 2014. Centennial (2014) Annual Review January 2013 to December 2013.	<ul> <li>Myuna operate under EPL 366 that regulates levels of pollution in water discharges. A review of the EPL is provided in this report.</li> <li>Weekly surface cleaning work orders were noted to include management and operation of the coal pad dam water diesel pump, clean out of drive in sump at the Coal Handling Plant dam and maintenance and servicing of water catchment sumps and drains. Weekly surface inspections were noted to address inspections for leaking machinery, evidence of oil on floor in the bulk oil storage area and levels of silt in the sumps in the workshop. Hazardous and dangerous goods are stored in bunded and covered storage areas.</li> <li>The 2013, 2014 and 2015 Annual Reviews provided quarterly monitoring results for Wangi Bay. Monitoring results are compiled and stored on a spread sheet within the Centennial Lotus Notes Intranet. The spread sheet contains data for Manganese in accordance with the requirements of this Condition.</li> <li>The monitoring of filterable Manganese is undertaken on a quarterly schedule. The monitoring results are submitted to the EPA. Site management reported that there has been a slight downward trend in Manganese concentrations recorded in Wangi Bay over the four year period of monitoring.</li> <li>GHD (2015) was engaged by Centennial Myuna to undertake a water quality assessment of discharge from Myuna Colliery into Wangi Creek, with a particular focus on the concentrations of metals in water discharged from the mine site as required by Condition U1 (PRP 1) of EPL 366. It is noted that EPL 366 lists PRP 1 completed as of 4 August 2015.</li> <li>Site management reported that the report (GHD, 2015) had been provided to the EPA but Centennial had yet to receive any feedback from the EPA concerning the report at the time of the site inspection.</li> </ul>
33	b) If the registered holder is using or about to use any process which in the opinion of the Minister is likely to cause contamination of the water of the said Catchment Area the registered holder shall refrain from using or cease using as the case may require such process within twenty-four hours of the receipt by the registered holder of a notice in writing under the hand of the Minister requiring the lease to do so.	-	Site management reported that no directions had been received by the Minister during the audit period.
33	c) The registered holder shall comply with any regulations now in force or hereafter to be in force for the protection from pollution of the said Catchment Area.	-	Noted

# Compliance Status & Risk Level & Recommendations

Not Triggered

Noted

Compliant

Not Triggered

Noted

	Condition	Evidence Source	Comment / Finding
34	Within a period of three months from the date of this authority or a period of three months from the date of service of the notice of renewal, or within such further time as the Secretary may allow the registered holder shall serve on each owner and occupier of the private land and on each occupier of the Crown land held under a pastoral lease within the subject area a notice in writing indicating that this authority has been granted or renewed and whether the authority includes the surface. The notice shall be accompanied by an adequate plan and description of the subject area. If there are ten or more owners or occupiers affected the registered holder may serve the notice by publication in a newspaper circulating in the region where the subject area is situated. The notice shall indicate that this authority has been granted or renewed, state whether the authority	URS (2013), Myuna Independent Environmental Audit, 24 October 2013, Ref: 43177866/1/0.	MCW Environmental concur with the previous finding (URS, 2013) that noted: "This requirement was initiated well before operations were managed by Centennial Coal. As such, this requirement was assumed to have been addressed at the time of the ML 334 being issued and was not assessed as part of this audit". For this reason, this condition was assessed as not verified.
	includes the surface and shall contain an adequate plan and description of the subject area.		
35	<ul> <li>a) Where the Inspector is of the opinion that any condition of this authority relating to operations within the subject area, or any provision of the Mining Act 1992, relating to operations within the subject area, are not being complied with by the registered holder, the Inspector may serve on the registered holder a notice stating that and give particulars of the reason why, and may in such notice direct the registered holder: <ul> <li>i. to cease operations within the subject area in contravention of that condition or act; and</li> <li>ii. to carry out within the specified time works necessary to rectify or remedy the situation.</li> </ul> </li> <li>b) The registered holder shall comply with the directions contained in any notice served pursuant to sub-paragraph (a) of this condition. The Secretary may confirm, vary or revoke any such direction.</li> <li>c) A notice referred to in this condition may be served on Colliery Manager.</li> </ul>	-	Site management reported that no notices have been issued to Myuna by the Inspector to cease work or carry out specific works during the audit period.
36	The registered holder must indemnify and keep indemnified the Crown from and against all actions, suits, claims and demands of whatsoever nature and all costs, charges and expenses which may be brought against the lease holder or which the lease holder may incur in respect of any accident or injury to any person or property which may arise out of the construction, maintenance or working of any workings now existing or to be made by the lease holder within the lease area or in connection with any of the operations notwithstanding that all other conditions of this lease shall in all respects have been observed by the lease holder or that any such accident or injury shall arise from any act or thing which the lease holder may be licensed or compelled to do.	-	Noted
37	The registered holder shall save harmless the Crown from payment of compensation and from and against all claims, actions, suits or demands whatsoever in the event of any damage resulting from mining operations under or near the subject area.	-	Noted

Compliance Status & Risk Level & Recommendations

Not Verified

(Historical requirement)

Not Triggered

Noted

Noted

	Condition	Evidence Source	Comment / Finding
38	<ul> <li>Security Deposit <ul> <li>a) The lease holder shall, upon request from the Director General, lodge with the Minister the sum of \$10,000 in accordance with Instructions for Manner of Lodgement of Security Deposits as security for the fulfilment of the obligations of the lease holder under this authority. In the event that the lease holder fails to fulfil any of the lease holder's obligations under this authority the said sum may be applied at the discretion of the Minister towards the cost of fulfilling such obligations. For the purposes of the clause a lease holder shall be deemed to have failed to fulfil the lease holder's obligations under this authority authority, any provision of the Act or regulations made there under or any condition or direction imposed or given pursuant to a condition or provision of this authority or of any provision of the Act of regulations made thereunder.</li> <li>b) The Minister may at any time after the commencement of this authority or any renewal thereof, vary the amount of security required in accordance with this condition.</li> <li>c) Where the amount of security has been increased pursuant to Clause (b) hereof the lease holder shall, within two (2) months of being requested by the Minister, lodge a security for the amount of security required, in which case the Minister shall refund or release to the lease holder the security previously lodged.</li> </ul> </li> </ul>	Letter – DRE (2016), Review of Group Security – Myuna Colliery, 5 February 2016. Letter – Centennial (2016), Review of Group Security – Myuna Colliery, 18 March 2016. Bank Guarantee DG492693418. Endorsement Schedule – MPL334, ML1371, ML1632.	An Endorsement Schedule stated that " <i>In accordance with the provisions of Section</i> 261B (3) & (4) of the Mining Act 1992, the decision maker varied the security conditions of Mining Purpose Lease 334 (Act 1973), Mining Lease 1370 (Act 1992) and Mining Lease 1632 (Act 1992) so as to require a single security in the amount of \$5,568,000 to be given and maintained". The amendment took effect on and from 20 December 2014. A letter from DRE to the site dated 5 February 2016 noted that a group security in the amount of \$7,586,000 was to be given and maintained. The letter noted that a security of \$5,568,000 was held with the Department noting that a security of \$2,018,000 could be added to the security already held by the Department. A letter from Centennial to DRE dated 18 March 2016 to DRE included a Bank Guarantee of \$2,018,000 for MPL 334, ML 1370 and ML 1632.

#### Endorsement Schedule

In accordance with the provisions of Section 79(4) of the Mining Act 1992, the Minster amended Mining Purposes Lease 334 (Act 1973) and Mining Lease 1370 (Act 1992) so as to require a single security in the amount of \$3,110,000 to be given and maintained.

The amendment takes effect on and from 11 April 2008.

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
1	<ul> <li>Notice to Landholders</li> <li>a) Within a period of three months from the date of grant/renewal of this lease or within such further time as the Minister may allow, the lease holder must serve on each landholder of the land a notice in writing indicating that this lease has been granted/renewed and whether the lease includes the surface. An adequate plan and description of the lease area must accompany the notice.</li> <li>b) If there are ten or more landholders affected, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this lease has been granted/renewed; state whether the lease includes the surface and must contain an adequate plan and description of the lease area.</li> <li>If a notice is made under condition 1(b), compliance with condition 1(a) is not required.</li> </ul>	Newcastle Herald, Tuesday May 21, 2013 (p.25).	Myuna provided a draft Notice within the Newcastle Herald on 21 May 2013. The date of issue could not be confirmed by Myuna. The draft notice contained relevant information as required by this Lease condition, including a plan outlining the boundaries of the Lease.
2	Rehabilitation Any disturbance as a result of activities under this lease must be rehabilitated to the satisfaction of the Minister.	Letter – DP&E (2015), Approval for Myuna Colliery, MOP, 7 December 2015. Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan July 2013 to December 2015. Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015, V1.	No buildings were renovated, removed or rehabilitated during the audit period. Rehabilitation of degraded areas caused by environmental weeds was systematically carried out during the reporting period, as part of land management practice. No rehabilitation trials, research or initiatives were undertaken during the audit period. No rehabilitation or removal and renovation of buildings are proposed in the plan period. Myuna will continue to operate infrastructure to support mining throughout the duration of the current MOP period from 2016 to 2022. Rehabilitation of any exploration drill sites will be undertaken at the completion of these sites during the MOP period in consultation with the landowner and in accordance with the relevant mining lease. Rehabilitation of water management structures are not planned during the current MOP period. Dams and water management structures will continue to be used to manage water on-site.

Compliance Status & Risk Level & Recommendations

#### Compliant

Condition	Evidence Source	Comment / Finding
<ul> <li>Condition</li> <li>Mining Operations Plan</li> <li>() The lease holder must comply with an approved Mining Operations Plan (MOP) in carrying out any significant surface disturbance activities, including mining purposes and prospecting. The lease holder must apply to the Minister for approval of a MOP. An approved MOP must be in place prior to commencing any significant surface disturbing activities, including mining operations, mining purposes and prospecting.</li> <li>(i) The MOP must identify the post mining land use and set out a detailed rehabilitation strategy which: <ul> <li>i. Identifies areas that will be disturbed.</li> <li>ii. Detail the staging of specific mining operations, mining purposes and prospecting.</li> <li>(iii. Identifies areas that will be managed and rehabilitated to achieve the post mining land use.</li> <li>iv. Identifies how mining operations, mining purposes and prospecting will be carried out in order to prevent and or minimise harm to the environment.</li> <li>v. Reflects the conditions of approval under:         <ul> <li>The <i>Environment Planning and Assessment Act</i> 1979.</li> <li>The Protection of the Environment Operations Act 1997.</li> <li>And any other approvals relevant to the development including the conditions of this mining lease.</li> </ul> </li> <li>(h) The MOP must be prepared in accordance with <i>ESG3: Mining Operations Plan</i> (MOP) Guidelines September 2013 published on the Departments website at www.resources.nsw.gov.au/environment.</li> <li>(i) The lease holder may apply to the Minister to amend an approved MOP at any time.</li> <li>(j) It is not a breach of this condition if:         <ul> <li>i. The operation which, but for this condition 3€ would be a breach if condition 3(a), were necessary to comply with a lawful order or direction prior to the operations constituting the brain and Safety Act 2000, and</li> <li>(ii) The lease holder must prepare a Rehabilitation Report to the satisfaction of the Minister. The report to suther sately Act 2000, and<th><ul> <li>Evidence Source</li> <li>Centennial (2015), Myuna Colliery Mining Operations Plan January 2016 to December 2022, 10 November 2015, V1.</li> <li>Letter – DP&amp;E (2015), Approval for Myuna Colliery, MOP, 7 December 2015.</li> <li>Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan July 2013 to December 2015.</li> <li>Centennial (2016) Annual Review January 2015 to December 2015.</li> <li>Centennial (2015) Annual Review January 2014 to December 2014.</li> <li>Centennial (2014) Annual Review January 2013 to December 2013.</li> <li>Letter – Centennial (2016), Myuna Colliery AEMR, 24 March 2016 [Letter to DP&amp;E].</li> <li>Letter – DP&amp;E (2015), Myuna Colliery Annual Review 2014, 10 September 2015 [Letter to Centennial].</li> <li>Letter – Centennial (2014), Myuna Colliery AEMR, 28 February 2014 [Letter to DP&amp;E].</li> <li>Letter – DP&amp;E (2014), Centennial Myuna 2013 AEMR, 21 March 2014 [Letter to Centennial].</li> </ul></th><th><ul> <li>Comment / Finding</li> <li>Site management reported that there is no planned rehabilitation until the end of mining and then actions will commence to facilitate ongoing industrial land use at the site. It is expected that decommissioning, remediation and removal of mine related infrastructure and coal pads will occur prior to handing the site over for ongoing industrial land use.</li> <li>The MOP notes that "The proposed final land use of light industrial / mixed use would require the site to be rezoned Light Industrial (IN2) or Mixed Use (B4) under the IMLEP 2014". A number of Domains' specified in the MOP will be returned to the predevelopment natural bushland</li> <li>The auditors sighted historical rehabilitation adjacent the Eraring Power Station boundary that had good cover and was in good condition.</li> <li>The MOP was originally submitted within 12 months of the approval, however has since been updated. A response from DRE dated 22 January 2013 approved the staged approach and approved the plan for the period of January 2013 to use 2013. A letter dated 11 June 2015 from DRE approved the Myuna Colliery Mining Operations Plan Stan Par Network 2015 Amendment.</li> <li>K) The Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015 Amendment.</li> <li>K) The Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015 appeared to have been prepared in general accordance with relevant DRE guidelines.</li> <li>Section 5.4 (pp.55-57) provided detail concerning mine closure planning.</li> <li>The previous IEA (URS, 2013, Appendix A, p.25) stated "URS sighted a letter of submission dated 5 June 2013 for Stage 2 of the Rehabilitation Management Plan. It is noted that Stage 1 of the Rehabilitation Management Plan. It is noted that Stage 1 of the Rehabilitation Management Plan was submitted in January 2013 (i.e. within the approval limeframe)".</li> <li>No rehabilitation or removal</li></ul></th></li></ul></li></ul></li></ul>	<ul> <li>Evidence Source</li> <li>Centennial (2015), Myuna Colliery Mining Operations Plan January 2016 to December 2022, 10 November 2015, V1.</li> <li>Letter – DP&amp;E (2015), Approval for Myuna Colliery, MOP, 7 December 2015.</li> <li>Centennial (2015), Myuna Colliery Mining Operations Plan Rehabilitation Management Plan July 2013 to December 2015.</li> <li>Centennial (2016) Annual Review January 2015 to December 2015.</li> <li>Centennial (2015) Annual Review January 2014 to December 2014.</li> <li>Centennial (2014) Annual Review January 2013 to December 2013.</li> <li>Letter – Centennial (2016), Myuna Colliery AEMR, 24 March 2016 [Letter to DP&amp;E].</li> <li>Letter – DP&amp;E (2015), Myuna Colliery Annual Review 2014, 10 September 2015 [Letter to Centennial].</li> <li>Letter – Centennial (2014), Myuna Colliery AEMR, 28 February 2014 [Letter to DP&amp;E].</li> <li>Letter – DP&amp;E (2014), Centennial Myuna 2013 AEMR, 21 March 2014 [Letter to Centennial].</li> </ul>	<ul> <li>Comment / Finding</li> <li>Site management reported that there is no planned rehabilitation until the end of mining and then actions will commence to facilitate ongoing industrial land use at the site. It is expected that decommissioning, remediation and removal of mine related infrastructure and coal pads will occur prior to handing the site over for ongoing industrial land use.</li> <li>The MOP notes that "The proposed final land use of light industrial / mixed use would require the site to be rezoned Light Industrial (IN2) or Mixed Use (B4) under the IMLEP 2014". A number of Domains' specified in the MOP will be returned to the predevelopment natural bushland</li> <li>The auditors sighted historical rehabilitation adjacent the Eraring Power Station boundary that had good cover and was in good condition.</li> <li>The MOP was originally submitted within 12 months of the approval, however has since been updated. A response from DRE dated 22 January 2013 approved the staged approach and approved the plan for the period of January 2013 to use 2013. A letter dated 11 June 2015 from DRE approved the Myuna Colliery Mining Operations Plan Stan Par Network 2015 Amendment.</li> <li>K) The Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015 Amendment.</li> <li>K) The Mining Operations Plan Rehabilitation Management Plan January 2016 to December 2022, 10 November 2015 appeared to have been prepared in general accordance with relevant DRE guidelines.</li> <li>Section 5.4 (pp.55-57) provided detail concerning mine closure planning.</li> <li>The previous IEA (URS, 2013, Appendix A, p.25) stated "URS sighted a letter of submission dated 5 June 2013 for Stage 2 of the Rehabilitation Management Plan. It is noted that Stage 1 of the Rehabilitation Management Plan. It is noted that Stage 1 of the Rehabilitation Management Plan was submitted in January 2013 (i.e. within the approval limeframe)".</li> <li>No rehabilitation or removal</li></ul>

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding
4	<ul> <li>Compliance Report</li> <li>a) The lease holder must submit a Compliance Report to the satisfaction of the Minister. The report must be prepared in accordance with any relevant guidelines or requirements published by the Minister for compliance reporting.</li> </ul>	-	A Compliance Report had not been provided to the Department given approval for MPL 334 was granted on 20 October 2015 (first report due 20 October 2016).
	<ul> <li>i. The extent to which the conditions of this mining lease or any provisions of the Act of regulations applicable to activities under this mining lease, have or have not been complied with.</li> </ul>		
	<ul> <li>ii. Particulars of any non-compliance with any such conditions or provisions.</li> <li>iii. The reason for any such non-compliance.</li> <li>iv. Any action taken, or to be taken to prevent any recurrence, or to mitigate the effects, of that non-compliance.</li> </ul>		
	c) The Compliance Report must be lodged with the Department annually		
	<ul> <li>d) In addition to annual lodgement under condition 4(c) above, a Compliance Report: <ol> <li>Must accompany any application to renew this mining lease under the Act.</li> <li>Must accompany any application to transfer this mining lease under the Act.</li> <li>Must accompany any application to cancel, or to partially cancel, this mining lease under the Act.</li> </ol></li></ul>		
	<ul> <li>e) Despite the submission of any Compliance Report under (c) or (d) above, the titleholder must lodge a Compliance Report with the Department at any date or dates otherwise required by the Minister.</li> </ul>		
	f) A Compliance Report must be submitted one month prior to the expiry of this mining lease, where the licence holder is not seeking to renew or cancel this mining lease.		

Compliance Status & Risk Level & Recommendations

	Condition	Evidence Source	Comment / Finding	
5	<ul> <li>Environmental Incident Report</li> <li>d) The lease holder must notify the Department of all: <ol> <li>Breaches of the conditions of this mining lease or breaches of the Act causing or threatening material harm to the environment; and</li> <li>Breaches of environmental protection legislation causing or threatening material harm to the environment (as defined in the <i>Protection of the Environment Operations Act 1997</i>).</li> </ol> </li> <li>Arising in connection with significant surface disturbing activities, including, mining operations, mining purposes and prospecting operations, under this mining lease. The notification must be given immediately after the lease holder becomes aware of the breach.</li> <li>e) The lease holder must submit an Environmental Incident Report to the Department within seven (7) days of all breaches to in condition 5(a)(i) and (ii). The Environmental Incident Report must include: <ol> <li>The details of the mining lease.</li> <li>Contact details for the lease holder.</li> <li>A map identifying the location of the incident and where material harm to the environment has or is likely to occur.</li> <li>A description of the nature of the incident or breaches referred to in 5(a).</li> <li>A summary of all previous incidents or breaches referred to in 5(a).</li> <li>In addition to the requirements set out in condition 5(a) and (b), the lease holder must immediately advise the Department of any notification made under section 148 of the <i>Protection of the Environment</i> for any notification and prospecting operations, under this mining lease.</li> </ol> </li> </ul>		Myuna management reported that there have not been any incidents that have caused, or threatened to cause, material harm to the environment or breaches of environmental protection legislation causing or threatening material harm to the environment (as defined in the <i>Protection of the Environment Administration Act 1997</i> ) and therefore no incident report has been provided to the Department and any other relevant agencies.	
6	Extraction Plan	-	-	
7	Resource Recovery NOT USED	-	-	
8	<ul> <li>Group Security</li> <li>The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations of all or any kind under the mining lease, including obligations of all or any kind under the mining lease that may arise in the future.</li> <li>The amount of the security deposit to be provided as a group security has been assessed by the Minister at \$5,568,000.</li> <li>The leases covered by the group security include Mining Lease 1370 (Act 1992) and Mining Lease 1632 (Act 1992).</li> </ul>	Letter – DRE (2016), Review of Group Security – Myuna Colliery, 5 February 2016. Letter – Centennial (2016), Review of Group Security – Myuna Colliery, 18 March 2016. Bank Guarantee DG492693418. Endorsement Schedule – MPL334, ML1371, ML1632.	An Endorsement Schedule stated that "In accordance with the provisions of Section 261B (3) & (4) of the Mining Act 1992, the decision maker varied the security conditions of Mining Purpose Lease 334 (Act 1973), Mining Lease 1370 (Act 1992) and Mining Lease 1632 (Act 1992) so as to require a single security in the amount of \$5,568,000 to be given and maintained". The amendment took effect on and from 20 December 2014. A letter from DRE to the site dated 5 February 2016 noted that a group security in the amount of \$7,586,000 was to be given and maintained. The letter noted that a security of \$5,568,000 was held with the Department noting that a security of \$2,018,000 could be added to the security already held by the Department. A letter from Centennial to DRE dated 18 March 2016 to DRE included a Bank Guarantee of \$2,018,000 for MPL 334, ML 1370 and ML 1632.	

Compliance Status & Risk Level & Recommendations

Not Triggered

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	Condition	Evidence Source	Comment / Finding
9	Cooperation Agreement         The lease holder must make every reasonable attempt, and be able to demonstrate their attempts, to enter into a cooperation agreement with the holder(s) of any overlapping title(s). The cooperation agreement should address but not be limited to issues such as:         • Access arrangements         • Operational interaction procedures         • Dispute resolution         • Information exchange         • Well location.         • Timing of drilling         • Potential resource extraction conflicts.         • Rehabilitation issues.	-	Site management reported that there are no overlapping titles and therefore this condition has not been triggered.
	Exploration Reporting Note: Exploration Reports (Geological and Geophysical) The lease holder must lodge reports to the satisfaction of the Minister in accordance with section 163C of the Mining Act 1992 and in accordance with clause 57 of the Mining Regulation 2010. Reports must be prepared in accordance with Exploration Reporting: A guide for reporting on exploration and prospecting in New South Wales (Department of Trade and Investment, Regional Infrastructure and Services 2010).	-	MCW Environmental considers this Condition not to be an environmental issue concerning the Mining Purpose Lease 334 and has therefore not been audited.

Compliance Status & Risk Level & Recommendations

Not Triggered

Not Applicable

B-0

## Appendix B Previous IEA Action Items

## Summary of conditions / requirements assessed as non-compliant or indeterminate and recommendations

Condition / Requirement No.	2013 Independent Environmental Audit Recommendation / Comment	Myuna 2013 Response	2016 IEA Status	Status 2016
Myuna Colliery – Mining Project - Project Approval DA 10_0080	<ul> <li>Preparation – Indeterminate (at time of site inspection formal approval by the Director-General was pending. Noted formal Approval has since been obtained dated 8 October 2013).</li> </ul>	Approval of the MOP/RMP received from DRE on 8 October 2013. No further action required.	Closed	Closed
S3.35	<ul> <li>Implementation – Indeterminate (on basis Plan was still to be approved at the time of the site inspection for the audit).</li> </ul>			
Myuna Colliery –Mining Project - Project	It is recommended that Myuna seek legal advice concerning the disposal of waste back underground in accordance with the POEO Act 1997.	Myuna has implemented a waste sorting procedure to prevent further stockpiling of waste in the area.	Waste from underground was observed to be collected in a large waste bin during the site inspection.	Closed
Approval DA PA 10_0080 S3.31	Only natural materials such as dirt, rock and coal deposits should be returned underground. Manmade materials including natural material treated with manmade product(s) (i.e. wood) should be segregated and disposed of off-site at an appropriately licensed waste facility. Waste should be separated at the source to prevent contamination of waste streams.	Waste currently stockpiled is to be sorted and disposed of through appropriate streams.		
Myuna Colliery –Mining Project - Project Approval DA 10_0080 S5.7	In accordance with this Condition and Myuna's management plans it is recommended that when the EPA is notified of an environmental incident that has caused, or threatens to cause, material harm to the environment the Director-General and any other agencies be notified at the earliest opportunity.	Noted. Reporting to the Director General and any other agencies will be undertaken in the case of an environmental incident in the future.	Reporting to the Director-General and other agencies was noted to have occurred during the audit period. Refer to Appendix A for further details.	Ongoing
Environmental Protection Licence 366 L2.2	Ensure future flocculation events are monitored to ensure pH levels are within the range specified by the EPL prior to discharging to receiving waters.	Noted. Ongoing dirty water treatment improvements being undertaken at site to avoid further non-compliances.	Flocculation of the sediment dams is no longer conducted at the site. Water was observed to be piped underground via a Siphon to settle before it is pumped to the surface for discharge through LDP B.	Closed
Environmental Protection Licence 366 L3.1	Monitor effectiveness of clean water diversion works to reduce discharge flows so as to be within licence volume limits. Ensure improvements continue to the dirty water treatment system.	Noted. Monitoring on going as per EPL366. Ongoing dirty water treatment improvements being undertaken at site to avoid further non-compliances.	Water was observed to be piped underground via a Siphon to settle before it is pumped to the surface for discharge through LDP B.	Ongoing
Environmental Protection Licence 366 L4.3	Refer to Myuna Colliery –Mining Project - Project Approval DA 10_0080 S3.31 above for audit finding.	Myuna has implemented a waste sorting procedure to prevent further stockpiling of waste in the area. Waste currently stockpiled is to be sorted and disposed of through appropriate streams.	Waste from underground was observed to be collected in a large waste bin during the site inspection.	Closed
Consolidated Coal Lease 762	Refer to Myuna Colliery –Mining Project - Project Approval DA 10_0080 S3.35 above for audit finding.	Approval of the MOP/RMP received from DRE on 8 October 2013. No further action required.	Closed	Closed
C2				
Myuna Colliery – Mining Purposes Lease 334	This requirement was initiated well before operations were managed by Centennial Coal. As such, this requirement was assumed to have been addressed at the time of the ML 334 being issued and was not assessed as part of this audit. For this reason, this condition was assessed as indeterminate.	Noted	Closed	Closed
	(Historical requirement)			

## Report: IEA Myuna Colliery

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# Appendix C Audit Team DP&E Approval



Planning Services Resource Assesssments & Compliance

Contact: Megan Dawson Phone: (02) 9228 6391 Email: megan.dawson@planning.nsw.gov.au

Mr Mal Yule Mine Manager Centennial Coal - Myuna PO Box 1000 TORONTO NSW 2283

Dear Mr Yule

#### Myuna Colliery (MP 10\_0080) Independent Environmental Audit

I refer to your letter dated 14 April 2016, seeking approval of MCW Environmental Consulting Pty Ltd to undertake an Independent Environmental Audit of the Myuna Colliery, in accordance with condition 9 of Schedule 5 of the Project Approval (MP 10\_0080).

The Department considers that the proposed audit team consists of suitably qualified, experienced and independent experts. Accordingly, please be advised that the Secretary endorses the appointment of Michael Woolley, Jenny MacMahon, Helen Onus and Nick Ballard of MCW Environmental to undertake the audit.

Should you wish to discuss this matter, please contact Megan Dawson at the details listed above.

Yours sincerely

Hangel Reed 15.9.16

Howard Reed Director Resource Assessments as the Secretary's nominee

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