



**Austar Coal Mine Pty Ltd**

# **Independent Environmental Audit Austar Coal Mine**

**November 2011**

# **aemc**

**applied environmental management consultants**

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by

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**4 April 2012**

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## Glossary

AEMR	Annual Environmental Management Report
AR	Annual Return required under the EPL
Annual Review	Review required from the CHPP from the CHPP under Schedule 5 condition 3
ARTC	Australian Rail Track Corporation
BCA	Building Code of Australia
CCC	Community Consultative Committee
CSC	Cessnock Shire Council
DEC	Department of Environment and Conservation
DECC	Department of Environmental and Climate Change
DECCW	Department of Environment, Climate Change and Water
Department	Department of Planning and Infrastructure
DII	Department of Industry and Investment
Director-General	Director-General of Department of Planning and Infrastructure, or delegate
DoP	Department of Planning
DP&I	Department of Planning and Infrastructure
EA	Environmental Assessment
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environmental Protection Licence
GLSC	Great Lakes Shire Council
MCoA	Minister's Condition of Approval
Mine Water	Water that accumulates within active mining areas and mine drainage
Mining operations	Includes all coal extraction, processing, handling, storage and transportation activities on site
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the project
OoW	New South Wales Office of Water
Proponent	Austar Coal Pty Ltd
ROM	Run-of-Mine
SEE	Statement of Environmental Effects
SIS	Surface Infrastructure Site - Kitchener

## Executive Summary

The Independent Environmental Audit of the Austar Coal Mine Pty Ltd (Austar) underground coal mine operation and activities was conducted by Trevor Brown & Associates during November/December 2011 to satisfy the requirements of DA29/95 (Stages 1 and 2) and Project Approval 08\_0111 (Stage 3) development.

(It should be noted that other than for shaft construction at the Kitchener Surface Infrastructure Site (SIS), the Stage 3 works under the Project Approval 08\_0111 that would trigger compliance actions (e.g. secondary extraction, commencement of buildings at the SIS) had not commenced at the time of the audit, so the majority of the comments on compliance are related to DA29/95 conditions).

The Independent Environmental Audit of the Austar Coal operations has generally demonstrated a high degree of compliance with DA29/95 Minister's Conditions of Approval and where relevant the Project Approval 08\_0111 conditions.

### ***Environmental Management Strategy***

The Environmental Management Strategy provides a sound basis for the management of environmental aspects of the Austar project activities and operation.

### ***Environmental Monitoring Program***

The Environmental Monitoring Program includes all the monitoring commitments outlined in the specific environmental aspect management plans. The Environmental Monitoring Program provides a satisfactory program for monitoring of meteorology, air quality, ecology, noise, vibration, surface and ground water, and subsidence that provides data for the assessment of the environmental performance of the Austar operations. Groundwater and subsidence monitoring programs will require review and revision as the underground mining operations progress with each long-wall.

### ***Air Quality***

The air quality management for the Stage 2 Austar Mine operations occurs in accordance with the approved Air Quality Management and Monitoring Plan 2007, and the approved Stage 3 Surface Infrastructure Site Shaft Construction Environmental Management Plan section 12.1, dated November 2009. The approved plans are satisfactory for the management and monitoring of dust generated by the current operations. The Stage 3 Air Quality and Greenhouse Gas Management Plan will be prepared prior to commencement of construction of buildings at the SIS.

The dust deposition, TSP and PM10 air quality monitoring results for the Austar operations demonstrated compliance with the MCoA criteria during the 2008 to 2011 period.

### ***Noise Management***

In general the noise emissions from the Austar operations are compliant with the noise limits in the EPL and noise criteria in DA29/95 Schedule 3 condition 13.

Noise nuisance from the CHPP to the nearest receptors is being addressed with upgrades to the CHPP and the construction of a noise bund in accordance with the EPL condition U1.

Noise emissions from the Kitchener SIS activities only exceeded the Construction Noise Management Levels on 3 occasions between November 2009 and June 2011.

### ***Erosion and Sediment Control (ERS)***

Erosion and sediment control measures implemented for the surface disturbance areas of the Austar operations appear to manage surface runoff and provide adequate protection of the natural waterways across the mining lease areas.

### ***Site Water Management***

The approved Site Water Management Plan provides a satisfactory program of monitoring and mitigation measures for the management of surface and groundwater aspects of the Austar surface facilities and underground workings. The water management system at the CHPP site has adequate capacity to control all dirty water runoff and CHPP wastewater/tailings, with disposal to disused underground workings at the Pelton and Bellbird Collieries.

### ***Surface Water Monitoring***

EPL discharge point SW6 (permeate release), exhibited water quality results for pH, EC and TSS that were compliant with the EPL limits. There have been no discharge from SW1 (Emergency Dam spillway) during the 2009 to 2011 period.

Natural fluctuations in water quality in Bellbird Creek, Quorrobolong Creek and Cony Creek were observed, exhibiting similar trends during the 2009 to 2011 period. No environmental impacts on the natural surface waters are apparent that can be attributed to mining activities in the Stage 2 area.

### ***Groundwater***

The approved Site Water Management Plan and Groundwater Monitoring Program were developed for Stage 2 and proposed future Stage 3 mining. The Stage 3 mining will include mining below identified alluvial aquifers that contain groundwater dependent ecosystems and a number of registered groundwater wells. The program is targeted to monitor groundwater levels in the alluvial aquifer, as well as a shallow water bearing zone at 70 m to 100 m depth for any changes to groundwater/aquifers.

### ***Subsidence Management***

The mine subsidence information being collected by Austar is considered adequate for meeting the objectives of current Subsidence Management Plan standards and allows for the assessment and mitigation strategies to be determined if any environmental damage occurs. Overall, the current strategies, plans and programs for managing mine subsidence impacts to the environment, man-made developments and public safety are considered to be adequate and the impact management and monitoring programs have functioned satisfactorily during the 2009-2011 period. Based on the review of the Section 138, Austar AEMR's and End of Panel Reports it is concluded that the Austar Mine has complied with the relevant DA Conditions of Consent for mine subsidence impact management for the 2009-2011 period.

### ***Rehabilitation and Reject Management***

The various reject emplacement areas are old disused open cut mining areas within the Mining Leases held by Austar Coal (these areas were mined prior to Yancoal Australia Limited purchasing the mine in December 2004). These areas are being progressively filled with coarse reject from the CHPP to final level and will be rehabilitated when the final profile is reached. Placement of the coarse rejects and surface water runoff management appeared to be progressing in a planned manner to restore a stable surface area for rehabilitation.

## 1. Introduction

The Project Approval granted for the Austar Coal Mine Pty Ltd (Austar) dated 26 November 2010, requires an Independent Environmental Audit of compliance in accordance with the Minister's Condition of Approval (MCoA) Schedule 5 condition 8:

*“By the end of December 2011, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:*

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

This Independent Environmental Audit was conducted for Austar by Trevor Brown & Associates between 28 and 30 November 2011.

### 1.2 Scope of Work

The compliance audit was conducted generally in accordance with the Australian/New Zealand Standards ISO 19011:2002 – Guidelines for Quality and/or Environmental Systems Auditing. The scope of work for the independent environmental audit of the Austar Coal Mine included the following components:

- review of compliance with DA29/95 and Project Approval 08\_011 conditions and other approvals for the project;
- conduct of a site inspection and review on-site documentation and monitoring data for the project, relevant to the audit;
- discussion of the development consent and other approval conditions and operation of the project with Austar Coal project staff;
- assessment of environmental performance of the development with the requirements in this Project Approval, Environment Protection Licence and Mining Lease conditions (including any assessments, plans or programs required under these consents/approvals);
- review of the adequacy of strategies, plans or programs prepared under the abovementioned consents/approval;
- provision of recommendations if considered necessary for implementation of measures or actions to improve environmental performance of the development, and/or any assessment, plan or program required under the project approvals; and
- preparation of the Independent Environmental Audit Report providing assessment of compliance against each approval condition and provision of recommendations or actions where considered appropriate to improve the environmental performance of the development, and/or the environmental management and monitoring systems.

It should be noted that other than for shaft construction at the Kitchener SIS, the Stage 3 works under the Project Approval 08\_0111, secondary extraction, construction of buildings at the SIS etc had not commenced at the time of the audit, so the majority of the comments on compliance are related to DA29/95 conditions.

### 1.3 Structure of the Report

The report has been prepared to provide comment on each condition of approval in a tabulated form, with additional discussion where required on specific matters. The tabulated comments are in the Attachments to this Independent Environmental Audit Report. The Independent Environmental Audit Report sections are:

Executive Summary

Glossary

Section 1	Introduction
Section 2	Austar Mine Development
Section 3	Consents, Approvals and Licenses
Section 4	Review of Environmental Management
Section 5	Conclusions and Recommendations

Attachment A Ministers Conditions of Approval (DA 29/95 December 2010)

Attachment B Environment Protection Licence No.416

Attachment C Consolidated Mining Lease (CML) 2

### 1.4 Compliance Table

This audit assessed the activities for compliance with the intent of the conditions via site inspections and verification of relevant documentation related to the conditions as provided by Austar.

The status of compliance of the conditions attached to the project approvals are expressed as:

	<b>Status</b>	<b>Description</b>
C	Compliant	Adequacy and appropriateness of implementation against the current Departmental Approval and Conditions, or compliance with commitment made.
O	Observation	A finding that is not likely to significantly affect the operations, that do not strictly relate to the scope of the audit of compliance and which could lead to performance improvement
NC	Non-compliant	An inadequacy in the design and/or implementation against the current approvals, licence conditions or management commitments. There are two subcategories of non-compliance: <b>Category 1 (NC1)</b> – a total absence of planning or implementation of a required operational element that presents an immediate risk or an isolated lapse in control in the implementation of an operations element, that will lead to a significant risk; or <b>Category 2 (NC2)</b> – an isolated lapse or absence of control in the implementation of an operational element that may not be of significant risk.
NA	Not applicable	Not active or applicable to the current operations.
Noted		Conditions that are statements of requirement but not auditable.

## 2. Austar Coal Mine Development

### 2.1 Background

The Austar Coal Mine (Austar) is owned by Yancoal Australia Limited (Yancoal). Yancoal purchased the mine in December 2004. The Austar Coal Mine surface facilities and Coal Handling and Preparation Plant (CHPP) are located off Middle Road Paxton, New South Wales, and Wollombi Road, Pelton respectively.

The Austar coal resource covers a large area of the Greta Seam in the Newcastle Coalfield. The Bellbird South reserves are situated north-east of and adjoin the original Ellalong Colliery.

Stage 1 - A Modification to Consent under section 96(2) of the Environmental Planning and Assessment Act 1979 was sought by Austar in 2006 for the introduction of an enhanced form of the conventional retreat long-wall system in 2006 known as Long-wall Top Coal Caving (LTCC). To allow for the introduction of LTCC, the Minister for Planning approved the Modification to allow the extraction of up to 6.5 metres of coal in panels A1 and A2. Long-wall panel A2 in the Stage 1 mining area was completed in November 2008

Stage 2 - In 2008 a further Modification to Consent was granted for long-walls A3, A4 and A5, and for slightly longer and wider panels A4 and A5 under a subsequent Modification. In December 2010 approval was granted for extraction of additional long-wall panel A5a in the Stage 2 area. Production (i.e. longwall panels A3 - A5a) commenced in February 2009. Long-wall A3 was completed in March 2010 and Longwall A4 was completed in May 2011.

Approval for Stage 3 operations for mining of known coal resources within Consolidated Mining Lease 2 (CML2) and existing Mining Lease Application Areas (MLA322 and MLA333) was granted on 6 September 2009

The Stage 3 development will consist of:

- Extension of underground mining from current Stage 1 and Stage 2 operations into the Stage 3 area. Coal will be extracted from the Greta Coal Seam at depths of 450 to 740 metres using Longwall Top Coal Caving (LTCC) methods. Approximately 45.3 million tonnes (Mt) of coal will be produced from long-wall panels A6 to A17 over a 21 year mine life at an extraction rate of up to 3.6 Mt of Run of Mine (ROM) coal per year.
- A new Surface Infrastructure Site (SIS) off Quorrobolong Road south of Kitchener consisting of an access road, upcast and downcast ventilation shafts, main ventilation fan, bathhouse, workshop, electricity substation and distribution line, service boreholes, offices and store (shaft construction had commenced at the time of this audit). The SIS will provide ventilation to the mine and provide access to the Stage 3 underground workings for personnel and materials.
- Continued use of Austar's existing water management, coal transport systems, coal preparation plant and rejects emplacement areas will occur.

Austar submitted an application to modify Project Approval 08\_0111 in February 2011, principally to facilitate the reorientation of the Stage 3 long-walls. In addition, the chain pillar widths are proposed to be increased from 45m to 55m to reduce roadway failure risks which in turn further minimises subsidence. The modification will enable more efficient and safer extraction of coal from the Stage 3 area.

## 2.2 Current Austar Project Status – November 2011

### 2.2.1 Underground Mine Development

Recent development of the Austar operations has focused on creating the next long-wall panels in Stage 2 (A5 and A5a) and developing the main access roadways for Stage 3. Workings in the Stage 2 area proceeded towards the Stage 3 area in August 2010. Long-wall mining in the 2011-2012 period will be undertaken in panel A5 and continue in panel A5a being the last in the Stage 2 area.

The Run-of-Mine (ROM) coal is conveyed from the pit top area to the Coal Handling and Preparation Plant (CHPP) for crushing and washing. The product coal is stockpiled prior to transport by rail from the CHPP.



The Stage 3 activities during 2010-2011 involved the commencement of shaft construction at the approved SIS in November 2009 with clearing and earthworks phase. Approximately 6ha of Austar owned land was required to be cleared in 2009-2010 to facilitate shaft construction and mine access roads. All land clearing activities at the SIS had occurred prior to the audit, in accordance the Shaft Construction Environmental Management Plan (SCEMP) approved by DoP on 13 November 2009 and the Mining Operations Plan (MOP). The SCEMP has a Preclearance Procedure (Section 5.2) and Vegetation Clearing Procedure (Section 5.3) to minimise the impacts on flora and fauna.



The stripped topsoil was removed in accordance with the SCEMP and stockpiled, and any cleared vegetation within the approved disturbance area was mulched and used onsite for erosion control on topsoil stockpiles and surrounding catch/diversion drains.

The Stage 3 Ventilation Shaft No.5 construction commenced in June 2010 with a drilling rig commissioned to bore a 5.5m shaft diameter, to a depth of approximately 460m. The shaft will be fully lined with a steel and concrete composite liner upon completion to a finished diameter of 4.5m. The Ventilation Shaft No.5 is planned to be completed in 2012.

## 2.2.2 Waste (Coal Reject) Management

Course reject material is managed in accordance with the MOP and a Section 102 application approved by the DTIRIS in 2008.

Placement of coarse reject to construct the noise bund to the northwest of the ROM area has occurred and will be ongoing to satisfy EPL No 416 condition U1 that requires construction of a noise bund to provide noise shielding to nearby neighbours, situated northwest from CHPP activities.

Analysis of the course reject waste materials indicates that it contains sulphur mostly in the form of pyrite and therefore Potentially Acid Forming (PAF) material that may result in acid mine drainage (AMD). Rehabilitation strategies have been developed to reduce the loss of potential acid drainage offsite, with reject emplacement and tailings areas designed to drain any runoff or leachate to old mine workings including:

- **Aberdare Extended Emplacement Area** – this former open cut void is currently the primary reject emplacement area to be utilised by Austar during the approved MOP term. Rejects are hauled by road registered trucks along a private haul road from the CHPP to the emplacement area. (No emplacement of coarse reject occurred at the Aberdare Extended Emplacement Area between 2005 and November 2009. Emplacement of coarse rejects material recommenced in December 2009).

Following the emplacement of rejects, the Aberdare Extended Emplacement Area will be progressively rehabilitated to a final landform agreed with the private landowner of the property. The Aberdare Extended Emplacement Area is situated within 40 metres of some neighbouring residences.

- **East Open Cut** - is a small void on the CHPP site with an area of approximately 15ha. The East Open Cut void was used as an emergency emplacement area when dumping at the Aberdare Extended area was unavailable.

The East Open Cut reject emplacement area is primarily utilised during night time periods or at other times when the Aberdare Extended area is not available. Restricting night reject emplacement to East Open Cut reduces the potential to disrupt nearby residences at the Aberdare Extended site. When the Aberdare Extended area has reached its maximum capacity, the East Open Cut will become the primary emplacement area for Austar.

- **West Open Cut Emplacement Area** - this area provides a source of inert capping material that will be utilised as part of the rehabilitation of reject emplacement areas. After removal of the clean overburden for capping purposes at Aberdare Extended area and East Open Cut void, it is planned to use the resultant void at the West Open Cut for ongoing reject emplacement.
- **Pelton Underground Mine Workings** - the fine reject tailings flow from the CHPP are discharged into the old Pelton underground mine workings adjacent to the CHPP area. The return water from these tailings gravitates through the old mine workings and is recovered by dewatering pumps back into Austar's contaminated water management system for water treatment (utilising a reverse osmosis process) and reuse in the CHPP, or discharged off-site under EPL 416.

## 3. Consents, Licenses and Approvals

### 3.1 Planning Approvals

The development of the underground mine operations following purchase of Austar by Yancoal in December 2004, has occurred under DA29/95 and Modifications, with the recent Project Approval 08\_0111 granted for the Stage 3 development..

A summary of the DA Modifications relevant to Austar's development is presented in the following table:

Approval	Date of Approval	Modification to Consent granted
DA 29/95	14 Feb 1996 Minister for Planning	<p>Ellalong Colliery Extension into Bellbird South.</p> <ul style="list-style-type: none"> <li>• Extension of underground mining activities into Bellbird South area (CML 2).</li> <li>• Mine life of 21 years with a production of 3 Mtpa.</li> <li>• Reject emplacement.</li> <li>• Construction and operation of a new infrastructure site including new ventilation shaft and fan(s) (No. 2 Shaft) adjacent to Sandy Creek Road.</li> <li>• Use of Pelton CHPP for washing and handling of coal.</li> <li>• Provision of a maximum raw coal stockpile of 100,000 t.</li> <li>• Reopening of disused Cessnock No. 1 Colliery shafts for ventilation and access, or the sinking of new shafts, as required.</li> <li>• Construction of various water management devices including sedimentation and clean water dams and drainage systems.</li> </ul>
DA 29/95 (modifications)	<p>Granted –</p> <p>27 Sep 2006 (MOD 1)</p> <p>8 Jun 2008 (MOD 2)</p> <p>28 May 2009 (MOD 3)</p> <p>7 Dec 2010 (MOD 4)</p> <p>Minister for Planning</p>	<p>Extension of Underground Mining Activities into Bellbird South (Ellalong Colliery) – Modification.</p> <ul style="list-style-type: none"> <li>• Use of long wall top coal caving (LTCC) mining methods in two long-wall panels.</li> <li>• Installation of a larger capacity fan at the site, new downcast ventilation shaft; new 10 MVA substation; nitrogen inertisation plant with a 2,000 cubic metre capacity; tube bundle shed to house electronic monitoring equipment.</li> <li>• Provision of a diesel and emulsion fluid storage area and dispatch system.</li> <li>• Upgrade of the existing water treatment plant; and water reticulation and pumps.</li> <li>• Minor embankment stabilisation works at Kalingo Dam.</li> <li>• Longer and wider panels A4 and A5.</li> <li>• Extract one additional Long-wall Panel A5a (LW A5a)</li> </ul>
Project Approval 08_0111	Granted 6 Sep 2009 Minister For Planning	<p>Stage 3 Expansion Project – extension to longwall mining to an area east of existing operations. Key features:</p> <ul style="list-style-type: none"> <li>• Longwall production from the Greta coal seam from panels A6 to A17 using Longwall Top Coal Caving (LTCC) technology;</li> <li>• Construction of a new surface infrastructure site south west of Kitchener including ventilation shafts and fans, winders, bath house facilities, a workshop, electricity substation, store and offices.</li> <li>• Construction of a new road and intersection at Quorrobolong Road.</li> <li>• Coal will continue to be brought to the surface at Austar's existing surface facilities at Paxton. These facilities will</li> </ul>

Approval	Date of Approval	Modification to Consent granted
		<p>continue to be used to take large mining equipment into and out of the mine.</p> <ul style="list-style-type: none"> <li>Continued use of Austar's existing water management, coal transport systems, coal preparation plant and rejects emplacement areas.</li> </ul> <p>Stage 3 Area project involves mining of known coal resources within Austar Consolidated Mining Lease 2 (CML2) and existing Mining Lease Application Areas (MLA322 and MLA333).</p>
Project Approval 08_0111	4 May 2010 (MOD 1) NSW Planning - Director, Mining and Industry Projects	Minor changes to wording regarding subsidence impact performance measures for built features in Table 1 of approval; and To enable more efficient and safer extraction of coal from Stage 3 Area.
Project Approval 08_0111	MOD 2 – Approval Pending (Under review by DP&I at time of audit)	Modification of longwall layout including the removal of longwall A6 and extraction of coal in longwalls A7 to A19 which are a reorientation of longwalls A7 to A17 as approved.

## 3.2 Other Approvals

### 3.2.1 Environment Protection Licence

An Environment Protection Licence No. 416 was issued by the DEC to a previous mine operator on 7 May 2002 under section 55 of the *Protection of the Environment Operations Act 1997* and was transferred to Austar after Yancoal acquired the mine in 2004.

EPL 416	Date	Variation conditions
<b>Variations to the EPL 416 between 2008 and 2011 were:</b>		
Variation 1083253	29 February 2008	<p>Decrease the licence fee activity scale to reflect actual production rates.</p> <p>Relocation of discharge and monitoring point 6 to a point approximately 120m downstream of its existing location. This will allow the licensee to discharge from a new permeate storage tank which is required to better control the pH of the permeate and ensure compliance with the licence discharge limits.</p>
Variation 1086359	23 May 2008	<p>The licensee has been investigating noise sources at the Austar Coal Mine and has completed two preliminary noise studies. Changes to plant and operational practices were implemented in response to the findings of these preliminary studies.</p> <p>The licensee proposes further investigations into the noise emissions from the Pelton Coal Handling and Preparation Plant (CHPP) to determine practical measures that can be implemented to reduce noise from these facilities.</p> <p>The purpose of this notice is to include a new Pollution Reduction Program condition on the licence which required the licensee to investigate feasible measures that can be implemented to reduce noise emissions from the CHPP site.</p>
Variation 1091659	28 August 2008	Extension of the date for submission of the Noise Pollution Program report due from 31 August 2008 to 30 September 2008.
Variation 1095340	2 January 2009	<p>Notice of Licence Variation (No. 1095340) attached Pollution Reduction Program (PRP) condition U1 to the licence. The PRP, which represented Stage 1 of a noise reduction program, required the licensee to undertake an assessment of the noise impacts associated with the existing Pelton Coal Handling and Preparation Plant (CHPP) and associated activities in accordance with the NSW Industrial Noise Policy. A report detailing the findings of the assessment was due to be submitted to the EPA by no later than 30 September 2008. On 26 September 2008 the EPA received the report “Austar Coal CHPP Assessment of Noise Impacts” prepared by Global Acoustics Pty Ltd and dated 15 September 2008 (“the</p>

EPL 416	Date	Variation conditions
<b>Variations to the EPL 416 between 2008 and 2011 were:</b>		
		<p>Report”). The Report identifies five noise control options, however no assessment is provided as to whether it is feasible and reasonable for the licensee to implement these noise control options.</p> <p>The purpose of this notice is to remove the existing condition U1 from the licence and replace it with a new PRP condition for Stage 2 of the noise reduction program. The new PRP condition requires the licensee to assess how feasible and reasonable the noise control options presented in the Report are.</p> <p>The licensee must also provide a timetable and noise goals to be achieved for each stage of implementation of the noise control options.</p> <p>Vary the monitoring conditions of the licence - water quality monitoring at Point 1 be conducted daily during discharge, and that monitoring at Point 3 be discontinued because water quality at Points 1 and Point 4 is representative of water quality at Point 3.</p>
Variation 1104063	17 November 2009	<p>This notice allows for the relocation of discharge point No. 6 to enable clean up works in Bellbird Creek and its tributaries.</p> <p>This notice includes a Pollution Reduction Program to ensure clean up works in Bellbird Creek and the associated tributary is completed in a satisfactory manner and timeframe.</p> <p>The licence has been varied as an outcome of the licence review conducted by the EPA as required under s78 of the Act.</p>
Variation 1109266	25 November 2009	<p>This notice extends the timeframe for clean-up works in Bellbird Creek and its tributaries and permits a wider range of methods for clean-up activities.</p>
Variation 1109768	20 January 2010	<p>This notice removes condition U2.</p> <p>Relocation of discharge and monitoring point 6 to its original position due to the completion of clean up works in Bellbird Creek. This notice relocates monitoring point 6 to its previous position.</p> <p>This notice removes condition U1.1 d) as the provisions of the condition have been met.</p> <p>Extensions to the due dates for the noise mitigation works as set out in condition U1.1 a), b) and c) are extended.</p>
Variation 1112337	5 August 2010	<p>Inclusion of Conditions U1.3, U1.4 and U1.5 as a Pollution Reduction Program for the CHPP Noise Reduction Program.</p> <p>Inclusion of Conditions U2.1 as a Pollution Reduction Program to undertake noise impact assessments at Aberdare Reject Emplacement Area, Current Pit Top and No.1 Fan Shaft.</p>
Variation 1123473	14 July 2011	<p>Extension to the due dates for completion of, and a variation to noise reduction works required to be carried out at the Coal Handling and Preparation Plant as required by EPL Condition U1.1.</p>

### 3.2.2 Water Licences

Current Water Licences held by Austar for monitoring and dewatering bores are:

<b>Austar Bore Licence Certificates</b>			
Licence No.	Licence Currency	Purpose of Licence	Extraction Limit
20BL171361	17 May 2007 - Perpetuity	Monitoring bore (AQD1077)	Groundwater Monitoring only
20BL171362	3 Jul 2007 to 2 Jul 2012	Mining (16CT pump station)	Combined extraction limit of 770ML in any 12 month period
20BL171481	17 Aug 2007 to 16 Aug 2012	Dewatering groundwater No.2 Shaft	
20BL171524	20 Jul 2010 - Perpetuity	Monitoring Bore (NER1010)	Groundwater Monitoring only
20BL171852	7 Jun 2011 - Perpetuity	Monitoring Bores (WBH1, WBH2 and WBH3)	Groundwater Monitoring only

### 3.2.3 Mining Leases

Consolidated Mining Lease (CML) 2 was renewed on the 4 December 2008 until 6 July 2025, for an area of 3406ha. The CML includes conditions 2 to 8 and 17 to 23 identified as environmental management for the purposes of Sections 125(3) and 374A of the Mining Act 1992.

#### **Mining Operations Plan (MOP)**

In accordance with the *Mining Act 1992*, Austar conduct operations in accordance with a Mining Operations Plans (MOP) approved by the DTIRIS on 30 June 2008. The approved MOP covers underground mining, coal handling and other associated activities for a seven year period of May 2008 to May 2015.

All mining activities at Austar have been carried out generally in accordance with the approved MOP including the approved LW A5a in Stage 2, and reorientation of longwall panels in Stage 3 (subject to Stage 3 modification approval by the DP&I).

A summary of compliance with the CML 2 conditions is presented in Attachment E.

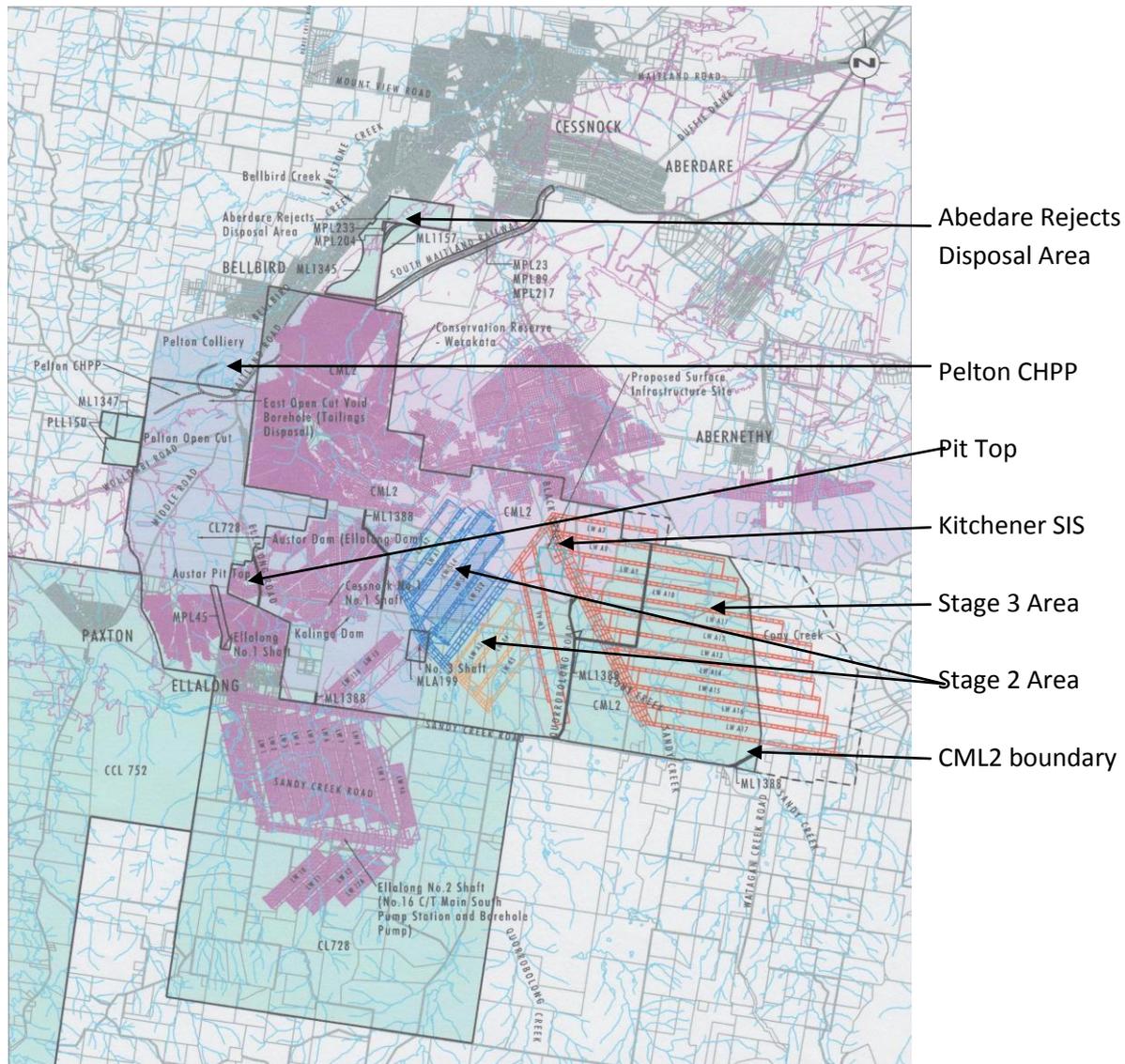


Figure 1: Austar Project Layout and Locality Plan

## 4. Environmental Management

### 4.1 Environmental Management Strategy

[DA29/95 Schedule 5 condition 1; and  
Project Approval 08\_111 Schedule 7 condition 1]

The Environmental Management Strategy (EMS) prepared by Austar addresses the requirements of DA29/95 Schedule 5 condition 1 and PA 08\_111 Schedule 7 condition 1, and was approved by Planning NSW on the 18 June 2010. The Austar operations are conducted in accordance with the approved EMS that includes:

- an overall framework for environmental management of the Austar project activities;
- identification of key environmental aspects addressed in the EMS and supporting plans and procedures;
- a framework for review of the EMS and plans for continual improvement; and
- process for reviewing the implementing of the EMS and corrective action if required.

**Conclusion:** The Environmental Management Strategy provides a sound basis for the management of environmental aspects of the Austar project activities and operation.

### 4.2 Environmental Monitoring Program

[DA 29/95 Schedule 5 condition 2]

The Environmental Monitoring Program was prepared for the Austar project in accordance with MCoA Schedule 5 condition 3 and approved by Planning NSW on 18 June 2010.

The Environmental Monitoring Program consolidates various environmental monitoring requirements of DA29/95, EPL and PA08\_0111 into a single document. The measurement and evaluation of criteria allows for the assessment of performance against quantitative and qualitative standards and assists in the identification of any non-conformances or areas that may require additional attention. (The location of Austar surface water, groundwater, air quality, noise and vibration monitoring sites are shown in the EMP and on Plan 2 of the AEMR).

Aspect	Monitoring Frequency	Monitoring components
Air Quality	Monthly (dust), PM10/TSP (each 6 days)	Five (5) dust deposition gauges and two (2) High volume Air Samplers (HVAS)
Community Issues	Daily	Checked daily during business hours
Ecology	Bi-annual (spring and autumn)	Survey of Stage 2 mining area
General environmental conditions	Monthly	Visual inspection of key project facilities by Environment and Community Manger
Meteorology	Continuous	Meteorological station at CHPP
Noise	Monthly and Quarterly	Quarterly at 3 locations around the CHPP, and 2 locations near the Kalingo Infrastructure Area Monthly at 3 sites around the Kitchener SIS
Subsidence	Monthly and quarterly	Field surveys
Vibration	Continuous	Tri-axial geophone at two locations
Water – surface	Monthly	Sampling at 5 locations as per EPL 416 and 4 locations per SWMP
Water - groundwater	Quarterly	Sampling at range of locations in accordance with SWMP

**Conclusion:** The Environmental Monitoring Program includes all the monitoring commitments outlined in the environmental management plans, and provides a satisfactory program for monitoring meteorology, air quality, ecology, noise, vibration, surface and ground water, and subsidence that provides data for the assessment of the environmental performance of the Austar operations.

## 4.3 Air Quality

[DA29/95 MCoA Schedule 3 conditions 17 to 19; and Project Approval Schedule 4 condition 4 to 7]

### 4.3.1 Air Quality Management and Monitoring Plan

The Air Quality Management and Monitoring Plan (AQM&MP) dated 29 January 2007 was prepared to address the requirements of DA29/95 MCoA Schedule 3 conditions 19 for the Stage 2 project, and was approved by DoP on 15 February 2007.

The Air Quality and Greenhouse Gas Management Plan required under PA Schedule 4 condition 7 for Stage 3 will be prepared prior to commencement of construction of buildings (other than shaft construction) at the Kitchener Surface Infrastructure Site (SIS) in 2012. (The current works at the SIS are associated with the construction of the shaft No.5, the environmental management of which are covered by the approved Stage 3 Surface Infrastructure Site Shaft Construction Environmental Management Plan (SCEMP) section 12.1, dated November 2009).

#### Conclusion:

The air quality management for the Stage 2 Austar Mine operations occurs in accordance with the approved AQM&MP and the approved Stage 3 SIS Shaft Construction Environmental Management Plan section 12.1, November 2009. The approved plans are satisfactory for the management and monitoring of dust generated by the current operations.

### 4.3.2 Air Quality Monitoring

In accordance with the AQM&MP, five (5) static dust deposition gauges and two (2) high volume air samplers (HVAS) were installed in March 2007:

#### Location of Air Quality Monitoring Points

Site Location	Location Description
Dust Gauge (DG)1	Bimbadeen Road, Bellbird
Dust Gauge (DG)2	Ellalong Road, Pelton Village
Dust Gauge (DG)3	Austar Coal property boundary, Doyle Street, Bellbird
Dust Gauge (DG)4	Ellalong Village
Dust Gauge (DG)5	Austar Coal property south west of upcast ventilation shaft
HVAS 1 (PM <sub>10</sub> )	Bimbadeen Road, Bellbird
HVAS 2 (PM <sub>10</sub> )	Ellalong Road, Pelton Village

Monitoring of depositional dust has demonstrated annual average results of less than the criteria of 4 g/m<sup>2</sup>/month for insoluble solids and less than a maximum increase of 2g/m<sup>2</sup>/month, during the 2008 to 2011 period. Historical dust depositional data provided in the EIS 1995 section 4.7.2 since 1991, has ranged between 0.2 to 2.7g/m<sup>2</sup>/month.

#### Dust Gauges Annual Average 2008 to 2011

Dust Gauge No.	Location	Annual Average Insoluble Solids (g/m <sup>2</sup> /month)*		
		2010-2011	2009-2010	2008-2009
DG1	Bimbadeen Road	1.1	1.2	1.0
DG2	Pelton	1.1	2.0	0.9
DG3	Bellbird	1.2	1.3	1.8
DG4	Ellalong	1.6	1.4	1.3
DG5	Kalingo Infrastructure Site	0.5	1.0	1.9

\*The results for dust deposition gauges contaminated with bird droppings/ insects are left out of the annual average calculations above.

The annual average for calculated Total Suspended Particulates (TSP) during the 2008 to 2011 period was less than the 90ug/m<sup>3</sup> criterion stated in MCoA Schedule 3 condition 17.

The annual average PM<sub>10</sub> results were also less than the long term annual average criterion of 30µg/m<sup>3</sup> and short term impact assessment criterion of 50 µg/m<sup>3</sup> during the 2008-2011 period.

PM <sub>10</sub> and TSP HVAS Results 2008 to 2011									
HVAS No.	Location	Annual Average (µg/m <sup>3</sup> )							
		PM <sub>10</sub>	TSP	PM <sub>10</sub>	TSP	PM <sub>10</sub>	TSP	PM <sub>10</sub>	TSP
		2010-2011		2009-2010		2008-2009			
HVAS1	Bimbadeen Road Bellbird	10.6	10.6	16.5	16.5	15.9	-	30	90
HVAS2	Ellalong Rd Pelton Village	13.2	13.2	17.6	17.6	14.7	-		

**Conclusion:**

The dust deposition, TSP and PM10 air quality monitoring results have demonstrated compliance with the MCoA criteria during the 2008 to 2011 period.

## 4.4 Noise

[DA29/95 MCoA Schedule 3 conditions 13 to 15; and PA08\_011 Schedule 4 conditions 2 and 3]

### 4.4.1 Noise Monitoring Program

The Noise Monitoring Program for was developed to satisfy DA29/95 MCoA Schedule 3 conditions 13 to 15, by Heggies, 22 January 2007 and was approved by DoP on 15 February 2007. To satisfy condition 1, Schedule 4 of PA08\_0111, Austar have implemented the approved Shaft Construction Environmental Management Plan (SCEMP) section 10, to manage noise impacts from the construction of the shaft at the SIS.

### 4.4.2 Noise Monitoring

Quarterly noise monitoring has been conducted in accordance with approved Noise Monitoring Program, at five (5) monitoring locations representative of the surrounding receivers, for assessing and evaluating noise emissions from the operation.

Austar Coal Project Attended Noise Monitoring Locations		
Monitoring Point	Receptor Location	Noise Limits EPL 416 (c.U1.3)
<b>Nearest Potentially Affected Receivers to CHPP</b>		
NMA	Pelton Village South - East of CHPP	LA <sub>90</sub> 43 dB
NMB	South of Bimbadeen Road, Mt View - West of CHPP	LA <sub>90</sub> 40 dB
NMC	Bimbadeen Road, Mt View North - West of CHPP	LA <sub>90</sub> 37 dB
<b>Nearest Potentially Affected Receiver Locations Near Kalingo Infrastructure Area (KIA)</b>		
Monitoring Point	Location	Criteria DA29/95 (Sch.3 c.13)*
NMD	Nash Lane Quorrobolong - East of KIA	LA <sub>eq</sub> 35 dB
NME	Glennie St Ellalong - West of KIA	LA <sub>eq</sub> 35 dB

\*Note: Noise Impact Assessment Criteria apply to the receptors during day/Evening/night periods.

### CHPP Noise Monitoring Results

CHPP noise levels have generally been compliant with the noise limits and criteria set for the project except for the recent exceedances of the LA90 noise criteria at NMC within the Q1 and Q2 period 2011. The 1 dB and 2 dB exceedences occurred in the evening and night monitoring periods. These exceedences are not considered significant as Chapter 11 of the "Industrial Noise Policy" indicates

that noncompliance is considered to have occurred if “the monitored noise level is more than 2 dB above the statutory noise limit specified in the consent or licence condition.”

Noise results for Nearest Potentially Affected Receivers to CHPP									
Austar CHPP Noise only LA <sub>(90,15 min)</sub>									
Quarter/Year	NM A			NM B			NM C		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
	EPL Noise Limit 43dB			EPL Noise Limit 40dB			EPL Noise Limit 37dB		
Q1 2009	IA	IA	27	36	37	27	33	29	34
Q2 2009	IA	43	44	29	26	37	27	24	29
Q3 2009	43	38	37	41	42	31	35	36	39
Q4 2009	IA	-	22	-	39	30	-	34	31
Q1 2010	-	41	39	29	29	28	31	31	31
Q2 2010	41	-	IA	25	35	39	35	40	37
Q3 2010	43	43	41	29	30	24	25	34	28
Q4 2010	IA	<20	30	35	39	40	34	30	22
Q1 2011	<35	43	43	34	35	30	36	31	38
Q2 2011	35	36	40	36	35	36	36	38	39

#### Kalingo Infrastructure Area

Noise levels from the Kalingo Infrastructure Area were compliant with the noise impact assessment criteria expressed in DA29/95 Schedule 3 condition 13, during the 2009 to 2011 period.

Noise Impact Assessment Results for Nearest Receptors to Kalingo Infrastructure Area			
Quarter	Date (Night-time Results)	NM D	NM E
1	25 Mar 2009	27	16
2	29 Jun 2009	32	20
3	6 Oct 2009	28	16
4	14 Dec 2009	27	17
1	9 Mar 2010	27	16
2	4 Aug 2010	27	16
3	13 Sep 2010	27	16
4	7 Dec 2010	27	16
1	28 Feb 2011	28	16
2	28 Jul 2011	28	16

#### Kitchener SIS Construction

Construction noise levels at the Kitchener SIS are managed in accordance with the Shaft Construction Environmental Management Plan (SCEMP), based on the Interim Construction Noise Guideline (DECCW 2009). The SCEMP was approved by DoP on 13 November 2009.

Construction Noise Management Level LA <sub>eq,15min</sub> (dB)					
Location	Background LA <sub>90</sub> level	Standard Working Hours (7am to 6pm)	Out-of-Hours Works (6pm to 7am)		
		Day	Day	Evening	Night
NM K1 South of SIS	<30	40	35	35	35
NM K2 East of SIS	32	40	35	37	35
NM K3 North of SIS	<30	43	38	35	35

Noise monitoring is undertaken at three receptor locations each month during standard work hours, and once per month for out-of-hours works. Additional monitoring has also been conducted as required in response to complaints.

Construction activities at the Kitchener SIS have included shaft construction undertaken on a 24 hour basis, liner construction, and maintenance activities.

		Austar Kitchener SIS Noise Results LAeq,15min* (dB)					
		NM K1		NM K2		NM K3	
		Standard Hrs	Out-of-Hours	Standard Hrs	Out-of-Hours	Standard Hrs	Out-of-Hours
Quarter/Yr	CNML L <sub>Aeq,15 min</sub>	40	35	40	35	43	35
Q4 2009	Nov-Dec	IA - 26	25	IA-30	26	IA-26	IA
Q1 2010	Jan-Mar	35-40	27-35	-	-	-	-
Q2 2010	Apr-Jun	34-37	34-39	IA/29-33	35-38	IA-28	34-38
Q3 2010	Jul-Sep	31-37	32-36	IA/31-32	IA/24-32	IA	IA-30
Q4 2010	Oct-Dec	25-34	29-33	IA/25-29	25-26	IA	IA-29
Q1 2011	Jan-Mar	IA/25-30	IA/30-34	IA-25	IA-27	IA	25-32
Q2 2011	Apr-Jun	IA-25	29-39	IA/26-30	26-35	IA	31-33

\* Kitchener SIS Noise Results are ranges per quarter expressed as LAeq,15min

Noise monitoring results from the Kitchener SIS between November 2009 and June 2011 demonstrated compliance with the Construction Noise Management Levels (CNML) for all results except for:

- one 39 LAeq,15min at NM K1 on 8 April 2010 and 24 June 2011 during out-of-hours works; and
- one 38 LAeq,15min at NM K2 and NM K3 on 14 April 2010 during out-of-hours works.

Additional noise monitoring in response to a complaint July/August 2010 indicated the potential for exceedance of out-of-hours works noise levels by fixed plant at the SIS. In response, the contractor investigated noise control options for fixed plant and also erected foam lined plywood noise barriers around the noisy activities (in addition to shipping container barriers) in September 2010 to reduce noise emissions from the site.

A noise exceedance of 4dB from out-of-hours works was recorded in June 2011. Fixed plant combined with meteorological conditions (temperature inversion) contributed to the exceedance. In response, the generator was fitted with a secondary exhaust and a lined duct was fitted to the main generator fan outlet to reduce noise emissions. Subsequent monitoring indicated compliance with noise management levels.

#### 4.4.3 Noise Mitigation Works

##### **CHPP Noise Pollution Reduction Program (PRP)**

For the ongoing use of the CHPP as part of the proposed Stage 3 mining, a voluntary noise pollution reduction program (PRP) has been commenced by Austar under EPL416 condition U1 (Variation to EPL 416, March 2008), that required the upgrade of the acoustic performance of the walls and roof of the CHPP building and this commenced in June 2009. The upgrade of the walls involved removal of the old sheeting, maintenance to the structural steel of the building, fitting of new girts to secure the wall cladding, and installation of new composite wall cladding with improved noise attenuation properties to the outer walls of the CHPP.

Noise reduction resulting from these upgrades to the CHPP building should noticeably improve the acoustic amenity for nearby neighbours to the CHPP site, when the works are completed.



**Figure 4.4.3: Pelton CHPP showing new external cladding for noise mitigation.**

### **Noise bund**

Construction of the noise bund to provide shielding to residents to the west and northwest of the CHPP has continued as suitable coal reject material has been available. (To fulfil mining lease rehabilitation commitments to the Department of Trade and Investment, coarse reject material has also been hauled to rehabilitate areas of the former Aberdare Extended Emplacement Area near Bellbird Heights/West Cessnock since December 2009).

The OEH have granted an extension of time to 31 December 2012 for completing the construction of the noise bund.

### **Conclusion:**

In general the noise emissions from the Austar operations are compliant with the noise limits in the EPL416 and noise criteria in DA29/95 Schedule 3 condition 13.

Noise nuisance from the CHPP to the nearest receptors is being addressed with upgrades to the CHPP and the construction of a noise bund in accordance with the EPL416 condition U1.

Noise emissions from the Kitchener SIS activities exceeded the Construction Noise Management Levels in the SCEMP during out-of-hours works on 3 occasions between November 2009 and June 2011. Noise controls were fitted to fixed plant at the SIS in response to the exceedences.

## **4.5 Site Water Management**

[DA No. 29/95 MCoA Schedule 3 condition 6; and  
PA 08-0111 Schedule 3 condition 9]

### **4.5.1 Site Water Management Plan**

The Site Water Management Plan developed in accordance with the requirements of DA No. 29/95, MCoA Schedule 3 condition 6, was prepared by Austar and reviewed in April 2009 to ensure adequacy for Stage 2 operations. The revised Site Water Management Plan was approved by DoP on 13 November 2009.

The Site Water Management Plan prepared to satisfy MCoA Schedule 3 condition 6 includes:

- Site Water Balance;
- Erosion and Sediment Control Plan
- Surface Water Monitoring Program;
- Ground Water Monitoring Program; and
- Surface and Ground Water Response Plan.

Water management for the Austar operations occurs in accordance with the approved Site Water Management Plan (SWMP) for the Stage 2 operations.

**Conclusion:**

The Site Water Management Plan provides a satisfactory program of monitoring and mitigation measures for the management of surface and ground water aspects of the Austar surface facilities and underground workings.

**4.5.2 Site Water Balance**

[DA29/95 MCoA Schedule 3 condition 7; and  
Project Approval Schedule 4 condition 9(b)(i)]

The Site Water Balance for the Austar project was prepared for Stage 2 operations to satisfy DA29/95 Schedule 3 condition 7 and approved in March 2009.

There are a number of interrelated water systems to manage the operational water needs of the mine. An interactive site water balance model was developed to predict the needs of the individual water demand components across the operation as a whole. The site water management system for Austar comprises of three (3) main components:

- Major surface water storages:
  - Kalingo Dam with a capacity of approximately 110ML and receives water from old underground workings via No. 2 shaft dewatering pumps. Kalingo Dam is used as a staging and water storage facility. Storage of water in this dam assists in the removal of iron and manganese via oxidation.



**Plate 4.5.2A: Kalingo Dam staging and water storage to assists in the removal of iron and manganese via oxidation**

- Austar Dam with a capacity of approximately 35ML and receives water from Kalingo Dam via a buried HDPE pipeline. It also receives water from the Main South Pumping Station underground pumping station via a rising main along the drift.



#### Plate 4.5.2B: Austar Main Dam

- Pelton CHPP operations water treatment onsite includes
  - pH adjustment, flocculation and settlement of suspended sediment in various water storage ponds; and
  - reverse osmosis water treatment plant located at the CHPP site for treatment of saline waters. The treated water from the reverse osmosis plant enables Austar to operate independently of town potable supply. Also the reverse osmosis permeate can be discharged to Bellbird Creek in accordance with EPL 416, if required; and



Figure 4.5.2C: Pelton CHPP Water Treatment Ponds

- Underground water storage/sources in old mine workings:
  - East Pelton Mine workings;
  - West Pelton Mine workings;
  - Ellalong Colliery workings (2 East Panel, Long-walls 1-12);
  - Ellalong Colliery Long-wall 13;
  - Sealed Long-wall 2 goaf; and
  - Bellbird/ Aberdare Central Colliery workings.
- Inflow water sources to the underground mine workings include:
  - natural strata inflow of groundwater;
  - water piped underground for mining and ancillary underground operations (a large proportion of this water returns to the surface in the Run-of-Mine (ROM) coal); and
  - water from high rainfall events that enters shallow mine workings via hydraulic connections.
  - There are two (2) active underground pumping systems available to deliver underground mine water to the Austar surface water management system:
    - Main South Pump Station - receives water via in-seam boreholes from the old Pelton (East and West) Mine workings and has been designed to pump mine water to the surface to Austar Dam via a rising main installed in the drift; and
    - Ellalong Colliery old workings (Long-walls 1 to 12) - utilised as the main underground water storage reservoir for the Austar mine. A large multistage borehole pump operating at the No. 2 shaft site, can pump water from these underground workings at a rate of approximately 7ML/day to Kalingo Dam via a vertical rising main and buried pipeline.

The underground water sources for the project are controlled with a remote centralised monitoring and communication system (CITECT) that provides real time monitoring of water pressure, flow rates and storage levels 24 hours/day for management of the water supplies by the Control Room Operator.

Monitoring of inflow waters to the mine workings occurs on a monthly basis to measure the cumulative volumes of water and provide data on long term trends and inflows. Water levels are also monitored in the old mine inactive workings of the neighbouring Kalingo and Aberdare Central Collieries by means of dipping shafts and a groundwater monitoring bore at Bellbird Mine.

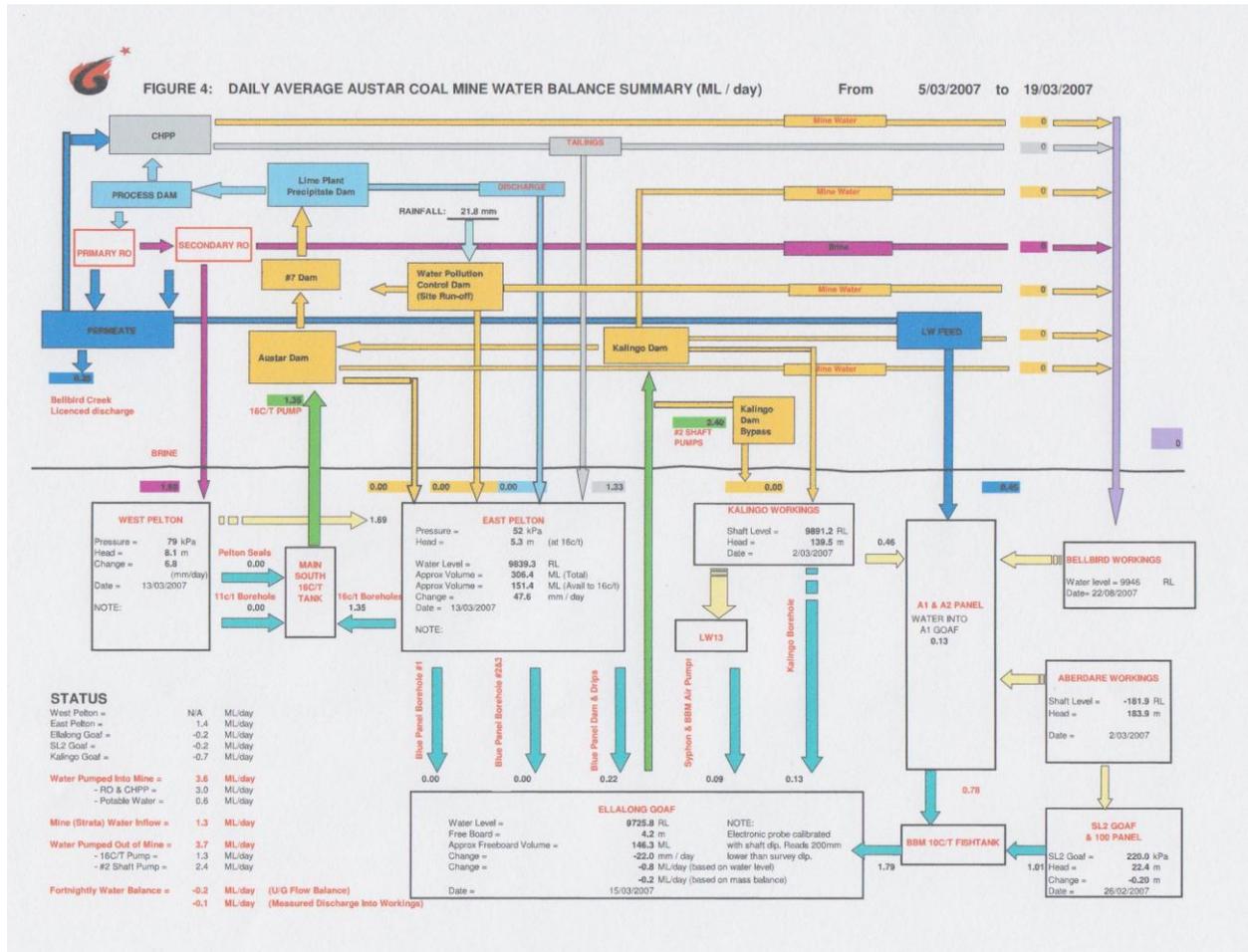


Figure 2: Austar Project Water Balance Summary

### 4.5.3 Surface Water Monitoring

[DA 29/95 MCoA Schedule 3 condition 9; and  
PA 08-0111 Schedule 4 condition 9(b)(iii)]

A Surface Water Monitoring Program was prepared to satisfy DA29/95 Schedule 3 condition 9 and was approved by Planning NSW on 13 November 2009. The SWMP takes into consideration the requirements of Austar's EPL416 issued under the Protection of the Environment Operations Act 1997 (PEO Act 1997).

#### Monitoring Program

Routine surface water quality monitoring is undertaken in local creeks each month. Additional surface water monitoring is required when there are discharges under the EPL416. Although sampling is not required when there is no discharge from Point 6 under EPL416, Austar maintain the sampling frequency of once per month at creek sites identified in EPL416. All water monitoring results are included in the Annual Return provided to the OEH under the EPL416. In addition to regular surface water monitoring required under EPL 416, real time monitoring of pH, EC and turbidity occurs at the treatment plant that feeds into the CITECT monitoring system.

Austar have engaged an environmental monitoring specialist to undertake routine surface water sampling and analysis of the 5 EPL monitoring sites (three creek sites and two discharge points); plus 4 creek monitoring sites (three sites in Quorrobolong Creek and one site in Cony Creek), in accordance with the approved Site Water Management Plan.

Austar Coal Surface Water Monitoring Sites			
EPA No.	Location	Type of Monitoring	Comment
1	Spillway of the Emergency Dam at the Pelton CHPP	Wet weather discharge (quality and volume)	Licensed Discharge Point No.1 & Austar Monitoring point SW 1
2	Bellbird Creek (near Wollombi Road) Downstream of CHPP	Ambient water quality monitoring	Austar Monitoring point SW 2
4	Bellbird Creek (northern boundary) Downstream of CHPP	Ambient water quality monitoring	Austar Monitoring point SW 4
5	Bellbird Creek (western boundary) Upstream of CHPP	Ambient water quality monitoring	Austar Monitoring point SW 5
6	Discharge from the 1ML Permeate Tank from the RO Water Treatment Plant	Discharge (quality and volume)	Licensed Discharge Point No.6 & Austar Monitoring point SW 6
Austar Creek Monitoring Sites			
SW Q1	Upstream of Austar mining areas on eastern boundary	Ambient water quality monitoring	SW Q1 is on the eastern boundary where Quorrobolong Creek enters the site.
SW Q2	Downstream of Austar mining areas		SW Q2 is downstream on the southern boundary where the creek exits the site.
SW Q3	Downstream of Austar mining areas, on southern boundary		SW Q3 is along Quorrobolong Creek downstream of Stage 2 area.
SW C1	Upstream of Austar mining areas		SW C1 location is where Quorrobolong Road crosses Cony Creek. Monitoring from this site will be compared with results from downstream locations on Quorrobolong Creek.

### **Bellbird Creek/Black Creek**

EPL 416 condition P1.3 requires sampling (when the site is discharging) above and below the CHPP in Bellbird Creek. This creek forms part of the Black Creek drainage system and is directly influenced by the quality and quantity of water discharged from the mine.

The confluence of Bellbird Creek and Black Creek is over 5 kilometres downstream from the mine on the northern side of Cessnock. At this point the Black Creek system is concrete lined in parts and passes through the urban centre of Cessnock.

### **Cony Creek**

Water samples are collected at the point where Quorrobolong Road crosses Cony Creek. Monitoring results from this site will be compared with results from downstream locations on Quorrobolong Creek.

### **Quorrobolong Creek**

Samples are taken monthly at two locations on Quorrobolong Creek:

- One upstream on the eastern boundary of Austar's land holding where Quorrobolong Creek enters the site; and
- One downstream sample site is on the southern boundary where the creek exits the site.

### **Channel Stability**

Channel stability in the Stage 2 area will be visually monitored on a monthly basis at the surface water monitoring sites on Quorrobolong and Cony Creeks. Channel stability in Quorrobolong and Cony Creeks will also be monitored as a part of the Ecological Monitoring Program for Stage 2.

Should any changes be observed during mining the creek cross section will be surveyed and compared with pre-mining survey data for the location to quantify the extent of the changes

An assessment of the potential impact of long-wall mining on creek systems in the Stage 2 and 3 areas was described in Umwelt (February 2007a) and Umwelt (September, 2008). Based on the maximum predicted and upper bound subsidence predictions it was concluded that it was unlikely that the stability of creek banks would be affected by Stage 2 and Stage 3 mining.

### **Reject Emplacement Area**

The reject emplacement areas have been designed for leachate to drain into the old Bellbird mine workings via two disused boreholes. Water quality in these workings is poor and reflective of historic mine workings. The boreholes provide a conduit to the old workings and as a consequence no surface discharges of leachate from the reject emplacement areas occur.

Monthly visual checks are undertaken to ensure that the area is maintained and surface water controls are functioning appropriately.

### **Farm Dams**

Farm dams within the Stage 2 and Stage 3 areas have been identified in the Subsidence Impact Assessments. Farm dams have also been identified in individual Property Subsidence Management Plans for the Stage 2 area. These assessments indicate that mining of long-walls in the Stage 2 and Stage 3 areas could have the following impacts:

- Change in the water storage capacity of farm dams due to systematic tilt associated with subsidence; and
- Potential loss of water from dams as a result of cracking of farm dam walls.

Regular visual monitoring of water levels in farm dams occurs during the extraction of long-walls. If any leakage or cracking is identified by the landowner during mining alternative water supply will be provided by Austar if required to the affected property for the duration of the mining period.

### ***Monitoring Results***

There was no discharge from SW1 (Emergency Dam spillway) during the 2009 to 2011 period, so no discharge water sampling in accordance with EPL416 was conducted.

At EPL discharge point SW6 (permeate from the Reverse Osmosis Water Treatment Plant), water quality results for pH, EC and TSS were compliant with the EPL limits.

Monitoring Point	2010-2011			2009-2010			2008-2009	
	pH	EC	TSS	pH	EC	TSS	pH	EC
<b>Discharge Water Quality Monitoring</b>								
<b>EPL Limits</b>	<b>6.5-8.5</b>	<b>600</b>	<b>&lt;50</b>	<b>6.5-8.5</b>	<b>600</b>	<b>&lt;50</b>	<b>6.5-8.5</b>	<b>600</b>
SW1	No discharge			No discharge			No discharge	
SW6	6.9-8.0	250-500	<1-9	6.5-8.5	250-600	<1-5	6.9-8.5	280-510

Both upstream (SW5) and downstream (SW4) of the CHPP were periodically dry at times when sampling was undertaken during the 2009-2011 period.

Natural fluctuations in water quality in Bellbird Creek, Quorrobolong Creek and Cony Creek were observed, exhibiting similar trends during the 2009 to 2011 period. No environmental impacts on the natural surface waters are apparent that can be attributed to mining activities in the Stage 2 area. For the ambient water quality monitoring points (SW2, SW4, and SW5) CHPP area;

- the pH measured at individual sites remained relatively constant ranging between pH 5.5 and pH 7.5, that were similar to the 2009-2010 results (pH 5.9-7.6);

- Surface water EC ranged between 290µS/cm and 3980µS/cm, that were similar to the 2009-2010 results (EC 236-2000 µS/cm); and
- TSS recorded 3mg/L to 56mg/L that were similar to the 2009-2010 results that exhibited a maximum of 69mg/L.

Monitoring Point	2010-2011			2009-2010			2008-2009	
	pH	EC	TSS	pH	EC	TSS	pH	EC
<b>EPL Discharge Points - Ambient Water Quality Monitoring</b>								
SW2	5.5-7.5	490-750	<1-10	5.9-7.0	400-1100	<1-37	6.4-8.5	400-1900
SW4	6.8-7.2	400-1100	4-9	6.5-7.3	450-2000	3-56	6.5-7.2	1050-3700
SW5	7.0-7.5	250-3980	5-55	7.2-7.5	250-550	<1-9	6.2-7.2	800-7000
<b>Austar Ambient Surface Water Monitoring Points</b>								
SWQ1	6.6-7.3	1050-1800	<10-240	7.0-7.5	1200-2150	-	6.7-7.7	100-2600
SWQ2	6.4-7.2	1100-1830	2-40	6.5-7.3	1050-2550	10-55	6.5-7.5	100-2550
SWQ3	6.4-6.9	900-1550	5-380	6.6-7.2	1000-2100	2-32	-	-
SWC1	6.9-7.1	600-1200	5-60	6.0-7.6	750-2560	5-30	-	-

#### 4.5.4 Groundwater

[DA No. 29/95MCoA Schedule 3 condition 10; and  
PA 08-0111 Schedule 4 condition 9(b)(iv)]

The Groundwater Monitoring Program and Surface and Groundwater Response Plan (Sections 5 and 7 of the Site Water Management Plan), have been developed largely on the basis of the Groundwater Impact Assessment by Connell Wagner for Stages 2 and 3 of the Austar development.

The current approved Site Water Management Plan was developed in response to the Stage 2 and proposed future Stage 3 mining. The Stage 3 mining will include mining below identified alluvial aquifers that contain groundwater dependent ecosystems and a number of registered groundwater wells. The strategy is targeted to monitor groundwater levels in the alluvial aquifer, as well as a shallow water bearing zone at 70 m to 100 m depth for any changes.

##### **Groundwater Monitoring System**

The site has a centralised monitoring and communication system (CITECT) that is managed 24 hours a day by the Control Room Operator. The system enables remote control of the major components and communications across the entire mine site. The real time monitoring system embraces a wide range of parameters including water pressure, flow rates and storage dam levels. In addition, a range of water quality and flow data is collected underground. The following component areas are monitored regularly:

- water pumped underground by events or processes controlled at the CHPP;
- inflow from in-seam drilled boreholes;
- flow from stored water bodies;
- water piped underground and used for mining operations; and
- water intercepted underground and pumped out of the mine.

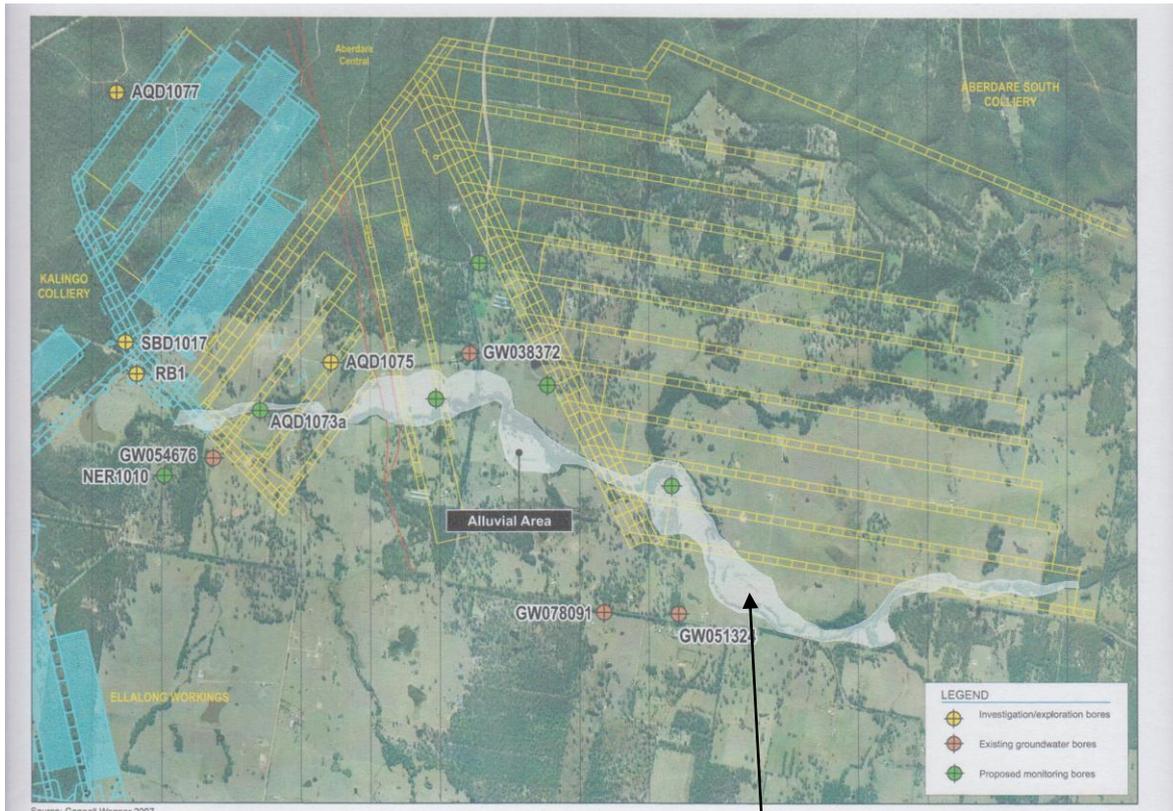


Figure 3: Austar Project Groundwater Bores and Alluvial Areas

### Assessment of Groundwater Strategies, Plans and Programs

#### Additional Piezometers

Additional piezometers (WBH1 to WBH3) have been installed in the alluvial aquifer above proposed Panel LWA5, in response to comments the mine received from the NSW Office of Water (NOW). Monitoring of these piezometers commenced in August 2011 in advance of mining of this panel and will provide baseline data. Piezometer AQR 1073a is located in alluvium above Panel LWA4 and has been monitored for several years, providing good baseline data.

The Groundwater Impact Assessment (Ref 2) recommends establishment and monitoring of piezometers in the alluvium over Panels A6 and A16 as well as in the shallow fractured rock (Branxton Formation) prior to Stage 3. The Site Water Management Plan (Ref 3) referenced only the proposed additional two shallow fractured rock piezometers. Given that the alluvium is more extensive in the Stage 3 areas, it is considered that at least the recommended additional two alluvial piezometers (Panels A6 and A16) be installed and monitored.

#### Recommendation:

It is recommended that the piezometers be installed as far in advance of the Stage 3 mining as practicable, and at least 1 year in advance, to allow establishment of baseline data.

#### Alluvial Trigger Levels

Trigger levels have now been set for the alluvial groundwater Levels. The trigger levels include a trigger depth and rate of decline. It seems that “Groundwater level drop below 2.5 m .....” (Table 10 of Site Water Management Plan) refers to the water depth in AQR 1073a. Similar trigger levels will need to be set for the any additional alluvial piezometers, once sufficient baseline data is collected and prior to mining of the underlying panels. The trigger level also incorporates “rate of decline over the previous fortnight is >20% than any fortnightly period in the past year”, that should pick up any sudden changes in water level due to mining but may not trigger a steadily increasing rate of decline.

**Recommendation:**

It is recommended that a system be implemented so that the groundwater levels are formally reviewed on a 3 month basis, as recommended by the SWMP.

**Verification**

No groundwater impact criteria have been set for the shallow fractured rock aquifer, rather it is proposed that data collected from the monitoring be reviewed at the completion of five nominated mining panels ranging from Panel A5 to Panel A17. The data is proposed to be reviewed to assess the occurrence of unexpected behaviour and allow any necessary remedial measures to be carried out.

No specific assessment criteria have been set, presumably because the definition of sensible/ meaningful criteria to compare groundwater levels is very difficult, as groundwater levels in fractured rock naturally fluctuate highly with climatic conditions.

Methodology that proposes a holistic overview of the available monitoring data, including rainfall records, groundwater levels, groundwater flows, subsidence data, extensometer data and surface water levels, is considered a practical alternative to the adoption of specific, possibly irrelevant, criteria. This proposed strategy however does introduce the process to subjectivity and judgement with interpretation of the data and therefore such a verification process should be subject to third party review. This should include the ongoing adequacy of the monitoring program.

**Recommendation:**

Although some trigger levels have now been set for the alluvial aquifer, the verification process should also continue to consider the results of monitoring on the fractured rock aquifer piezometers.

No verification was undertaken at the completion of Panel A2, as the piezometers in this location had failed by this stage. A verification report has been undertaken at the completion of Panel A1, which indicated that piezometric levels had declined at depth, however little impact had occurred for the shallow piezometers.

**Recommendation:**

It is noted that impacts can still occur following mining and it is recommended that in the future, if piezometers fail, that they are replaced.

#### 4.5.5 Surface and Groundwater Response

[DA No. 29/95MCoA Schedule 3 condition 10; and  
Project Approval 08-0111 condition 9(b)(iv)]

A Surface and Groundwater Response Plan was prepared to satisfy DA29/95 and approved by DoP as part of the Site Water Management Plan in March 2009. Potential impacts on surface and groundwater, triggers, actions and responsibilities for addressing potential impacts are provided in the Surface and Groundwater Response Plan Table 10.

##### **Surface Water Incidents**

If water quality monitoring results indicate that the criteria in EPL 416 condition L3.2 have been exceeded, investigation of the non-compliance will occur and action taken to address the issue. The investigation will consider any plant operation or other factors that may have resulted in the non-compliance. A report of the non-compliance and response would be provided to the DP&I and other relevant authority (e.g.OEH, DI&I) within 7 days.

In the event of an un-licensed discharge, Austar would notify the OEH immediately (in accordance with the Protection of the Environment Legislation Amendment Act 2011 and conduct an investigation of the discharge event, in accordance with EPL416 and the Surface and Groundwater Response Plan section 7.

### ***Shallow and Alluvial Aquifers***

If monitoring of alluvial bores indicate groundwater levels drop below 2.5m and the rate of decline over the previous fortnight is >20% than any fortnightly period in the past year, an investigation into the likely causes of the change in groundwater level would be conducted and recommended mitigation measures provide as required.

### **Loss of Water Surface Water Flows in Creeks and into Farm Dams**

If monitoring in Cony Creek and Quorrobolong Creek or visual monitoring of farm dams within the Stage 2 or Stage 3 areas indicates a loss of water, investigation into the potential causes of the loss will be conducted. If it is found that the loss is a result of long-wall mining in the Stage 2 or Stage 3 areas, actions to address the matter including remedial measures in creeks or repairs to farm dams will be undertaken as required.

No remedial action had been required in relation to water loss or quality caused as a result of the underground mining at the date of this audit.

## **4.5.6 CHPP Water Management System**

All water required for use in the CHPP is pumped from underground inflow sources and the surface mine water dams (Austar Dam / Kalingo Dam) to the Process Water Dam at the CHPP, for use after passing through the lime treatment plant and precipitate dam.

Depending on dam levels, flow rate and demand within the system, water is managed via the coal washing and handling system, stormwater runoff and management system, and/or the reverse osmosis (RO) water treatment system;

Dirty water from the three systems is discharged back into the old underground mine workings where settling of sediment occurs prior to the water being collected and pumped to the surface again for reuse.

Clean permeate from the RO treatment plant is used as the water supply for underground mining operations or in the CHPP, with excess treated water that is not utilised on site discharged into Bellbird Creek in accordance with the conditions of EPL 416.

### ***Water Treatment System***

Mine water collected from underground workings is pre-treated by oxidation in Austar and Kalingo dams, and water is pumped to the lime treatment plant where the pH is adjusted to approximately pH 8 and then fed into the precipitation dam where the excess lime, precipitated metals and gypsum are allowed to settle out. Water then flows to the Process Water Dam from where it is pumped to the RO plant for treatment.

The Pelton RO treatment plant contains 3 units and can treat up to 7.5 ML in total of mine water per day. Water pumped from the process dam undergoes primary filtration through standard filters, secondary filtration through multi-media filters and final tertiary filtration through cartridge filters. This feed water is then pumped into the RO elements where the brine and permeate are separated. The brine is returned underground via the Bellbird borehole. The clean permeate is used in the CHPP or underground mine with any excess discharged to Bellbird Creek in accordance with EPL conditions.

### ***Coal Washing and Handling System***

The CHPP requires up to 2.5 ML/day of water to operate. This water may be a blend of process dam water and permeate from the RO plant. Approximately 2.0 ML/day of fine tailings (approximately 15-30% solids) is returned underground to the abandoned Pelton underground workings via an adit adjacent to the CHPP.

### **Storm Water Run-Off and Management System**

Stormwater management at the CHPP aims to contain all runoff in surface dams up to their capacity with excess dirty water runoff piped into the former Bellbird Colliery via a borehole.

All dirty water runoff from the CHPP surface is contained within the dirty water management system, with the final destination in normal operation being the Pollution Control Ponds in the eastern part of the CHPP site. Other areas of the CHPP site are used to act as on site retention structures to control stormwater flow to the Pollution Control Ponds in large storm events.

Water levels in the Pollution Control Ponds are monitored and pump status to the Bellbird Colliery borehole checked regularly. In the event of a major storm exceeding the Pollution Control Pond capacity, the overflow from the Ponds is directed to the Emergency Overflow Dam. A pump in the Emergency Overflow Dam can return storm water to the dirty water system to minimise the risk of off-site discharge at the licensed outlet (weir) of the Emergency Overflow Dam.

#### **Conclusion:**

The CHPP water management system is of adequate capacity to control all dirty water runoff and CHPP wastewater/tailings.

## **4.6 Erosion and Sediment Control**

[DA No. 29/95 MCoA Schedule 3 condition 8; and  
PA 08-0111 Schedule 4 condition 9(b)(ii)]

### **4.7.1 Erosion and Sediment Control Plan**

Erosion and Sediment Control was prepared to satisfy DA29/95 Schedule 3 condition 8 as Part 3 of the Site Water Management Plan (SWMP) dated March 2009. The Part 3 provides generic details and concepts to control erosion and prevent sediment loss. It mentions sediment control basins “designed to contain sediment from normal rainfall events and reduce flow in high rainfall events”. The rainfall events are not defined.

#### **Recommendation:**

That any sediment basin is designed to the requirements of “Managing Urban Stormwater – Soils and Construction Volume 1” Landcom, 2004 and its companion document “Managing Urban Stormwater – Soils and Construction Volume 2e” (DECC 2008).

### **4.6.2 Erosion and Sediment Control**

The majority of the surface disturbance from the underground Austar Coal Mine project activities is limited to the Austar Surface Facilities Area, the Pelton CHPP, waste rock emplacement areas and the Kitchener SIS construction, that were inspected at the time of the audit:

#### **Coal Handling and Preparation Plant (CHPP)**

The CHPP is located to the northwest of the Austar Surface Facilities Area on the western side of Middle Road. The ROM coal from the underground workings is washed and crushed at the CHPP and stockpiled for transport from the site by rail. Water for the CHPP operation is sourced from the Process Dam. Water supply to the Process Dam comes from surface water collected from the CHPP plus water pumped from Austar Dam north of the Austar Surface Facilities Area and Kalingo Dam to the south of the Austar Surface Facilities Area. These dams collect minor surface water runoff from their own catchments but are mainly used for storage of the water pumped from underground workings. The majority of wastewater from the CHPP is returned underground via an old adit adjacent to the CHPP.

Additionally up to 7.5 ML/d from the CHPP is treated in a reverse osmosis plant for subsequent reuse and/or release to Bellbird Creek (as an environmental flow), that flows through the centre of the CHPP site. Brine from the reverse osmosis plant is returned underground via the old adit.

During the audit inspection, clean water and dirty water on the CHPP site was observed to be satisfactorily separated with the onsite drainage system, and Bellbird Creek was protected from dirty water runoff from the operational areas. Dirty water is directed to two sediment cells (8 ML) prior to passage to a 40 ML Water Pollution Control Dam from where it is pumped underground via borehole(s) at up to 10 ML/day. An emergency overflow dam (40 ML) is also available.

Assuming a volumetric coefficient of 0.7, 88 ML of storage is significantly more than sufficient for the design rainfall depth (90th percentile, 5-Day event (43 mm)).

**Conclusion:**

No erosion or sediment control issues were noted at the CHPP during the site inspection.

**Waste Rock Emplacement Area (Aberdare Emplacement Area)**

The Aberdare Extension Emplacement Area is located east northeast of the CHPP, to the east of Bellbird Village and in an area of former open-cut. The far southwest of this area is filled almost to final level. Topsoiling is not complete and so it is partly un-vegetated, but that is not an issue as it drains north into underground workings.

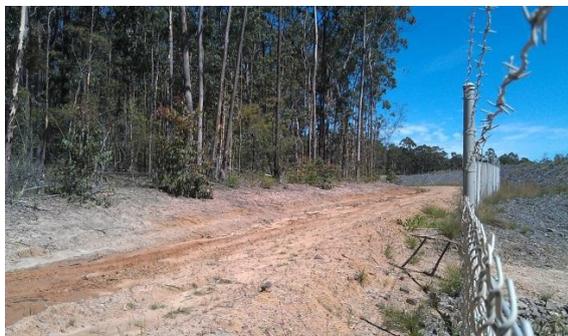
Further northeast is an area of active filling. Dirty water drains into the former open cut and eventually underground. There is no release of dirty water from this area. The far northeast part of the active site drains southwest into the former open cut.

Generally, dirty surface water is being managed satisfactorily (as it all drains underground) but there is one small area of partly un-rehabilitated land south of the former open cut that drains directly off-site. It has a low gradient to the north and drains into an existing drain (a former cut-off drain upslope of the former open cut). That drain flows northeast to join Black Creek. Because this area drains directly to Black Creek, the un-rehabilitated areas should be stabilised as soon as possible (within 60 days). Here “stabilise” means achieve at least 70% ground cover.

**Recommendation:** Stabilise disturbed lands in the small catchment to the existing drain south of the Aberdare Emplacement Area.

**Kitchener SIS Number 5 Shaft Construction Area**

The Number 5 Shaft construction site at the Kitchener SIS is located east north east of the Austar Surface Facilities Area. At the time of inspection the shaft was under construction. The building site and the materials storage site are either side of a small un-named watercourse.



Erosion and sediment controls at the Kitchener SIS were generally satisfactory. Clean water was effectively diverted around the site, although one drain was eroding and requires stabilisation (Plate 4.7A).

The building site drains either to two production ponds used to store water for (and from) the drilling process or to a sediment basin in the far northeast corner of the site. If the production water supply ponds become too full, water can be pumped to Kalingo Dam.

**Figure 4.6A: Clean water drain. Requires channel lining to stop erosion (both sides of creek).**

There was one potential problem with the inlet to the sediment dam as a sediment fence had been installed across the flow (Plate 4.7B).

This effectively dams the flow and could divert water straight to the watercourse. The fence must be removed. The sediment dam, when full, is pumped to the production water supply ponds and, if necessary they are pumped to Kalingo Dam.



**Figure 4.6B: Remove sediment fence from inlet to basin. It acts as a dam.**



A second larger sediment dam is located east of the watercourse, to collect dirty water from the materials handling area. Much of that area is stabilised with gravel but the basin is still necessary. Dirty water trapped in it is pumped to the production water supply dams and, if necessary, pumped to Kalingo Dam.

**Plate 4.6C: Sediment basin east of the watercourse collecting runoff from the materials storage and handling area.**

## 4.7 Subsidence

[DA29/95 MCoA Schedule 3 conditions 2 to 4; and  
Project Approval 08\_111 Schedule 3 conditions 3 and 4]

### 4.7.1 Subsidence Management Plans

Austar operates under approved Subsidence Management Plans (SMP) for long-wall panels A3 to A5 in the Stage 2 Area. An additional SMP approval for the additional LW A5a was granted on 27 April 2011 by the Department of Trade and Investment, Regional Infrastructure and Services (DRITIS), formally Industry and Investment NSW (I&I NSW). The SMP also includes documents for the management of environmental impacts associated with subsidence.

- Subsidence Monitoring Program (Stage 1 Area and Stage 2 Area LWs A3 to A5)
- Public Safety Management Plan (Stage 1 and Stage 2 Area LWs A3 to A5)
- Environmental Monitoring Program (Stage 1 Area)
- Land and Surface Watercourse Monitoring Plan (Stage 1 Area)
- Vibration Monitoring Program (Stage 2 Area LWs A3 to A5)
- Site Water Monitoring Plan (Stage 2 Area LWs A3 to A5)
- Stage 2 Ecological Monitoring Program (Stage 2 Area LWs A3 to A5)

### 4.7.2 Existing Strategies, Plans and Programs

The existing strategies in place to manage mine subsidence impacts and public safety issues at Austar have provided the following:

- Predictions of mine subsidence impacts for a range of scenarios that allow for the uncertainties inherent in the prediction models used and the behaviour of the rock mass (see End of Panel Report for LW A4);
- Subsidence monitoring plans, that gather data on surface and subsurface movements by 3-D survey, borehole instrumentation, and visual inspection techniques (see LWA4 End of Panel Report for all monitoring plans and results data).
- Public Safety Management Plan, which addresses issues raised in the DA Consent Conditions and defines the plans required to satisfy those conditions. The PSMP includes for the timely installation of public hazard warning signage, survey lines and visual inspection guidelines before, during and after the development of mine subsidence. Mine subsidence damage repairs and hazard mitigation strategies are also defined in the PSMP.
- Vibration Monitoring Program which provides monitoring and assessment guidelines in regards to vibrations to surface structures due to the longwall mining goaf development.
- Site Water Monitoring Plan which provides monitoring and impact assessment strategies for surface and ground water systems above Stage 2.
- Stage 2 Ecological Monitoring Program which provides monitoring and impact assessment strategies for ecological communities above Stage 2.

The completion of the Stage 1 mining activities and the combined A3 and A4 mining in Stage 2 has supported predicted subsidence levels developed by Mine Subsidence Engineering Consultants (MSEC), with the actual total subsidence equal to or less than maximum predicted levels. Tilts and strains were within the accuracy of the model and again at predicted levels. No changes or environmental effects could be observed on the surface following completion of mining.

Actual subsidence and impact predictions at surface features within the area of influence of Stage 2 mining have generally been less than or consistent with, the Section 138 Application and EIS predictions. Actual impacts have been assessed as 'imperceptible' with no surface cracking or damage observed after subsidence of up to 1 metre.

**Conclusions:** The mine subsidence information being collected by Austar is considered adequate for meeting the objectives of current Subsidence Management Plan standards and allows for the assessment and mitigation strategies to be determined if any environmental damage occurs. Overall, the current strategies, plans and programs for managing mine subsidence impacts to the environment, man-made developments and public safety are considered to be performing adequately.

### 4.7.3 Reports on Subsidence

#### *Annual Environmental Management Reports (AEMRs)*

AEMR's prepared for the 2008-2009, 2009-2010 and 2010-2011 periods provide a summary of mine subsidence for the year in section 3.17. The DP&I requested that tables of predicted versus measured subsidence effects and any impact exceedences be included in the AEMR's with necessary explanation and management responses noted. The subsidence effect predictions and impacts have been presented for LWs A1 and A2 in Stage 1 and LWs A3 and A4 in Stage 2. (LW A5 started after the last AEMR in July 2011).

The measured subsidence effects and impacts were all generally shown to be equal to or less than expected maximum levels. There were some minor subsidence and strain exceedences noted along ridges and steep slopes outside the limits of LW A3, however, these were identified as being due to either topographical effects or disturbed survey markers with no cracking or steep slope movements noted.

No mining related impact to surface flows or water quality have been identified along the water courses (Quorrobolong Creek and Cony Creek). Groundwater levels in surface alluvium and fractured rock masses have also remained within 2.5 m to 3.0 m of the surface and remain responsive to rainfall events. No surface erosion or bed sediment deposits have been identified either.

Ecological surveys have not detected any change to flora species populations, riparian vegetation or creek bank instability.

### **End of Panel Reports (EOPR)**

End of Panel Reports have been prepared by Austar for Stage 1 Area long-walls A1 and A2, and Stage 2 Area long-walls A3 and A4 for submission to the relevant authorities.

The summary of the findings in the End of Panel Reports indicated that measured surface subsidence was of the order of 1000 mm above long-walls A1 and A2 and 850 mm above long-walls A3 and A4. The predicted maximum subsidence, tilt and strain values were generally greater than measured data with no perceptible impacts to the environment or increase in public safety risk. Ground and groundwater behaviour indicated by monitoring is as predicted by the assessment reports.

Assessment of subsidence effects related to features overlying long-walls A1 to A4 were:

- No adverse changes (e.g. cracking or slope instability) has occurred to the land surface;
- No adverse changes to stream flow or stream water quality of the low order creeks;
- No additional gully erosion or bed load sediment transport;
- No entry of surface water into the mine workings has occurred;
- No observable redistribution of surface flow to shallow groundwater or generation of new stream paths has occurred;
- No areas of ponding have developed; and
- No loss of flow to the catchments of Black Creek, Quorrobolong and Coney Creeks.
- No changes or loss of any eco-system within the Stage 1 and 2 Areas have been detected.
- Minor cracking of plasterboard detected in one residence.
- No impacts have occurred to Nash Lane, utilities, drainage lines, dams, fences or access roads.
- No impacts to Aboriginal artefact sites.

<p><b>Conclusion:</b> Overall the impact management and monitoring programs have been functioning satisfactorily during the audit period.</p>
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### **Audit Site Inspection Observations**

An inspection of the following surface areas above long-walls A3 and A4 was conducted by a Principal Engineer, Ditton Geotechnical Services on the 28 November 2011.



**Plate 4.7A: Prominent hillside above LW A3**



**Plate 4.7B: Austar Owned Vineyard and prominent hill above LW A3**



Plate 4.7C: Cony Creek and Surface Alluvium above LW A3 and A4



Plate 4.7D: Cony Creek and Riparian vegetation above LW A3 and A4



Plate 4.7 E: Residence above LW A3



Plate 4.7F: Vibration monitoring station above LW A3

No perceptible impacts from mine subsidence up to 850 mm were observed at the sites visited.

**Conclusion:** Based on the review of the Section 138, AEMR and EOPR documents for 2009 to 2011 it is concluded that the Austar Mine has complied with the relevant DA Conditions of Consent for mine subsidence impact management for the 2009-2011 period.

#### 4.7.4 Subsidence Complaints

Several complaints related to ground vibration and damage caused by underground fracturing and goafing of strata behind the longwall faces have been made during the 2009-2011 period. The measured vibrations have all been < 15 mm/s, which is the lower limit for cosmetic damage potential to structures. It is noted that approximately 30% of vibrations have exceeded 3 mm/s, which is the lower limit of perceptibility to humans.

Impacts to houses are required to be within Safe, Serviceable and Repairable (SSR) limits unless landholders agree to greater impact. It is understood that Austar has entered into royalty agreements with several land holders that are based on the quantity of land above mineable reserves.

Subsidence impacts to-date have not exceeded SSR limits set by the Mine Subsidence Board (MSB) for a given structure.

#### 4.7.5 Actions to Improve Subsidence Management System Performance

It is assessed that the subsidence management strategies being implemented at Austar have performed satisfactorily in regards to the Conditions of Consent during the 2009 - 2011 reporting period.

The only issue of concern from this audit period is the whether the frequency of vibration events is becoming a significant issue with local residents. It is noted that the magnitude of the vibrations do not exceed minimum limits for cosmetic damage and it is not practical to impose operational constraints on the mine to reduce the frequency of the vibration events from occurring.

However, it is considered that an appropriate response would be to acknowledge to the community that the vibrations that do occur are likely to diminish to imperceptible levels as mining moves away from a given location.

## 4.8 Rehabilitation

The majority of the surface disturbance from underground activities is limited to the Austar Surface Facilities Area, the Pelton CHPP and the Kitchener SIS construction.

- The Austar Surface Facilities Area (also referred to as Pit Top) is maintained in a park-like setting with native vegetation and sealed access roads. There is no open disturbed land around this area.
- The Pelton CHPP area has been operational since the commencement of coal mining in the area with expansion of the CHPP and upgrade of the Pelton rail loading facility and rail spur in 1975.
- The area of disturbed land from mining activities around the CHPP is being rehabilitated and reject material is being placed to the west and northwest of the CHPP as a noise bund. These areas are still active and rehabilitation and revegetation will occur as the disturbed areas profile is finalised. The riparian vegetation along Bellbird Creek (that runs through the CHPP site) has been retained and provides an undisturbed corridor through the site.

The Kitchener Surface Infrastructure Site construction (off Quorrobolong Road) is occurring on an area of approximately 8 to 10Ha. The stripped topsoil has been stockpiled and any cleared vegetation within the disturbance area was mulched and used onsite for erosion control on topsoil stockpiles and surrounding catch/diversion drains.

## 4.9 Reject Emplacement

[DA 29/95 MCoA Schedule 3 condition 21; and  
Project Approval 08-0111 Schedule 4 condition 16]

Austar has development approval to dispose of coarse reject material and manage tailings at Pelton Colliery (both north and south of Wollombi Road), Pelton Open Cut, Aberdare Extended Open Cut and the areas identified under the 1996 Minister's Consent as Reject Emplacement Areas 1, 3 and 4. Reject emplacement continues to be in areas previously approved for Ellalong Colliery (DA 74/75/79), Pelton Open Cut (DA 118/691/181) and the Bellbird South extension to Ellalong Colliery (DA 29/95). These areas have capacity for the emplacement of approximately 17.5 Mt of coarse reject.

Reject emplacement and tailings disposal is undertaken in accordance with an approved Mining Operations Plan (MOP) (Austar 2008) as required by Mining Lease conditions issued under the *Mining Act 1992*.

Coarse reject from the Pelton CHPP is trucked via the private haul road to either the Aberdare Extended Open Cut emplacement area or is emplaced in open cut voids at the Pelton Open Cut. The major current area for waste rock / coarse reject emplacement is the disused Aberdare Extended Open Cut Voids located east northeast of the CHPP, and to the east of Bellbird Village (refer to Preliminary Environmental Assessment, Figure 3.2 Umwelt, June 2008). The southwest of this area is filled almost to final level, topsoiling is not complete and the area not revegetated. This is not an issue in relation to surface runoff as the area drains north to the lowest point into disused underground workings.

**Conclusion:** The various reject emplacement areas are old disused open cut mining areas within the Mining Leases held by Austar Coal (these areas were mined prior to Yancoal Australia Limited purchasing the mine in December 2004). These areas are being progressively filled with coarse reject from the CHPP to final level and will be rehabilitated when the final profile is reached. Placement of the coarse rejects and surface water runoff management appeared to be progressing in a planned manner to restore a stable surface area for rehabilitation.



**Plate 4.9:       Abedare Reject Emplacement Area -nearing completion height for topsoil spreading and revegetation.**

## 5. Conclusions and Recommendations

The Independent Environmental Audit of the Austar operations has generally demonstrated a high degree of compliance with DA29/95 Minister's Conditions of Approval and where relevant the Project Approval 08\_0111 conditions.

### ***Environmental Management Strategy***

The Environmental Management Strategy provides a sound basis for the management of environmental aspects of the Austar project activities and operation.

### ***Environmental Monitoring Program***

The Environmental Monitoring Program includes all the monitoring commitments outlined in the specific environmental aspect management plans. The Environmental Monitoring Program provides a satisfactory program for a monitoring of meteorology, air quality, ecology, noise, vibration, surface and ground water, and subsidence that provides data for the assessment of the environmental performance of the Austar operations. Groundwater and subsidence monitoring programs will require review and revision as the underground mining operations progress with each long-wall.

### ***Air Quality***

The air quality management for the Stage 2 Austar Mine operations occurs in accordance with the approved Air Quality Management and Monitoring Plan 2007, and the approved Stage 3 Surface Infrastructure Site Shaft Construction Environmental Management Plan section 12.1, dated November 2009. The approved plans are satisfactory for the management and monitoring of dust generated by the current operations. The Stage 3 Air Quality and Greenhouse Gas Management Plan will be prepared prior to commencement of construction of buildings at the Surface Infrastructure Site. The dust deposition, TSP and PM10 air quality monitoring results demonstrated compliance with the MCoA criteria during the 2008 to 2011 period.

### ***Noise Management***

In general the noise emissions from the Austar operations are compliant with the noise limits in the EPL and noise criteria in DA29/95 Schedule 3 condition 13.

Noise nuisance from the CHPP to the nearest receptors is being addressed with upgrades to the CHPP and the construction of a noise bund in accordance with the EPL condition U1.

Noise emissions from the Kitchener SIS activities only exceeded the Construction Noise Management Levels on 3 occasions between November 2009 and June 2011. Noise controls were fitted to fixed plant at the SIS in response to the exceedences.

### ***Erosion and Sediment Control (ERS)***

Erosion and sediment control measures implemented for the surface disturbance areas of the Austar operations appear to manage surface runoff and provide adequate protection of the natural waterways across the mining lease areas.

#### **ERS Recommendation 1:**

Any sediment control basins should be designed to the requirements of "Managing Urban Stormwater – Soils and Construction Volume 1" Landcom, 2004 and its companion document "Managing Urban Stormwater – Soils and Construction Volume 2e" DECC 2008.

#### **ERS Recommendation 2:**

Stabilise disturbed lands south of the Aberdare Emplacement Area in the small catchment to the existing drain.

### ***Site Water Management***

The approved Site Water Management Plan provides a satisfactory program of monitoring and mitigation measures for the management of surface and groundwater aspects of the Austar surface

facilities and underground workings. The water management system at the CHPP site is adequate capacity to control all dirty water runoff and CHPP wastewater/tailings, with disposal to disused underground workings at the Pelton and Bellbird Collieries.

### **Surface Water Monitoring**

EPL discharge point SW6 (permeate release), exhibited water quality results for pH, EC and TSS that were compliant with the EPL limits. (There have been no discharge from SW1 (Emergency Dam spillway) during the 2009 to 2011 period.

Natural fluctuations in water quality in Bellbird Creek, Quorrobolong Creek and Cony Creek were observed, exhibiting similar trends during the 2009 to 2011 period. No environmental impacts on the natural surface waters are apparent that can be attributed to mining activities in the Stage 2 area.

### **Groundwater**

The approved Site Water Management Plan and Groundwater Monitoring Program were developed for Stage 2 and proposed future Stage 3 mining. The Stage 3 mining will include mining below identified alluvial aquifers that contain groundwater dependent ecosystems and a number of registered groundwater wells. The program is targeted to monitor groundwater levels in the alluvial aquifer, as well as a shallow water bearing zone at 70 m to 100 m depth for any changes to groundwater/aquifers.

#### **Groundwater Recommendation 1:**

It is recommended that the piezometers be installed as far in advance of the Stage 3 mining as practicable, and at least 1 year in advance, to allow establishment of baseline data.

#### **Groundwater Recommendation 2:**

It is recommended that a system be implemented so that the groundwater levels are formally reviewed on a 3 month basis, as recommended by the SWMP.

#### **Groundwater Recommendation 3:**

Although some trigger levels have now been set for the alluvial aquifer, the verification process should also continue to consider the results of monitoring on the fractured rock aquifer piezometers.

#### **Groundwater Recommendation 4:**

It is noted that impacts can still occur following mining and it is recommended that in the future, if piezometers fail, that they are replaced.

### **Subsidence Management**

The mine subsidence information being collected by Austar is considered adequate for meeting the objectives of current Subsidence Management Plan standards and allows for the assessment and mitigation strategies to be determined if any environmental damage occurs. Overall, the current strategies, plans and programs for managing mine subsidence impacts to the environment, man-made developments and public safety are considered to be adequate and the impact management and monitoring programs have functioned satisfactorily during the 2009-2011 period. Based on the review of the Section 138, Austar AEMR's and End of Panel Reports it is concluded that the Austar Mine has complied with the relevant DA Conditions of Consent for mine subsidence impact management for the 2009-2011 period.

### **Rehabilitation and Reject Management**

The various reject emplacement areas are old disused open cut mining areas within the Mining Leases held by Austar Coal (these areas were mined prior to Yancoal Australia Limited purchasing the mine in December 2004). These areas are being progressively filled with coarse reject from the CHPP to final level and will be rehabilitated when the final profile is reached. Placement of the coarse rejects and surface water runoff management appeared to be progressing in a planned manner to restore a stable surface area for rehabilitation.

## Attachment A

### Consolidated Consent - Austar Coal Mine Stage 2 DA No. 29/95, 7 December 2010

#### Minister's Conditions of Approval

Black type represents June 2008 modification (MOD 2)

Blue type represents May 2009 modification (MOD 3)

Red type represents December 2010 modification (MOD 4)

MCoA No.	Condition	Verification	Compliance	Comments
	<b>SCHEDULE 2 ADMINISTRATIVE CONDITIONS</b>			
	<b>Obligation to Minimise Harm to the Environment</b>			
<b>2/1</b>	The Applicant 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 development.	Site inspection related to this audit	C	Trevor Brown Lead Auditor, Steve Ditton – Subsidence, Will Wright – Groundwater and Mark Passfield – Surface Water. Soils and Rehabilitation conducted site inspections of the Austar operations.
	<b>Terms of Consent</b>			
<b>2/2</b>	<p>The Applicant shall carry out the development generally in accordance with the:</p> <p>(a) DA 29/95 and accompanying Environmental Impact Statement prepared by HLA Envirosiences Pty Limited, Aug 1995;</p> <p>(b) modification application MOD-49-4-2006 and accompanying Statement of Environmental Effects, titled <i>Austar Coal Mine Section 96 Modification</i>, prepared by Environmental Resources Management Australia Pty Ltd April 2006 (April 2006 SEE), and information from ERM clarifying the modification application MOD-49-4-2006, 13 Jul 2006;</p> <p>(c) modification application DA29/95 – Mod 2 and accompanying Statement of Environmental Effects, titled <i>Austar Coal Mine Statement of Environmental Effects Section 96 Modification Stage 2 Longwall Panels A3-A5</i>, prepared by Austar Coal Mine September 2007; and</p> <p>(d) modification application DA 29/95 – MOD 3 and the accompanying Statement of Environmental Effects prepared by Austar Coal Mine Pty Ltd Apr 2009;</p> <p>(e) modification application DA 29/95 – MOD 4 and the accompanying Environmental Assessment, Umwelt (Australia) Pty Ltd Jul 2010; and</p> <p>(f) the conditions of this consent.</p> <p>If there is any inconsistency between the above documents, the latter document shall prevail over the former to the extent of the inconsistency. However, the conditions of this consent shall prevail over all other documents to the extent of any inconsistency.</p>		C	The Austar Stage 2 workings have been developed generally in accordance with the Environmental Impact Statement (1995), Statements of Environmental Effects 2006, 2007 and 2009, and Environmental Assessment 2010.

MCoA No.	Condition	Verification	Compliance	Comments						
2/3	The Applicant shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of: (a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this consent; and (b) the implementation of any actions or measures contained in these reports, plans, strategies, programs or correspondence.		Noted							
	<b>Operation of Plant and Equipment</b>									
2/4	The Applicant shall ensure that all plant and equipment used at the site is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.		Noted							
	<b>Limits on Approval</b>									
2/5	This consent lapses on 14 February 2017. <i>Note: this condition does not affect the operation of section 95 of the EP&amp;A Act</i>		Noted							
	<b>Management Plans/Monitoring Programs</b>									
2/6	With the approval of the Director-General, the Applicant may submit any management plan or monitoring program required by this consent on a progressive basis.		Noted							
2/7	Following any modification to this consent, or if directed by the Director-General, the Applicant shall review and if necessary revise all relevant management and monitoring strategies, plans and programs required under this consent to the satisfaction of, and within a timeframe approved by, the Director-General.		Noted							
	<b>SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS</b>									
	<b>ACQUISITION UPON REQUEST</b>									
3/1	Upon receiving a written request for acquisition from the landowner of land listed in Table 1, the Applicant shall acquire the land in accordance with the procedures in conditions 3 to 5 of Schedule 4: <i>Table 1: Land subject to acquisition upon request</i> <table border="1" data-bbox="315 1187 987 1299"> <thead> <tr> <th>Property</th> <th>Property Owner</th> </tr> </thead> <tbody> <tr> <td>A03a</td> <td>Duff Property</td> </tr> <tr> <td>A04a</td> <td>Bukanmain Pty Limited</td> </tr> </tbody> </table> However, the Applicant is not required to acquire the land listed in Table 1 if:	Property	Property Owner	A03a	Duff Property	A04a	Bukanmain Pty Limited	Letter from Austar to DoP re Acquisition of Properties, 17 May 2010	C	Austar notified Department of Planning of the purchase of A04a Bukanmain Pty Ltd 145 Nash Lane Quorrobolong on 31 March 2009, and A03a Duff 93 Nash Lane Quirrobolong on 30 April 2010, following written requests for acquisition.
Property	Property Owner									
A03a	Duff Property									
A04a	Bukanmain Pty Limited									

MCoA No.	Condition	Verification	Compliance	Comments
	(a) the Applicant has a current written negotiated agreement with the landowner in regard to the management of subsidence-related impacts, and a copy of this agreement has been forwarded to the Department by the Applicant; or (b) the landowner has agreed to the MSB purchasing the land under the <i>Mine Subsidence Compensation Act 1961</i> ; or (c) a request for acquisition has not been made following completion of mining in long-walls A3 to A5, and the MSB determines that the residence/s on the land listed in Table 1 remains safe, serviceable and repairable.			
	<b>SUBSIDENCE</b>			
	<b>Subsidence Impact Assessment Criteria</b>			
<b>3/2</b>	If the subsidence generated by the development results in damage to any residence on privately-owned land (excluding the land listed in Table 1) that in the opinion of the MSB exceeds safe, serviceable and repairable criteria, the Applicant shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 3 to 5 of Schedule 4. However, the Applicant does not have to act on any such request if: (a) the Applicant has a current written negotiated agreement with the landowner in regard to the management of subsidence-related impacts, and a copy of this agreement has been forwarded to the Department by the Applicant; or (b) the landowner has agreed to the MSB purchasing the land under the <i>Mine Subsidence Compensation Act 1961</i> .		C	The properties listed in Table 1 have been purchased by Austar Coal. (See Schedule 3 condition 1 above).
	<b>Subsidence Management Plan</b>			
<b>3/3</b>	<p>The Applicant shall revise the approved Subsidence Management Plan for the Stage 2 mining area to include long-wall A5a, to the satisfaction of I&amp;I NSW. The revised plan must:</p> <p>(a) include a mine plan for the relevant area;</p> <p>(b) integrate ongoing management of previously mined areas;</p> <p>(c) include management, monitoring and contingency plans for all man-made and natural features which may experience subsidence effects, subsidence impacts or environmental consequences, including:</p> <ul style="list-style-type: none"> <li>• built structures;</li> <li>• farm dams;</li> <li>• watercourses;</li> <li>• groundwater;</li> <li>• terrestrial flora and fauna and ecology (including any threatened species and their habitats); and</li> </ul>	<ul style="list-style-type: none"> <li>▪ Letter from DPI for Approval of SMP for Long-wall A3 Only, 3 Feb 2009</li> <li>▪ Letter from DI&amp;I re SMP Approval for Long-walls A4 and A5, 24 Dec 2009</li> <li>▪ Letter from DI&amp;I re SMP Approval for Long-wall A5A, 27 April 2011</li> </ul>	C	Approval of the Subsidence Management Plan for long-wall A3 was received from DPI on 3 February 2009, long-walls A4 and A5 SMP approval received from DI&I on 24 December 2009, and approval for long-wall A5a was received on 27 April 2011. Conditions of approval were attached to each letter in respect of each long-wall. (a)SMP section 2.1 SMP Application Area and Plan 1: Long-walls A3 to A5 Existing and Proposed Workings; (b)SMP section 10 Subsidence and its Impacts provides outline of the monitoring to be conducted for the assessment (c)Long-wall 5A SMP was approved on 27 April 2011 prior to commencement of mining (planned

Independent Environmental Audit – Austar Coal Mine – November 2011

MCoA No.	Condition	Verification	Compliance	Comments
	<ul style="list-style-type: none"> <li>Aboriginal cultural heritage;</li> </ul> <p>(d) be approved by the Director-General of I&amp;I NSW prior to the commencement of extraction of long-wall A5a; and</p> <p>(e) be implemented, following approval, to the satisfaction of the Director-General of I&amp;I NSW.</p>			<p>for Q1-2 2012.</p> <p>(d) SMP Approval for Long-wall A5A, received from DI&amp;I on 27 April 2011.</p> <p>(e) long-wall panel A5A had not commenced prior to the audit.</p>
3/4	<p>The Applicant shall:</p> <p>(a) before carrying out any underground mining that will potentially lead to subsidence within the Werakata State Conservation Area, the Applicant shall prepare (and following approval implement) a Public Safety Management Plan for the Werakata State Conservation Area; and</p> <p>(b) before carrying out any underground mining that will potentially lead to subsidence at Nash Lane, the Applicant shall prepare (and following approval implement) a Public Safety Management Plan for Nash Lane, to the satisfaction of the I&amp;I NSW.</p>	<ul style="list-style-type: none"> <li>Guideline for Subsidence Management Approvals, DPI, 2003</li> <li>Subsidence Management Plan Long-walls A3 to A5, Sep 2008</li> <li>Public Safety Subsidence Management Plan – Long-walls A3 to A5, Jan 2009</li> </ul>	C	<p>This Public Safety Subsidence Management Plan addresses the management of the potential hazards to the public as a result of underground mining in long-walls A3 to A5 in the Greta seam. This plan was prepared in accordance with the DPI-Mineral Resources <i>Guideline for Subsidence Management Approvals dated 2003</i>. The northern portion of the SMP area is located within the Werakata State Conservation Area (SCA). The SCA is located outside of the 20 mm subsidence contour, therefore any potential subsidence impacts are expected to be minimal.</p>
	<b>WATER QUALITY</b>			
	<b>Discharge Limits</b>			
3/5	<p>Except as may be expressly provided by a DECCW Environmental Protection Licence, or in accordance with section 120 of the <i>Protection of the Environment Operations Act 1997</i>, the Applicant shall not discharge any water from the site.</p>		Noted	Refer to EPL 416 table Attachment D.
	<b>Site Water Management Plan</b>			
3/6	<p>Prior to mining commencing in panel A3, or other date agreed by the Director-General, the Applicant shall revise its Site Water Management Plan for the mine, in consultation with the NOW and the DECCW, and to the satisfaction of the Director-General. This plan shall be implemented to the satisfaction of the Director-General, and must include:</p> <p>(a) a Site Water Balance;</p> <p>(b) an Erosion and Sediment Control Plan;</p> <p>(c) a Surface Water Monitoring Program;</p> <p>(d) a Ground Water Monitoring Program; and</p> <p>(e) a Surface and Ground Water Response Plan.</p>	<p>Letter from Planning re Revised Water Management Plan, 13 Nov 2009</p>	C	<p>The Site Water Management was revised in March 2009 in consultation with DECC and approved by the Planning NSW on 13 November 2009. The Site Water Management included:</p> <p>a) a Site Water Balance;</p> <p>(b) an Erosion and Sediment Control Plan;</p> <p>(c) a Surface Water Monitoring Program;</p> <p>(d) a Ground Water Monitoring Program; and</p> <p>(e) a Surface and Ground Water Response Plan</p>
	<b>Site Water Balance</b>			
3/7	<p>The Site Water Balance must:</p> <p>(a) include details of:</p> <ul style="list-style-type: none"> <li>sources of water;</li> </ul>	<p>Site Water Balance, March 2009</p> <p>Letter from Planning re Revised Water Management Plan, 13 Nov 2009</p>	C	<p>(a) Site Water Balance was included as section 2 of the Site Water Management Plan (dated March 2009), and included:</p>

MCoA No.	Condition	Verification	Compliance	Comments
	<ul style="list-style-type: none"> <li>• water use on site;</li> <li>• water management on site;</li> <li>• off-site water transfers or discharges;</li> <li>• reporting procedures; and</li> </ul> (b) describe measures to minimise water use by the development.			<ul style="list-style-type: none"> <li>• section 2.2.1 Inflow Sources</li> <li>• section 2.3 CHPP Water Management System</li> <li>• section 2.2 Underground Mine Water Management System</li> <li>• section 2.4 Surface Water Storage and Pumping System</li> <li>• section 2.5 Reporting Procedures</li> <li>(b) section 2.6 Water Management Initiatives</li> </ul>
	<b>Erosion and Sediment Control</b>			
3/8	The Erosion and Sediment Control Plan must: <ul style="list-style-type: none"> <li>(a) be consistent with the requirements of Landcom's <i>Managing Urban Stormwater: Soils and Construction</i> manual;</li> <li>(b) identify activities that could cause soil erosion and generate sediment;</li> <li>(c) describe measures to minimise soil erosion and the potential for transport of sediment downstream;</li> <li>(d) describe the location, function and capacity of erosion and sediment control structures; and</li> <li>(e) describe what measures would be implemented to maintain the structures over time.</li> </ul>	Erosion and Sediment Control Plan, Mar 2009 Letter from Planning re Revised Water Management Plan, 13 Nov 2009	C	Erosion and Sediment Control Plan is included as section 3 of the Site Water Management Plan (dated March 2009) and approved by Planning NSW on 13 November 2009: <ul style="list-style-type: none"> <li>(a) the Erosion and Sediment Control Plan is consistent with the <i>Managing Urban Stormwater: Soils and Construction</i> manual;</li> <li>(b) Section 3.2 Site Activities and Potential for Soil Erosion</li> <li>(c) Section 3.2.1 Surface Activities outlines the management measures for the erosion and sediment control for the CHPP, waste rock emplacement area and Kitchener site shaft construction.</li> <li>(d) Figures 12, 13 and 14 of the Site Water Management Plan present the location and function of the erosion and sediment control structures.</li> <li>(e) Section 3.3 Maintenance of Erosion and Sediment Controls</li> </ul>
	<b>Surface Water Monitoring</b>			
3/9	The Surface Water Monitoring Program must include: <ul style="list-style-type: none"> <li>(a) surface water assessment criteria;</li> <li>(b) a program to monitor surface water flows and quality (particularly in Black, Cony and Quorrobolong Creeks);</li> <li>(c) a program to monitor water levels in farm dams within the subsidence zone;</li> </ul>	Surface Water Monitoring Program, March 2009 Letter from Planning re Revised Water Management Plan, 13 Nov 2009	C	The Surface Monitoring Program is presented in section 4 of the Site Water Management Plan (dated March 2009) and approved by Planning NSW on 13 November 2009: <ul style="list-style-type: none"> <li>(a) Section 4.1 On Site Monitoring Requirements presents the water assessment criteria specified in EPL</li> </ul>

MCoA No.	Condition	Verification	Compliance	Comments
	(d) a program to monitor channel stability in Quorrobolong and Cony Creeks; (e) reporting procedures; and (f) a protocol for the investigation, notification and mitigation of identified exceedances of the surface water criteria that are related to the development (particularly in respect of acid mine drainage and acid leachate).			condition L3.2. (b) Section 4.2 Other monitoring presents the program for monitoring Quorrobolong Creek (section 4.2.1), Cony Creek (section 4.2.2), Bellbird Creek and Black Creek (section 4.2.3). (c) Section 4.2.5 Farms Dams (d) Section 4.2.6 Channel Stability (e) Section 6 Reporting and Review of Data (f) Section 7 Surface and Groundwater Response Plan
	<b>Groundwater Monitoring</b>			
3/10	The Groundwater Monitoring Program must include: (a) ground water impact assessment criteria; (b) a program to monitor the volume and quality of ground water seeping into the underground mine workings; (c) a program to monitor ground water levels and quality; and (d) a protocol for the investigation, notification and mitigation of identified exceedance of the groundwater impact assessment criteria.	Groundwater Monitoring Program, Mar 2009 Letter from Planning re Revised Water Management Plan, 13 Nov 2009	C	The Groundwater Monitoring Program was prepared as part of the Site Water Management Plan (dated March 2009) and approved by Planning NSW on 13 November 2009: (a) Section 5.2.1 Groundwater Quality and section 5.3 Groundwater Quality Records (b) Section 5.2.1 Groundwater Quality (c) Section 5.2.2 Groundwater Inflows and Water Levels in Underground Workings (d) Section 7 Surface and Groundwater Response Plan
	<b>Surface and Ground Water Response Plan</b>			
3/11	The Surface and Ground Water Response Plan must include: (a) the procedures that would be followed in the event of any exceedance of the surface or groundwater impact assessment criteria, or other identified impact on surface or groundwater; (b) measures to mitigate, remediate and/or compensate any identified impacts (including measures to mitigate and/or compensate potentially affected landowners for any loss of surface water flows in local creeks or farm dams); and (c) disposal/neutralisation contingencies in the event that acid leachate problems emerge after the mine closes.	Surface and Groundwater Response Plan, Mar 2009 Letter from Planning re Revised Water Management Plan, 13 Nov 2009	C	The Surface and Groundwater Response Plan was prepared as part of the Site Management Plan (dated March 2009) and approved by Planning NSW on 13 November 2009: (a) Section 7 - Triggers, Actions and Responsibilities in Table 10. (b) Table 10 - Actions to measure, mitigate and remediate any impacts identified. (c) Table 10 Acid mine drainage following mine closure - contingency measures to reduce the potential for acid mine drainage to be developed prior to mine closure.

MCoA No.	Condition	Verification	Compliance	Comments																																														
	<b>Groundwater Study</b>																																																	
3/12	The Applicant shall, in the event it selects the Cessnock No. 1 Shaft at Kalingo as the ventilation shaft site for the mine, submit a report to the Director-General and the I&I NSW which includes a groundwater study and mine water disposal plan prepared in accordance with the requirements of the I&I NSW and DECCW.		Not triggered	Cessnock No.1 Shaft has not been used as a ventilation shaft for the mine.																																														
	<b>NOISE AND VIBRATION</b>																																																	
	<b>Impact Assessment Criteria</b>																																																	
3/13	<p>The Applicant shall ensure that the noise generated by the Infrastructure Upgrade Area identified in Figure 1.3 of the April 2006 SEE does not exceed the noise impact assessment criteria in Table 2.</p> <p><i>Table 2: Noise impact assessment criteria dB(A)</i></p> <table border="1"> <thead> <tr> <th>Day/Evening/Night</th> <th>Land</th> </tr> </thead> <tbody> <tr> <td>35 LAeq(15 minute)</td> <td>All privately owned land</td> </tr> </tbody> </table> <p>a) Noise from the development is to be measured at the most affected point or within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary, to determine compliance with the LAeq(15 minute) noise limits in the above table. Where it can be demonstrated that direct measurement of noise from the development is impractical, the Department and the DECCW may accept alternative means of determining compliance. The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.</p> <p>b) The noise emission limits identified in the above table apply under meteorological conditions of:</p> <ul style="list-style-type: none"> <li>wind speeds of up to 3 m/s at 10 metres above ground level; or</li> <li>temperature inversion conditions of up to 3°C/100m, and wind speeds of up to 2 m/s at 10 metres above ground level.</li> </ul> <p>However, if the Applicant has a written negotiated noise agreement with any landowner of the land listed in Table 2, and a copy of this agreement has been forwarded to the Department and the DECCW, then the Applicant may exceed the noise limits in Table 2 in accordance with the negotiated noise agreement.</p>	Day/Evening/Night	Land	35 LAeq(15 minute)	All privately owned land	Noise Monitoring Program Austar Coal Mine, Heggies, 22 Jan 2007	C	The attended noise monitoring results to determine noise generated from the Kalingo Infrastructure Area between 2009 and 2011 demonstrate compliance with the noise impact assessment criteria in Schedule 3 condition 13.																																										
Day/Evening/Night	Land																																																	
35 LAeq(15 minute)	All privately owned land																																																	
				<table border="1"> <thead> <tr> <th rowspan="2">Quarter</th> <th rowspan="2">Date (Night-time results)</th> <th colspan="2">Kalingo Infrastructure Area</th> </tr> <tr> <th>NM D</th> <th>NM E</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>25 Mar 2009</td> <td>27</td> <td>16</td> </tr> <tr> <td>2</td> <td>29 Jun 2009</td> <td>32</td> <td>20</td> </tr> <tr> <td>3</td> <td>6 Oct 2009</td> <td>28</td> <td>16</td> </tr> <tr> <td>4</td> <td>14 Dec 2009</td> <td>27</td> <td>17</td> </tr> <tr> <td>1</td> <td>9 Mar 2010</td> <td>27</td> <td>16</td> </tr> <tr> <td>2</td> <td>4 Aug 2010</td> <td>27</td> <td>16</td> </tr> <tr> <td>3</td> <td>13 Sep 2010</td> <td>27</td> <td>16</td> </tr> <tr> <td>4</td> <td>7 Dec 2010</td> <td>27</td> <td>16</td> </tr> <tr> <td>1</td> <td>28 Feb 2011</td> <td>28</td> <td>16</td> </tr> <tr> <td>2</td> <td>28 Jul 2011</td> <td>28</td> <td>16</td> </tr> </tbody> </table>	Quarter	Date (Night-time results)	Kalingo Infrastructure Area		NM D	NM E	1	25 Mar 2009	27	16	2	29 Jun 2009	32	20	3	6 Oct 2009	28	16	4	14 Dec 2009	27	17	1	9 Mar 2010	27	16	2	4 Aug 2010	27	16	3	13 Sep 2010	27	16	4	7 Dec 2010	27	16	1	28 Feb 2011	28	16	2	28 Jul 2011	28	16
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	<b>Continuous Improvement</b>																																																	
3/14	The Applicant shall: (a) implement all reasonable and feasible noise mitigation measures; (b) investigate ways to reduce the noise generated by the development;	Assessment of Noise Impacts Austar Coal Mine, Global Acoustics, Sep 2008	C Ongoing	(a) The cladding on the CHPP has been upgraded to reduce noise emissions from the plant.																																														

MCoA No.	Condition	Verification	Compliance	Comments
	and (c) report on these investigations and the implementation and effectiveness of these measures in the AEMR, to the satisfaction of the Director-General.	CHPP Noise Pollution Reduction Program Status Report, 31 Aug 2010 CHPP Noise Pollution Reduction Program Status Report, 1 Aug 2011		(b) The report prepared by Global Acoustics in 2008 suggested noise control options for the CHPP including: <ul style="list-style-type: none"> <li>• Closing openings in the CHPP building;</li> <li>• Upgrading CHPP wall and roof sheeting;</li> <li>• Installation of silencers on roof CHPP vents;</li> <li>• Construction of a noise bund around the CHPP stockpiles;</li> <li>• Shielding/enclosing all conveyors and conveyor drives.</li> </ul> (c) Six monthly reports on the Noise Pollution Reduction Program have been prepared and submitted to the DECC/OEH/EPA in accordance with EPL condition U1.2.
	<b>Noise Monitoring</b>			
3/15	The Applicant shall implement the approved Noise Monitoring Program for the development to the satisfaction of the Director-General. This program must include quarterly attended noise monitoring and a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this consent.	<ul style="list-style-type: none"> <li>▪ Noise Monitoring Program Austar Coal Mine, Heggies, 22 Jan 2007</li> <li>▪ Letter from DoP re Approval of Noise Monitoring Program, 157 Feb 2007</li> <li>▪ Environmental Noise Monitoring Additional Sites for Quarter 4 2010, Global Acoustics</li> </ul>	C	The Noise Monitoring Program section 8.2 specifies operator attended noise measurements shall be undertaken during the day, evening and night periods on a quarterly basis. The Noise Monitoring Program Section 11 Reporting and Review of Noise Monitoring Data, presents the protocol for evaluating compliance with the noise impact assessment criteria.
	<b>Vibration Monitoring</b>			
3/16	The Applicant shall implement the approved Vibration Monitoring Program for the development to the satisfaction of the D-G. This program must be capable of recording ground vibrations on the surface emanating from underground mining activities.	Vibration Monitoring Program, July 2009	C	The Vibration Monitoring Program for Long-walls A3, A4, and A5 provides a monitoring program and surface locations for the recording ground vibrations emanating from underground mining activities.
	<b>AIR QUALITY</b>			
	<b>Impact Assessment Criteria</b>			
3/17	The Applicant shall ensure that the dust emissions generated by the Infrastructure Upgrade Area identified in Figure 1.3 of the April 2006 SEE do not cause additional exceedances of the air quality impact assessment criteria listed in Tables 3, 4 and 5 at any residence on, or on more than 25 percent of, any privately-owned land.	Air Quality Management and Monitoring Plan Jan 2007	C	In accordance with the Air Quality Management and Monitoring Plan, five (5) static dust gauges and two (2) high volume air samplers were installed in March 2007.

MCoA No.	Condition	Verification	Compliance	Comments																							
	<p><i>Table 3: Long term impact assessment criteria for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Total Suspended Particulate (TSP) matter</td> <td>Annual</td> <td>90 µg/m<sup>3</sup></td> </tr> <tr> <td>Particulate Matter &lt;10µm (PM<sub>10</sub>)</td> <td>Annual</td> <td>30 µg/m<sup>3</sup></td> </tr> </tbody> </table> <p><i>Table 4: Short term impact assessment criterion for particulate matter</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate Matter &lt;10µm (PM<sub>10</sub>)</td> <td>24 hour</td> <td>50 µg/m<sup>3</sup></td> </tr> </tbody> </table> <p><i>Table 5: Long term impact assessment criteria for deposited dust</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Max increase in DD level</th> <th>Max total DD level</th> </tr> </thead> <tbody> <tr> <td>Deposited Dust</td> <td>Annual</td> <td>2g/m<sup>2</sup>/mth</td> <td>4g/m<sup>2</sup>/mth</td> </tr> </tbody> </table>	Pollutant	Averaging Period	Criterion	Total Suspended Particulate (TSP) matter	Annual	90 µg/m <sup>3</sup>	Particulate Matter <10µm (PM <sub>10</sub> )	Annual	30 µg/m <sup>3</sup>	Pollutant	Averaging Period	Criterion	Particulate Matter <10µm (PM <sub>10</sub> )	24 hour	50 µg/m <sup>3</sup>	Pollutant	Averaging Period	Max increase in DD level	Max total DD level	Deposited Dust	Annual	2g/m <sup>2</sup> /mth	4g/m <sup>2</sup> /mth			<p>The project average for calculated Total Suspended Particulates (TSP) is below the annual average criterion of 90µg/m<sup>3</sup> (calculated by multiplying the PM10 by 2.5 in accordance with the method of the AQM&amp;MP).</p> <p>The annual average PM<sub>10</sub> results were less than the long term annual average criterion of 30 µg/m<sup>3</sup> and short term impact assessment criterion of 50 µg/m<sup>3</sup> during the 2008-2011 period.</p> <p>Dust depositional results have been below the annual average criteria of 4 g/m<sup>2</sup>/month for insoluble solids and less than the assessment criteria of a maximum increase of 2g/m<sup>2</sup>/month annual average during the 2009 to 2011 period. (The results for dust deposition gauges contaminated with bird droppings/ insects are left out of the annual average calculation).</p>
Pollutant	Averaging Period	Criterion																									
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	<b>Operating Conditions</b>																										
3/18	<p>The Applicant shall:</p> <p>(a) ensure any visible air pollution generated by the development is assessed regularly, and measures taken to minimise air quality impacts on privately-owned land; and</p> <p>(b) implement all practicable measures to minimise the off-site odour and fume emissions generated by the mine's ventilation system or any spontaneous combustion at the development, to the satisfaction of the Director-General.</p>	<p>Spontaneous Combustion Management Plan, Dec 2009</p> <p>Environmental Inspection Reports</p>	C	<p>(a) Monthly Environmental Inspections are conducted with visual assessment of air quality occurs at No 3 and 4 shafts, washery area, coal storage area, Kitchener SIS, and reject areas (Abedare and East Open Cut).</p> <p>(b) The Spontaneous Combustion Management Plan provides processes for managing spontaneous combustion to reduce the potential for odour emissions from the mine and vent system.</p>																							
	<b>Monitoring</b>																										
3/19	<p>The Applicant shall implement the approved Air Quality Monitoring Program for the development to the satisfaction of the Director-General. This program must include an air quality monitoring protocol for evaluating compliance with the air quality impact assessment criteria in this consent.</p>	<ul style="list-style-type: none"> <li>Air Quality Management and Monitoring Plan, Jan 2007</li> </ul>	C	<p>The Air Quality Management and Monitoring Plan includes a protocol for evaluating compliance with the air quality impact assessment criteria in section 7 - EPL Conditions and section 8 - Air Quality Goals.</p>																							
	<b>METEOROLOGICAL MONITORING</b>																										
3/20	<p>The Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the development in accordance with the</p>	<ul style="list-style-type: none"> <li>Letter from DoP re Approval of Extension of Time to Complete</li> </ul>	C	<p>A meteorological station consistent with the requirements of Approved Methods for Sampling</p>																							

MCoA No.	Condition	Verification	Compliance	Comments
	requirements in Approved Methods for Sampling of Air Pollutants in New South Wales and to the satisfaction of the Director-General.	Works (Meteorological Station), 2 Feb 2009		Air Pollutants and EPL 416 condition M7.2 has been installed at the Austar CHPP site.
	<b>REJECT EMPLACEMENT</b>			
3/21	The Applicant shall undertake reject emplacement in accordance with the current Mining Operations Plan as updated and approved by I&I NSW from time to time. If reject emplacement in Areas 1, 3 and 4 as described in the August 1995 EIS is proposed, the Applicant shall: (a) investigate and report to the I&I NSW on the possibility of disposing all reject into one emplacement area, at least 12 months before reject emplacement into the disturbed mining areas is complete; (b) provide a report on the geotechnical investigations and engineering specifications for emplacement areas 1, 3 and 4 to the I&I NSW, and the Director-General at least 6 months prior to commencement of reject emplacement in these areas; and (c) commence use of emplacement areas 1, 3 and 4 only after consultation with the Council and approval by the I&I NSW.	<ul style="list-style-type: none"> <li>▪ Mining Operations Plan, 2008-2015</li> <li>▪ Letter from DPI re Approval of MOP, 30 Jun 2008</li> </ul>	Not triggered	No emplacement of reject materials has occurred in Areas 1, 3 or 4. (a) Noted (b) Coarse reject emplacement occurs at three main sites approved by DI&I: <ul style="list-style-type: none"> <li>• Abedare Extended Open Cut Void;</li> <li>• East open Cut Void; and</li> <li>• West Open Cut Emplacement Area</li> </ul> (c) The MOP approval granted by DPI on 30 June 2008 included reject emplacement to the Abedare Emplacement and East and West Open Cut Voids.
	<b>FLORA AND FAUNA</b>			
3/22	The Applicant shall: (a) take all reasonable measures to protect native vegetation from damage during construction except where trees, shrubs and other vegetation are removed for approved works; and (b) salvage all useable trees and shrubs for reuse in controlling erosion and/or site rehabilitation.	Clearing, Excavation, Stake or Pile Driving Permits (EMP-P-007)	C	(a) Any disturbance of land or vegetation only occurs after completion of form EMP-P-007 and approval prior to vegetation removal for approved works. (b) Usable trees and shrubs are retained for control of erosion or for habitat establishment.
3/23	The Applicant shall: (a) undertake fauna surveys for bat species at undisturbed sites proposed for reject emplacement as required by the DECCW; (b) report results of any fauna surveys to the DECCW; (c) undertake a monitoring program of riparian vegetation along Quorrobolong and Cony Creeks in the area of long-walls A3 to A5a with particular reference to River Flat Eucalypt Forest EEC; and (d) carry out any necessary ameliorative measures requested by the DECCW in relation to the findings of the fauna surveys and riparian vegetation monitoring program, to the satisfaction of the DECCW.	Ecological Monitoring Program Stage 2 Longwall Mining, Austar Coal Mine Quorrobolong, Umwelt, Mar 2009 2010 Ecological Monitoring Report Stage 2 Longwall Mining, Austar Coal Mine Quorrobolong, Umwelt, Jun 2011 2009 Ecological Monitoring Report Stage 2 Longwall Mining, Austar Coal Mine Quorrobolong, Umwelt, Jun 2010 Letter to OEH re Revised Ecological Monitoring Program Stage 2, 17 Nov 2011	C	(a) No reject emplacement or works have occurred in undisturbed areas of the site. No bat surveys have been required. (b) Fauna surveys conducted opportunistically during the ecological monitoring program site inspections are reported in the Ecological Monitoring Program Reports submitted to OEH. (c) Monitoring of riparian vegetation along Quorrobolong and Cony Creeks in the area of long-walls A3 to A5a have occurred with reference to River Flat Eucalypt Forest EEC and are reported in the annual Ecological Monitoring Program Reports.

MCoA No.	Condition	Verification	Compliance	Comments
				(d) Not activated
	<b>HERITAGE</b>			
	<b>Aboriginal Heritage</b>			
3/24	Six months prior to commencing activities in undisturbed reject emplacement areas to use Cessnock No. 1 Colliery surface facilities, the Applicant shall undertake additional Aboriginal heritage surveys to the satisfaction of the DECCW.		Not triggered	Cessnock No. 1 Colliery surface facilities had not been used at the date of the audit
3/24A	<p>The Applicant shall prepare and implement an Aboriginal Cultural Heritage Management Plan for the Stage 2 mining area to the satisfaction of the Director-General. The plan must:</p> <p>(a) be prepared by a suitably qualified archaeologist in consultation with DECCW and the relevant Aboriginal groups, and be submitted to the Director-General for approval prior to the commencement of extraction of longwall A5a; and</p> <p>(b) include a program/procedures for:</p> <ul style="list-style-type: none"> <li>• salvage and management of Aboriginal sites within the Stage 2 mining area;</li> <li>• monitoring and management of Aboriginal sites within the Stage 2 mining area;</li> <li>• managing the discovery of any new Aboriginal objects or skeletal remains discovered during the project;</li> <li>• undertaking additional archaeological surveys on any areas subject to extensive remediation activities; and</li> <li>• ongoing consultation with and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site.</li> </ul> <p><i>Note: This plan can be incorporated into the Aboriginal Cultural Heritage Management Plan required under the Project Approval for the Stage 3 mining area (08_0111).</i></p>		In progress	Due to be submitted to the Director-General by March 2012 for Long-wall 5A.
	<b>European Heritage</b>			
3/25	<p>The Applicant shall:</p> <p>(a) undertake a Heritage Impact Assessment of the site and prepare a Heritage Management Plan, in consultation with the Council, for the approval of the Heritage Council of NSW prior to recommencing any mining activities at the Cessnock No 1 Colliery surface facilities at Kalingo;</p> <p>(b) make application under section 132 of the <i>Heritage Act 1977</i> for any works proposed to be undertaken on or under Lot 1, DP 87087 and Part Lot 1, DP 69968 County Northumberland, Parish Heddon; and</p>		Not triggered	No works had commenced at the Cessnock No. 1 Colliery area at the date of this audit.

MCoA No.	Condition	Verification	Compliance	Comments
	(c) take all reasonable measures to protect the ring-barked tree referenced in the April 2006 SEE, to the satisfaction of the Director-General.			
	<b>TRAFFIC AND TRANSPORT</b>			
3/26	The Applicant shall: (a) prior to the commencement of operations in reject emplacement areas 3 and 4 (as described in the August 1995 EIS), provide to the satisfaction of the Council and the RTA and at its own cost, a crossing over Wollombi Road (Main Road 218) in the vicinity of these coal waste emplacement areas with respect to type and sight distance in accordance with AS2890-1. Such crossing shall consist of pavement and bitumen seal extending at least 30 metres either side of Main Road 218; and (b) provide a Type BA intersection at the nominated entry to the Cessnock No 1 Colliery site. The intersection type and location shall be determined in conjunction with Council and constructed prior to commencement of operations at the Cessnock No 1 Colliery site.		Not triggered	
3/27	The Applicant shall: (a) prior to 31 December 2008, or as otherwise agreed with the Director-General, undertake upgrade works to the road level crossing at Vincent Street, Kitchener, as recommended in <i>Austar Coal Mine Pty Limited Report on Four Rail Level Crossings in Cessnock LGA Stage 5 Road Safety Audit</i> (GHD March 2007); and (b) prior to 30 June 2009, use its best endeavours to undertake upgrade works at the following road level crossings as recommended in <i>Austar Coal Mine Pty Limited Report on Four Rail Level Crossings in Cessnock LGA Stage 5 Road Safety Audit</i> (GHD March 2007): <ul style="list-style-type: none"> <li>• Cessnock Road, Kearsley;</li> <li>• Neath Road, Neath; and</li> <li>• Mitchell Avenue, Weston,</li> </ul> in consultation with the South Maitland Railway, and to the satisfaction of the Council and the RTA.	<ul style="list-style-type: none"> <li>▪ Letter to DoP re Extension for Completion of Road Level Crossing at Vincent Street Kitchener, 21 Jan 2009</li> <li>▪ Letter from DoP re Approval for Extension of Time to Complete Works, 2 Feb 2009</li> <li>▪ Letter from Cessnock City Council re Notice of Determination for Proposed Works Vincent Street Cessnock, 26 May 2009</li> <li>▪ Meeting Notes with SMR Railway re Cessnock Road, Kearsley; Neath Road, Neath; and Mitchell Avenue, Weston , dated 15 Aug 2008</li> </ul>	Ongoing	<p>(a) A Notice of Determination of the Application under the Roads Act 1993 for proposed works and structures within the public road known as Vincent street Cessnock was received from the Cessnock City Council on 26 May 2009. Austar requested an extension of time for completion of works on the road level crossing at Vincent Street and was granted an extension until 30 June 2009. The works have been completed.</p> <p>(b) Consultation has occurred with South Maitland Railway as recorded in Meeting Minutes August 2008, but no works had been approved or agreed with South Maitland Railway at the date of this audit.</p>
	<b>SCHEDULE 4 ADDITIONAL PROCEDURES FOR SUBSIDENCE MANAGEMENT</b>			
	<b>NOTIFICATION OF LANDOWNERS</b>			
4/1	Prior to 31 June 2008, the Applicant shall notify the landowners of land listed in Table 1 in writing that they have the right to require the Applicant to acquire their land in accordance with condition 1 of	Letter to S&C Duff re Austar Coal Mine Stage 2 Modification, dated 30 June 2008:	C	Letters notifying landowners of the have the right to require the Applicant to acquire their land were sent on 30 June 2008.

MCoA No.	Condition	Verification	Compliance	Comments
	Schedule 3 and conditions 3 to 5 below.	Letter to Bukan Main Pty Ltd re Austar Coal Mine Stage 2 Modification, dated 30 June 2008		
4/2	Prior to 31 June 2008, the Applicant shall notify all landowners whose land may be subject to subsidence as a result of the development about the procedures for rectification and compensation for subsidence effects on residences, farm buildings, agricultural land and other infrastructure under the <i>Mining Act 1992</i> and the <i>Mine Subsidence Compensation Act 1961</i> .	Letter to S&C Duff re Austar Coal Mine Stage 2 Modification, dated 30 June 2008: Letter to Bukan Main Pty Ltd re Austar Coal Mine Stage 2 Modification, dated 30 June 2008 Letter to P McGreevey and P Malou re Austar Coal Mine Stage 2 Modification, dated 30 June 2008 Letter to T&N Duckworth re Austar Coal Mine Stage 2 Modification, dated 30 June 2008	C	Letters notifying landowners of procedures for rectification and compensation for subsidence effects on residences, farm buildings, agricultural land and other infrastructure were sent on 30 June 2008.
	<b>LAND ACQUISITION</b>			
4/3	<p>Within 3 months of receiving a written request from a landowner with acquisition rights as specified in Condition 1 or Condition 2 of Schedule 3, the Applicant shall make a binding written offer to the landowner based on:</p> <p>(a) the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the development the subject of the development application, having regard to the:</p> <ul style="list-style-type: none"> <li>• existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and</li> <li>• presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of measures implemented by the MSB;</li> </ul> <p>(b) the reasonable costs associated with:</p> <ul style="list-style-type: none"> <li>• relocating within the Cessnock local government area, or to any other local government area determined by the Director-General;</li> <li>• obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and</li> </ul>	<p>Letter Report from TEW Property Consultants re Duff property 93 Nash Lane Quorrobolong Valuation, 17 Aug 2009</p> <p>Letter from Austar to DoP re Acquisition of Properties, 17 May 2010</p>	C	Austar notified Department of Planning of the purchase by Austar Coal of properties A04a Bukan Main Pty Ltd 145 Nash Lane Quorrobolong on 31 March 2009, and A03a Duff 93 Nash Lane Quirrobolong on 30 April 2010, following written requests for acquisition.

MCoA No.	Condition	Verification	Compliance	Comments
	<p>(c) reasonable compensation for any disturbance caused by the land acquisition process.</p> <p>However, if at the end of this period, the Applicant and landowner cannot agree on the acquisition price of the land, and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution (see Appendix 1).</p> <p>Upon receiving such a request, the Director-General shall request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer or Fellow of the Institute, to consider submissions from both parties, and determine a fair and reasonable acquisition price for the land, and/or terms upon which the land is to be acquired.</p> <p>Within 14 days of receiving the independent valuer's determination, the Applicant shall make a written offer to purchase the land at a price not less than the independent valuer's determination.</p> <p>If the landowner refuses to accept this offer within 6 months of the date of the Applicant's offer, the Applicant's obligations to acquire the land shall cease, unless otherwise agreed by the Director-General.</p>			
4/4	The Applicant shall bear the costs of any valuation or survey assessment requested by the independent valuer, or the Director-General and the costs of determination referred above.		Noted	
4/5	If the Applicant and landowner agree that only part of the land shall be acquired, then the Applicant shall pay all reasonable costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of the plan at the Office of the Registrar-General.		Noted	
<b>SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORT</b>				
<b>Environmental Management Strategy</b>				
5/1	<p>The Applicant shall implement the approved Environmental Management Strategy for the development to the satisfaction of the Director-General. This Strategy must:</p> <p>(a) provide the strategic context for environmental management of the development;</p> <p>(b) identify the statutory requirements that apply to the development;</p> <p>(c) describe in general how the environmental performance of the development would be monitored and managed during the development;</p> <p>(d) describe the procedures that would be implemented to:</p> <ul style="list-style-type: none"> <li>keep the local community and relevant agencies informed about the operation and environmental performance of the development;</li> </ul>	<p>Environmental Management Strategy, Jun 2010</p> <p>Letter from Planning re Approval of Environmental Management Strategy and Environmental Monitoring Program, 18 Jun 2010</p>	C	<p>The Environmental Management Strategy revised by Austar Coal in June 2010 included:</p> <ul style="list-style-type: none"> <li>(a) Section 2 Purpose of the EMS</li> <li>(b) Section 6 Statutory Obligations</li> <li>(c) Section 12 Monitoring, Review and Improvement</li> <li>(d) Procedures to be implemented: <ul style="list-style-type: none"> <li>Section 10.1 Community Involvement</li> <li>Section 10.2 Complaint Protocol</li> <li>Section 9 Cumulative Impacts</li> <li>Section 11 Incident Response</li> </ul> </li> </ul>

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	<ul style="list-style-type: none"> <li>receive, handle, respond to, and record complaints;</li> <li>resolve any disputes that may arise during the course of the development;</li> <li>respond to any non-compliance;</li> <li>manage any cumulative impacts;</li> <li>respond to emergencies; and</li> </ul> <p>(e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the development.</p>			(e) Section 7.1 Roles and Responsibilities
	<b>Environmental Monitoring Program</b>			
5/2	The Applicant shall undertake monitoring in accordance with the approved Environmental Monitoring Program for the development, to the satisfaction of the Director-General. This program must consolidate the various monitoring requirements of this consent into a single document.	<ul style="list-style-type: none"> <li>Environmental Monitoring Program, Jun 2010</li> <li>Letter from Planning re Approval of Environmental Management Strategy and Environmental Monitoring Program, 18 Jun 2010</li> </ul>	C	The monitoring requirements for the various environmental aspects have been collated into the Environmental Monitoring Program, dated June 2010.
	<b>Environmental Manager</b>			
5/3	Prior to carrying out any development, the Applicant shall employ a suitably qualified and experienced Environmental Manager, whose appointment has been endorsed by the Director-General, for the duration of the development to oversee the environmental performance of the development and compliance with the conditions of this approval.	<ul style="list-style-type: none"> <li>Letter from DoP Approving Appointment of New Environmental Co-ordinator, 1 Jul 2009</li> </ul>	C	The DoP approved the appointment of Mr Gary Mulhearn as Environmental Co-ordinator for Austar Coal on 1 July 2009.
	<b>Incident Reporting</b>			
5/4	<p>Within 7 days of detecting an exceedance of the limits/performance criteria in this consent, the Applicant shall report the exceedance/incident to the Department (and any relevant agency). The report must:</p> <p>(a) describe the date, time, and nature of the exceedance/incident;</p> <p>(b) identify the cause (or likely cause ) of the exceedance/incident;</p> <p>(c) describe what action has been taken to date; and</p> <p>(d) describe the proposed measures to address the exceedance / incident.</p>	<ul style="list-style-type: none"> <li>2010-2011 AEMR Appendix G</li> <li>2009-2010 AEMR Appendix G</li> </ul>	C	Environmental incidents are recorded and actions implemented and reported to the DoP/DP&I/EPA in the Annual Review/AEMR's Appendix G. Reportable incidents are notified in accordance with the EPL condition R2.1 and R2.2, and reported in the Annual Returns to the EPA.
	<b>Annual Reporting</b>			
5/5	<p>Each year, the Applicant shall submit an Annual Environmental Management Report (AEMR) to the Director-General and the relevant agencies. This report must:</p> <p>(a) identify the standards and performance measures that apply to the</p>	<ul style="list-style-type: none"> <li>2010-2011 AEMR</li> <li>2009-2010 AEMR</li> <li>Letter from Planning re 2009-</li> </ul>	C	The Annual Environmental Management Reports/Annual Review have been prepared by Austar Coal and submitted to the Director-General and other relevant agencies:

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	development; (b) describe the works carried out in the last 12 months; (c) describe the works that will be carried out in the next 12 months; (d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years; (e) include a summary of the monitoring results for the development during the past year; (f) include an analysis of these monitoring results against the relevant: <ul style="list-style-type: none"> <li>• impact assessment criteria/limits;</li> <li>• monitoring results from previous years; and</li> <li>• predictions in the EIS and/or SEE;</li> </ul> (g) identify any trends in the monitoring results over the life of the development; (h) identify any non-compliance during the previous year; and (i) describe what actions were, or are being, taken to ensure compliance.	2010 AEMR, 7 Jan 2011		(a) Section 1.3 Consents, Leases and Licences (b) Section 2 Operations during the Reporting Period (c) Section 6 Activities Proposed for the Next AEMR Period (d) Section 4.2 Environmental Complaints (e) to (i) Section 3 Environmental Management and Performance
	<b>Independent Environmental Audit</b>			
5/6	Prior to 31 December 2008, and every 3 years thereafter, unless the Director-General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must: <ul style="list-style-type: none"> <li>(a) be conducted by suitably qualified, experienced, and independent expert/s whose appointment has been endorsed by the Director-General;</li> <li>(b) include consultation with the relevant agencies;</li> <li>(c) assess, in respect of the requirements of this consent and any relevant mining lease or environment protection licence, the environmental performance of the development and its effects on the surrounding environment;</li> <li>(d) assess whether the development is complying with relevant standards and performance measures specified in these approvals (including under any strategy, plan or program required under these approvals) and with other statutory requirements;</li> <li>(e) review the adequacy of strategies, plans or programs required under these approvals; and, if necessary,</li> <li>(f) recommend measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under these approvals.</li> </ul> Note: This audit team must be led by a suitably qualified auditor and include experts in the fields of subsidence, surface water, groundwater,	<ul style="list-style-type: none"> <li>▪ Independent Environmental Audit, GSS Environmental, Apr 2009</li> <li>▪ Letter from Planning re Independent Environmental Audit, 16 Nov 2009</li> <li>▪ Letter from Planning re Approval of Independent Environmental Audit Team, 20 Oct 2011</li> </ul>	C	The Independent Environmental Audit was conducted by GSS Environmental Pty Ltd with site inspections on the 3 and 4 December 2008 and the report was submitted to Austar Coal in April 2009. <ul style="list-style-type: none"> <li>(a) The Independent Environmental Audit Team was approved by Planning on 20 October 2011</li> <li>(b) Consultation occurred with the EPA/DP&amp;I/DII in December 2011</li> <li>(c) The site inspections for the 2011 audit were conducted on 2 November 2011 (Surface water/ erosion and sediment control/rehabilitation and general site inspection) and the 29 November 2011 (subsidence and groundwater). The Independent Environmental Audit Report was submitted to Austar Coal in January 2012.</li> <li>(d) Audit of documentation for compliance was conducted for MCoA/EPL/ML</li> <li>(e) Adequacy of strategies, plans or programs was conducted and reported.</li> </ul>

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MCoA No.	Condition	Verification	Compliance	Comments
	<i>noise and air quality.</i>			(f) Recommendations were provided where relevant to improve the environmental performance of the development
5/7	Within 6 weeks of completing this audit, or as otherwise agreed by the Director-General, the Applicant shall submit a copy of the audit report to the Director-General with a response to any recommendations contained in the audit report.	<ul style="list-style-type: none"> <li>Letter to Planning re Independent Environmental Audit, 7 May 2009</li> </ul>	C	Austar provided responses to Planning in relation to actions related to the recommendations made in Table 7 of the Independent Environmental Audit Report.
5/8	Within 3 months of submitting the audit report to the Director-General, the Applicant shall review and if necessary revise the strategies/ plans/programs required under this consent, to the satisfaction of the Director-General.		Noted	
	<b>Community Consultative Committee</b>			
5/9	<p>The Applicant shall establish and maintain a Community Consultative Committee (CCC) to oversee the ongoing environmental performance of the development. The CCC shall:</p> <p>(a) be comprised of:</p> <ul style="list-style-type: none"> <li>2 representatives from the Applicant, including the person responsible for environmental management at the mine;</li> <li>at least 1 representative from Council; and</li> <li>at least 3 representatives from the local community, whose appointment has been approved by the Director-General in consultation with the Council. The local community representative positions will be re-appointed every two years unless otherwise agreed by the Director-General;</li> </ul> <p>(b) be chaired by an independent chairperson, or council representative, whose appointment has been approved by the Director-General;</p> <p>(c) meet at least 4 times a year, or as otherwise approved by the Director-General;</p> <p>(d) review the Applicant's performance with respect to environmental management and community relations;</p> <p>(e) undertake regular inspections of the mine operations;</p> <p>(f) review community concerns or complaints about the mine operations, and the Applicant's complaints handling procedures; and</p> <p>(g) provide advice to:</p> <ul style="list-style-type: none"> <li>the Applicant on improved environmental management and community relations, including the provision of information to the community and the identification of community initiatives to which the Applicant could contribute;</li> <li>the Department regarding the conditions of this consent; and</li> </ul>	<ul style="list-style-type: none"> <li>Letter from Planning reappointment of Community Consultative Committee Members, 15 Dec 2009</li> <li>CCC Meeting Minutes 14 Nov 2011</li> <li>CCC Meeting Minutes 8 Aug 2011</li> <li>CCC Meeting Minutes 26 Aug 2010</li> </ul>	C	<p>(a)The Community Consultative Committee (CCC) members were approved by Planning on 15 Dec 2009 and CCC Meetings were held quarterly. The members of the CCC are:</p> <p><b>Community Representatives:</b>            Louise Dews            David Holmes            Peter Sturrock            Alan Smith</p> <p><b>Cessnock City Council Representative:</b>            Cr Jeff Maybury</p> <p><b>Austar Representatives:</b>            Gary Mulhearn Environment &amp; Community Manager            David MacLean            Adrian Moodie</p> <p>(b) <b>Chairman</b> - Hon Garry West</p> <p>(c) CCC Meetings were held quarterly.</p> <p>(d) the CCC Meetings are provided with a review of environmental performance and community relation issues.</p> <p>(f)Community complaints are presented and reviewed by the CCC.</p> <p>(g)the CCC members discuss the performance of the mine in relation to community relations and approval conditions.</p> <p>(h)the CCC Meetings are run formally by the</p>

MCoA No.	Condition	Verification	Compliance	Comments
	<ul style="list-style-type: none"> <li>the general community on the performance of the mine with respect to environmental management and community relations; and</li> </ul> <p>(h) be operated generally in accordance with any guidelines the Department may publish in regard to the operation of Community Consultative Committees for mining developments.</p> <p><i>Note: The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.</i></p>			Chairman in accordance with CCC's for mining projects
5/10	<p>The Applicant shall fulfil all responsibilities set out for companies in the CCC guidelines, including at its own expense:</p> <p>(a) ensuring that 2 of its representatives attend CCC meetings;</p> <p>(b) regularly providing the CCC with reports and other information on the environmental performance and management of the development;</p> <p>(c) providing meeting facilities for the CCC, if the CCC requests;</p> <p>(d) arranging site inspections for the CCC, if the CCC requests;</p> <p>(e) taking minutes of the CCC meetings, if the CCC requests;</p> <p>(f) making these minutes available to the public; and</p> <p>(g) responding to any advice or recommendations the CCC may have in relation to the environmental management or community relations.</p>	<ul style="list-style-type: none"> <li>CCC Meeting Minutes 14 Nov 2011</li> <li>CCC Meeting Minutes 8 Aug 2011</li> <li>CCC Meeting Minutes 26 Aug 2010</li> </ul>	C	<p>(a) two representatives of Austar Coal attend each CCC Meeting</p> <p>(b) reporting on environmental performance and management is presented at each meeting</p> <p>(c) CCC Meetings are held in the Board Room at the Austar Coal Mine Main Office</p> <p>(d) Site inspections are arranged if requested</p> <p>(e) Minutes of the CCC Meeting are prepared and distributed by the Austar Environment and Community Manager</p> <p>(f) Minutes are made available on the Austar website</p> <p>(g) Austar respond to the CCC on matters raised from previous meetings.</p>
5/11	<p>The Applicant shall fund the payment of invoices received to facilitate the general purposes and functioning of the CCC up to \$2,000 each year until the cessation of operations under the consent.</p> <p><i>Note. The contribution is to be indexed according to the CPI at the time of each payment. The first payment shall be made by the date of the first CCC meeting.</i></p>		C	Austar Coal provide a venue for the CCC Meetings, accommodation and expenses for the Chairman as required to attend meetings and any other expense for the operation of the CCC.
	<b>Access to Information</b>			
5/12	<p>By 30 April 2008, and thereafter within 3 months of the approval of any strategy/plan/program required under this consent (or any subsequent revision of these strategies/plans/programs), or the completion of the audits or AEMRs required under this consent, the Applicant shall:</p> <p>(a) provide a copy of the relevant document/s to the relevant agencies and CCC; and</p>	<a href="http://www.austarcoal.com.au/Community">www.austarcoal.com.au/Community</a>	C	<p>(a) Copies of strategy/plan/programs/audits/AEMR's are provided to the relevant authorities and CCC, and</p> <p>(b) the documentation is placed on the Austar Coal website.</p>

MCoA No.	Condition	Verification	Compliance	Comments
	(b) put a copy of the document/s on its website.			
5/13	By 30 April 2008, and thereafter during the life of the development, the Applicant shall: (a) include a copy of this consent, as may be modified from time to time, on its website; (b) provide a full summary of monitoring results required under this consent on its website; and (c) update this summary on a regular basis (at least every 3 months).	<a href="http://www.austarcoal.com.au/Community">www.austarcoal.com.au/Community</a> and <a href="http://www.austarcoal.com.au/Environment">www.austarcoal.com.au/Environment</a>	C	(a) copy of consents and modifications are provided on the Austar website. (b) Summary of monitoring/ AEMR's are placed on the website. (c) Documentation on the website is updated as required.

## Attachment AA

### Subsidence Management Plan

#### Additional Approval Conditions – Long-walls A3 to A5 and A5A

No.	Condition	Verification	Compliance	Comments
	<b>Limits on Approval</b>			
1	The Leaseholder must carry out the activity strictly in accordance with SMP Approved Plan.	<ul style="list-style-type: none"> <li>Subsidence Management Plan, Long-walls A3 to A5, Sep 2008</li> </ul>	Noted	The Austar mine operations have been conducted in accordance with the approved SMP.
2	The Leaseholder must carry out the activity generally in accordance with the SMP subject to the conditions of this Approval. In the event of any inconsistency between the conditions of this Approval and the SMP, the conditions of this Approval prevail to the extent of any inconsistency.	<ul style="list-style-type: none"> <li>Subsidence Management Plan, Long-walls A3 to A5, Sep 2008</li> <li>Subsidence Monitoring Strategy, Long-wall Panels A3 to A5, 2008</li> </ul>	Noted	
3	Where this Approval requires actions to be undertaken by the lease holder, including remediation of subsidence impacts, the obligation continues until the Director-General notifies the Leaseholder that the action has been completed to his or her satisfaction.		Noted	
4	The Director-General may vary the conditions of this Approval by notice in writing.		Noted	
5	The Director-General may, at his or her discretion, suspend or revoke this Approval if: (a) the Leaseholder fails to adhere to any condition of the Approval; or (b) the head of any other government authority requests suspension or revocation on the basis of the Leaseholder's non-compliance, or potential non-compliance, with legislation		Noted	

No.	Condition	Verification	Compliance	Comments
	administered by that agency in relation to this Approval.			
	<b>General Obligation to Minimise Harm to the Environment</b>			
6	The Leaseholder must implement the SMP (as amended by the conditions of this Approval) and carry out any additional practicable measures necessary to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the activity.		Noted	
	<b>Notification of Approval</b>			
7	The Proponent must give notice of this SMP approval within 30 days to the DoP, DECCW-NOW, DECCW, Council, MSB, the local Aboriginal Land Council/s, the owners/operators of any infrastructure, and landowners in the application area and any other relevant government agencies or stakeholders that the Director-General's approval of the SMP has been granted. <i>Note: Relevant government authorities and stakeholders are listed in the Guideline for Application for Subsidence Management Approvals.</i>		C	Notice of the SMP was provided to the DoP, DECCW, Cessnock City Council, MSB, and the local Aboriginal Land Council in February 2009.
	<b>Implementation of Approval</b>			
8	Any plans, programmes, reports or strategies required as a condition of this Approval must be developed having regard to any guidelines adopted by the Director-General for the purpose of subsidence management and mine rehabilitation.		Noted	
9	The Leaseholder must implement any plan, programme or strategy required and approved pursuant to this Approval. <i>Note: The Leaseholder may, at any time, submit an amended plan, programme or strategy for approval. Once approved, the amended plan, programme or strategy must be implemented, however, up until the date of approval, the Leaseholder must continue to implement the previously approved plan, programme or strategy.</i>		Noted	
10	Any modifications to plans, programmes or strategies already approved for the purposes of the conditions of this Approval must have regard to the matters set out in condition 8. Amended plans, programmes or strategies submitted for approval must be accompanied by all relevant supporting documentation to assist in the assessment of the amendment or modification. <i>Note: This condition relates to plans, programmes and strategies required by the conditions of this Approval it does not apply to variations to the SMP or the SMP Approved Plan which must be done in accordance with the requirements of the Mining Act, the conditions of title and the variation procedures identified in the SMP guidelines</i>		Noted	
	<b>Directions</b>			

No.	Condition	Verification	Compliance	Comments
11	<p>The Leaseholder must comply with any written direction given by the Director-General, Director Environmental Sustainability, Director Mine Safety Operations or Principal Subsidence Engineer relating to:</p> <ul style="list-style-type: none"> <li>(a) the implementation of any aspect of the SMP or an approved plan, programme or strategy;</li> <li>(b) assessing or reviewing the adequacy, effectiveness, or coverage of any approved plan, programme or strategy or any aspect of the SMP;</li> <li>(c) the type, timing and/or location of monitoring of baseline conditions, subsidence or subsidence impacts;</li> <li>(d) any reporting requirement under this Approval;</li> <li>(e) the carrying out of works to address subsidence impacts; and/or</li> <li>(f) the carrying out of any studies or investigations related to subsidence or subsidence impacts and the reporting of any findings or conclusions.</li> </ul> <p>The obligations under this condition prevail over any other obligation under this Approval.</p> <p><i>Note: Compliance with a written direction will not operate as a defence to a breach of any obligation under this Approval that occurred prior to the Direction being given.</i></p>		Noted	
	<b>Subsidence Monitoring Programme</b>			
12	<p>The Leaseholder must submit to the Principal Subsidence Engineer for approval a subsidence monitoring programme for the longwall panels which are the subject of this Approval. This programme must include:</p> <ul style="list-style-type: none"> <li>• inspection regimes;</li> <li>• layout of monitoring points;</li> <li>• parameters to be measured;</li> <li>• monitoring methods and accuracy;</li> <li>• timing and frequencies of surveys and inspections;</li> <li>• recording and reporting of monitoring results.</li> </ul> <p>The Leaseholder must not commence longwall mining prior to the subsidence monitoring programme being approved.</p> <p><i>Note: The programme should be submitted to the Principal Subsidence Engineer at least 30 days prior to the expected commencement of operations to enable sufficient time for the assessment of the programme. The Principal Subsidence Engineer may require the provision of further information to assist in the assessment of the programme or a resubmission of the programme if it is considered inadequate. Complex issues or the need for additional information or a resubmission of the programme may require a longer assessment</i></p>	Subsidence Management Plan, Long-walls A3 to A5, Sep 2008 Subsidence Monitoring Strategy, Long-wall Panels A3 to A5, 2008	C	The Subsidence Management Plan for the long-walls A3 to A5 and A5A include references to monitoring of the many aspects of underground mining. The Subsidence Monitoring Strategy provides the detail for the monitoring of the areas that would potentially be affected by subsidence and identifies the dwellings that would be subject to monitoring.

No.	Condition	Verification	Compliance	Comments
	<i>period.</i>			
	<b>Environmental Management Plan</b>			
13	<i>Note — Environmental Management Plan condition is not required as the Environmental Management is covered by the Department of Planning Development Consent (DA No. 29/95) and subsequent modifications.</i>		Noted	Refer to DA 29/95 MCoA Schedule 3 and Project Approval 08-0111 Schedule 4.
	<b>Infrastructure and Property Management</b>			
14	<i>Note — Infrastructure and Property Management condition is not required as Infrastructure and Property Management is covered by the Department of Planning Development Consent (DA No. 29/95) and subsequent modifications.</i>		Noted	Refer to DA 29/95 MCoA Schedule 4 and Project Approval 08-0111 Schedule 5.
	<b>Public Safety</b>			
15	<p>The Leaseholder must prepare and implement a public safety management plan to ensure public safety in any structures, houses and surface areas that may be affected by subsidence, to the satisfaction of the Director, Mine Safety Operations.</p> <p>The plan must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>(a) identification of houses which are hazardous or could become hazardous due to subsidence impacts;</li> <li>(b) regular monitoring of areas or infrastructure/structures posing safety risks measures to prevent, mitigate and promptly remediate hazards and safety risks referred to in a) and b) above;</li> <li>(c) erection of warning signs;</li> <li>(d) entry restrictions;</li> <li>(e) backfilling of dangerous surface cracks;</li> <li>(f) securing of unstable built structures or rockmass where required and appropriate; an</li> <li>(g) provision of timely notification of proposed mining progress to the community and any other relevant stakeholders where management of public safety is required.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Public Safety Management Plan for Long-walls A3 to A5, Jan 2009</li> </ul>	C	<p>A Public Safety Management Plan was prepared in 2009 by Austar Coal for Long-walls A3 to A5:</p> <ul style="list-style-type: none"> <li>(a) section 6.7 Impacts on Buildings</li> <li>(b) section 7 Table 7.1 Surface Safety Management Controls</li> <li>(c) section 8.2 Other Public Safety Issues includes signage</li> <li>(d) section 8 Remedial Actions</li> <li>(e) section 7 Management Controls</li> <li>(f) section 7.1 Notifications</li> </ul>
	<b>Incident and Ongoing Management Reporting</b>			
16	<p>The Leaseholder must, within 24 hours of becoming aware of the occurrence, notify:</p> <ul style="list-style-type: none"> <li>i. the Principal Subsidence Engineer;</li> <li>ii. Director, Environmental Sustainability;</li> <li>iii. The Mine Subsidence Board;</li> <li>iv. Department of Environment Climate Change &amp; Water — NSW Office of Water;</li> </ul>		C Ongoing	Any occurrence encountered is notified to the nominated personnel by the Austar Coal Mine Technical Services Manager.

No.	Condition	Verification	Compliance	Comments
	<p>v. the operators of all infrastructure that may be affected by subsidence arising from the extraction of the subject longwall; and</p> <p>vi. other relevant stakeholders and Government Agency with a regulatory role if they request such notification, of the following:</p> <p>(a) Any significant unpredicted and/or higher-than-predicted subsidence and/or abnormalities in the development of subsidence;</p> <p>(b) Any exceedance of predicted impacts on groundwater resources and/or the natural environment that may have been caused (whether partly or wholly) by subsidence;</p> <p>(c) Any observed subsidence impacts adverse to the serviceability and/or safety of infrastructure and other built structures that may be affected by longwall mining;</p> <p>(d) Any significant subsidence-induced cracking and/or ground deformations observed in any surface areas within the SMP application area;</p> <p><i>Note: Under Condition 11, the Leaseholder can be directed to, among other things, prepare a report on an incident reported under this condition. A report on the details of the incident, including likely or known causes, response action and proposed response measures will generally be required for incidents that involve material property or environmental damage or have the potential to cause such damage.</i></p>			
	<p><b>Status Report</b></p>			
<p>17</p>	<p>The Leaseholder must prepare and maintain a Subsidence Management Status Report which must include but not be limited to:</p> <p>(a) the current face position of the panel being extracted;</p> <p>(b) a summary of any subsidence management actions undertaken by the Leaseholder in the period subsequent to the last regular submission of the Status Report;</p> <p>(c) a summary of any comments, advice and feedback from consultation with stakeholders in relation to the implementation of this Approval (including the preparation, implementation and review of plans, programmes, reports or strategies required by this approval) undertaken or received in the period subsequent to the last regular submission of the Status Report and a summary of the Leaseholder's response to the comments, advice and feedback given by the stakeholders;</p> <p>(d) a summary of the observed and/or reported subsidence impacts, incidents, service difficulties, community complaints, and any other relevant information reported to the Leaseholder in the period subsequent to the last regular submission of the</p>	<p>Letters to Subsidence Engineer re Progress of Long-wall and Results of Monitoring for September 2011, dated 19 Oct 2011</p>	<p>C Ongoing</p>	<p>Progress reports on subsidence are prepared by Austar Coal for the long-walls and submitted to DI&amp;I.</p> <p>The progress reports provide:</p> <ul style="list-style-type: none"> <li>Long-wall progress for the past month</li> <li>Monitoring and inspection results included graphs of subsidence for the long-walls, peak vibration events &gt;1mm/s, mining activities for the next month, subsidence management actions (if required) and plans of the long-wall mining progress for the month.</li> </ul>

No.	Condition	Verification	Compliance	Comments
	<p>Status Report and a summary of the Leaseholder's response to these impacts, incidents, service difficulties and complaints;</p> <p>(e) a summary of subsidence development based on monitoring information compared with any defined triggers and/or the predicted subsidence to facilitate early detection of potential subsidence impacts;</p> <p>(f) a summary of the adequacy, quality and effectiveness of the implemented management processes based on the monitoring and consultation information summarised above; and</p> <p>(g) a statement regarding any additional and/or outstanding management actions to be undertaken or the need for early responses or emergency procedures to ensure adequate management of any potential subsidence impacts due to longwall mining.</p> <p>The Subsidence Management Status Report must be updated at least every 14 days to reflect any changes in the information required to be included in the Report. The Status Report must be regularly submitted to the Principal Subsidence Engineer, the Department of Environment Climate Change &amp; Water — NSW Office of Water and each operator of infrastructure that may be affected by subsidence arising from the extraction of the subject longwall, every four (4) months from the date of this Approval. The Status Report (as updated from time to time) must be provided, upon request, to the Mine Subsidence Board, the Director of Environmental Sustainability, the Principal Subsidence Engineer, owners/operators of any infrastructure within the application area and any other relevant stakeholders.</p>			
	<b>End of Panel Report</b>			
18	<p>Within 4 months of the completion of a Longwall, an end of panel report must be submitted to the Director-General. The end of panel report must:</p> <p>(a) include a summary of the subsidence and environmental monitoring results.</p> <p>(b) include an analysis of these monitoring results against the relevant;</p> <p>(c) impact assessment criteria;</p> <p>(d) monitoring results from previous panels; and</p> <p>(e) predictions in the SMP</p> <p>(f) identify any trends in the monitoring results over the life of the activity; and</p> <p>(g) describe what actions were taken to ensure adequate management of any potential subsidence impacts due to longwall mining.</p>	<ul style="list-style-type: none"> <li>▪ Stage 2 End of Panel Report for Longwall A4, 14 Sep 2011</li> </ul>	C Ongoing	<p>The End of Panel Report for Stage 2 Long-wall A4 was submitted to the D-G on 14 September 2011 and included:</p> <p>Appendix 1: Surface subsidence monitoring program;</p> <p>Appendix 2: Public safety monitoring and management plan;</p> <p>Appendix 3: Vibration monitoring plan</p> <p>Appendix 4: Groundwater monitoring as per the Site Water Management Plan (SWMP)</p> <p>Appendix 5: Surface water monitoring per the SWMP</p> <p>Appendix 6: Ecological monitoring per the Stage 2 Ecological Monitoring Program</p>
	<b>Access to Information</b>			

No.	Condition	Verification	Compliance	Comments
19	<p>Within 3 months of the submission of an End of Panel Report (as required by Condition 18) or the approval of a plan, programme or strategy required under this Approval or the SMP (or any subsequent revision of these documents), the Leaseholder must, to the satisfaction of the Director-General:</p> <ul style="list-style-type: none"> <li>(a) provide a copy of these documents to all relevant agencies;</li> <li>(b) ensure that a copy of the relevant documents is made publicly available at the Leaseholder's regional office; and</li> <li>(c) put a copy of the relevant document/s on the Leaseholder's website.</li> </ul> <p><i>Note: Relevant agencies currently include MSB, DECCW, DECCW-NOW and DoP.</i></p>	2010-2011 AEMR Appendix E	C	<ul style="list-style-type: none"> <li>(a) A copy of the End of Panel Report for Long-wall A4 was appended to the AEMR for Austar Coal submitted on 29 November 2011 to all the relevant authorities (DP&amp;I, OEH, MSB).</li> <li>(b) A copy of the report is available at the Austar Coal office.</li> <li>(c) The End of Panel Report appended to the AEMR is available on the Austar Coal website.</li> </ul>
	<b>Survey Marks</b>			
20	At the completion of subsidence, or otherwise as required by the Land and Property Management Authority, the functionality of any survey marks affected by subsidence must be fully restored to the satisfaction of the Land and Property Management Authority.		Noted	
	<b>Water Supply</b>			
21	In the event of interruptions to potable water supplies (water quality and/or quantity) due to subsidence impacts on water supply systems and/or sources caused by longwall mining, the Leaseholder must provide, without delay, water supplies of equivalent quality and quantity to locations convenient to those affected within the SMP Application Area until such time that the affected water supply systems and/or sources are restored.		Noted	

## Attachment B

### Project Approval Stage 3 - No. 08-111

#### Conditions of Approval

**Note: Stage 3 operations had not commenced at the date of this audit.**

MCoA No.	Condition	Verification	Compliance	Comments
	<b>SCHEDULE 2 ADMINISTRATIVE CONDITIONS</b>			
	<b>OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT</b>			
2/1	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of the project.		Noted	
	<b>TERMS OF APPROVAL</b>			
2/2	The Applicant shall carry out the development generally in accordance with the: <ul style="list-style-type: none"> <li>(a) EA; and</li> <li>(b) conditions of this approval.</li> </ul> <i>Notes: The general layout of the project is shown in Appendix 2; The statement of commitments is reproduced in Appendix 3.</i>		Ongoing	The Stage 2 MOD4 and Stage 3 second workings mining activities had not commenced at the date of this audit. The surface infrastructure shaft works have commenced at the Kitchener site, in accordance with the EA.
2/3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.		Noted	
2/4	The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of: <ul style="list-style-type: none"> <li>• any strategies, plans, programs, reviews, audits, or correspondence that are submitted in accordance with this approval; and</li> <li>• the implementation of any actions or measures contained in these documents.</li> </ul>		Noted	
	<b>LIMITS ON APPROVAL</b>			
2/5	Mining operations in Stage 3 may take place until 31 December 2030. <i>Note: Under this approval, the Proponent is required to rehabilitate the site and perform additional undertakings to the satisfaction of the Director-General and DII. Consequently, this approval will continue to apply in all other respects other than the right to conduct mining operations until the site has been properly rehabilitated.</i>		Noted	
2/6	The Proponent shall not extract more than 3.6 million tonnes of ROM coal a year from the Austar Mine Complex.		C	Total ROM coal extracted by the Austar Mine during the 2008-2011 period did not exceed the

MCoA No.	Condition	Verification	Compliance	Comments								
				approved ROM tonnage. <table border="1"> <thead> <tr> <th>Period</th> <th>ROM Tonnage</th> </tr> </thead> <tbody> <tr> <td>2010-2011</td> <td>1,847,148 tpa</td> </tr> <tr> <td>2009-2010</td> <td>1,724,466 tpa</td> </tr> <tr> <td>2008-2009</td> <td>1,537,132 tpa</td> </tr> </tbody> </table>	Period	ROM Tonnage	2010-2011	1,847,148 tpa	2009-2010	1,724,466 tpa	2008-2009	1,537,132 tpa
Period	ROM Tonnage											
2010-2011	1,847,148 tpa											
2009-2010	1,724,466 tpa											
2008-2009	1,537,132 tpa											
2/7	The Proponent may transport a maximum of 60,000 tonnes of coal (including coal reject) per calendar year from the mine complex by road. All other coal shall be transported from the site by rail.		C	Product coal transported from the Austar Mine by road was: <table border="1"> <thead> <tr> <th>Period</th> <th>Road Transport</th> </tr> </thead> <tbody> <tr> <td>2010-2011</td> <td>Nil</td> </tr> <tr> <td>2009-2010</td> <td>14,558 tpa</td> </tr> <tr> <td>2008-2009</td> <td>28,816 tpa</td> </tr> </tbody> </table>	Period	Road Transport	2010-2011	Nil	2009-2010	14,558 tpa	2008-2009	28,816 tpa
Period	Road Transport											
2010-2011	Nil											
2009-2010	14,558 tpa											
2008-2009	28,816 tpa											
	<b>STRUCTURAL ADEQUACY</b>											
2/8	The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structure, are constructed in accordance with: <ul style="list-style-type: none"> <li>the relevant requirements of the BCA; and</li> <li>any additional requirements of the MSB in areas where subsidence effects are likely to occur.</li> </ul> <p><i>Notes: Under Part 4A of the EP&amp;A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works; Part 8 of the EP&amp;A Regulation sets out the requirements for the certification of the project.</i></p>		C	A construction and operational approve for a septic tank system was obtained from the Cessnock City Council.  Other demountable buildings placed on the Austar Coal site adjacent to the Administration Building, do not require approvals as part of the mine facilities, under the <i>Mining Act 1992</i> .								
	<b>DEMOLITION</b>											
2/9	The Proponent shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.		Notactivated									
	<b>PROTECTION OF PUBLIC INFRASTRUCTURE</b>											
2/10	Unless a claim under the Mine Subsidence Compensation Act 1961 can be made, or where the Proponent and the applicable authority agree otherwise, the Proponent shall: <ol style="list-style-type: none"> <li>repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; or</li> <li>relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.</li> </ol>		Not Not activated									
	<b>OPERATION OF PLANT AND EQUIPMENT</b>											

MCoA No.	Condition	Verification	Compliance	Comments								
2/11	The Proponent shall ensure that all plant and equipment used at the site is: <ul style="list-style-type: none"> <li>maintained in a proper and efficient condition; and</li> <li>operated in a proper and efficient manner.</li> </ul>		Noted									
	<b>STRATEGIES, PLANS AND PROGRAMS</b>											
2/12	With the approval of the Director-General, the Proponent may submit any strategies, plans or programs required by this approval on a progressive basis.		Noted	Management Plans developed for second workings were approved by Planning on 13 November 2009: <ul style="list-style-type: none"> <li>Site Water Management Plan</li> <li>Site Water Balance</li> <li>Erosion and Sediment Control Plan</li> <li>Surface Water Monitoring Program</li> <li>Groundwater Monitoring Program</li> <li>Surface and Groundwater Response Plan</li> </ul>								
2/13	With the approval of the Director-General, the Proponent may integrate any strategies, plans, programs, reviews, audits or committees required by this approval with any similar requirement under another development consent or approval relating to the Austar Mine Complex.	<ul style="list-style-type: none"> <li>Letter from Planning re Revised Site Water Management Plan, 13 Nov 2009</li> </ul>	C	Implementation of these Plans had not been triggered for Stage 3 works on the date of this audit as secondary workings had not commenced.								
	<b>SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS — MINING</b>											
	<b>KEY PERFORMANCE MEASURES</b>											
3/1	<p>The Proponent shall ensure that the project does not cause any exceedance of the key performance measures in Table 1.</p> <p><i>Table 1: Subsidence Impact Performance Measures Water Resources and Flooding</i></p> <table border="1"> <thead> <tr> <th colspan="2"><b>Water Resources and Flooding</b></th> </tr> </thead> <tbody> <tr> <td>Flooding</td> <td>No significant increased risk on built features, unless the landowner agrees otherwise in writing</td> </tr> <tr> <th colspan="2"><b>Built Features</b></th> </tr> <tr> <td>Built Features</td> <td>Safe, servicable and repairable unless the owner agrees otherwise in writing.</td> </tr> </tbody> </table> <p><i>Note: The Proponent will be required to define more detailed performance indicators for these performance measures in the various management plans that are required under this approval (see condition 4 below).</i></p>	<b>Water Resources and Flooding</b>		Flooding	No significant increased risk on built features, unless the landowner agrees otherwise in writing	<b>Built Features</b>		Built Features	Safe, servicable and repairable unless the owner agrees otherwise in writing.		Noted	Second workings mining activities had not commenced in the Stage 3 area at the date of this audit.
<b>Water Resources and Flooding</b>												
Flooding	No significant increased risk on built features, unless the landowner agrees otherwise in writing											
<b>Built Features</b>												
Built Features	Safe, servicable and repairable unless the owner agrees otherwise in writing.											
	<b>ACQUISITION OF AFFECTED RESIDENCES</b>											
3/2	If the subsidence generated by the project results in damage to any residence on privately-owned land that in the opinion of the MSB exceeds its safe, serviceable and repairable criteria, the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in		Noted Not yet activated	Second workings mining activities had not commenced in the Stage 3 area at the date of this audit.								

MCoA No.	Condition	Verification	Compliance	Comments
	<p>accordance with the procedures in conditions 5 to 7 of schedule 5. However, the Proponent does not have to act on any such request if:</p> <ul style="list-style-type: none"> <li>the Proponent has a current, written negotiated agreement with the landowner in regard to the management of subsidence-related impacts beyond safe, serviceable and repairable criteria, and a copy of this agreement has been forwarded to the Department by the Proponent; or</li> <li>the landowner has agreed to the MSB purchasing the land or otherwise compensating the impacts under the Mine Subsidence Compensation Act 1961.</li> </ul> <p>If the landowner has not made a written request for acquisition within 12 months of the date of being notified of the criteria exceedance and his/her acquisition rights by the Proponent, then the Proponent's obligations to acquire the land shall cease, unless the Director-General determines otherwise.</p>			
	<b>FIRST WORKINGS</b>			
3/3	The Proponent shall not carry out first workings in the mining area that are not consistent with the approved mine plan without the written approval of the Director-General.	<ul style="list-style-type: none"> <li>Letter to Planning re Modification to First Workings, 21 Jul 2010</li> <li>Letter from Planning re First Workings, 13 Jan 2010</li> <li>Figure 3 Revised First Workings</li> <li>Plan 4A Mining Activities 2010-2011</li> </ul>	C	A request to modify the first workings layout for Stage 3 was granted by NSW Planning on 13 August 2010 in relation to Figure 3 submitted with the request.
	<b>SECOND WORKINGS</b>			
	<b>Extraction Plan</b>			
3/4	<p>The Proponent shall prepare and implement an Extraction Plan for all second workings in the mining area to the satisfaction of the Director-General. This plan must:</p> <ol style="list-style-type: none"> <li>be prepared by a team of suitably qualified and experienced experts whose appointment has been endorsed by the Director-General, and be approved by the Director-General prior to the commencement of any second workings covered by the Extraction Plan;</li> <li>include a detailed plan for the second workings, which has been prepared to the satisfaction of DII, and provides for adaptive management;</li> <li>include detailed plans of any associated surface construction works;</li> <li>include the following to the satisfaction of DII:</li> </ol>	Plan 4A Mining Activities 2010-2011	Not yet triggered	Extraction Plan will be prepared prior to commencement of coal extraction in Stage 3 area (currently planned to commence in 2013).

MCoA No.	Condition	Verification	Compliance	Comments
	<ul style="list-style-type: none"> <li>• a coal resource recovery plan that demonstrates effective recovery of the available resource;</li> <li>• revised predictions of the subsidence effects and subsidence impacts of the extraction plan, incorporating any relevant information that has been obtained since this approval; and</li> <li>• a Subsidence Monitoring Program to:                             <ul style="list-style-type: none"> <li>• validate the subsidence predictions; and</li> <li>• analyse the relationship between the subsidence effects and subsidence impacts of the Extraction Plan and any ensuing environmental consequences;</li> </ul> </li> <li>(e) include a:                             <ul style="list-style-type: none"> <li>• Watercourse Management Plan, which has been prepared in consultation with DECCW, to manage the environmental consequences of second workings on watercourses (including flooding and ponding) and alluvial aquifers;</li> <li>• Biodiversity Management Plan, which has been prepared in consultation with DECCW, to manage the potential environmental consequences of second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species;</li> <li>• Land Management Plan, to manage the potential environmental consequences of second workings on steep slopes and land in general;</li> <li>• Heritage Management Plan, which has been prepared in consultation with DECCW and the relevant Aboriginal groups, to manage the potential environmental consequences of second workings on heritage sites or values;</li> <li>• Built Features Management Plan, which has been prepared in consultation with the owner of the relevant feature, to manage the potential environmental consequences of second workings on any built features; and</li> </ul> </li> <li>(f) include a Public Safety Management Plan, which has been prepared in consultation with DII, to ensure public safety in the mining area.</li> </ul> <p><i>Notes: In accordance with condition 12 of schedule 2, the preparation and implementation of Extraction Plans for second workings may be staged, with each plan covering a defined area of second workings. In addition, these plans are only required to contain management plans that are relevant to the specific second workings that are being carried out.</i></p> <p><i>The Watercourse Management Plan must be integrated with all relevant aspects of the Site Water Management Plan required under condition 8 of schedule 4.</i></p>			

MCoA No.	Condition	Verification	Compliance	Comments
3/5	In addition to the standard requirements for management plans (see condition 2 of schedule 7), the Proponent shall ensure that the management plans required under condition 4(e) above include: (a) a program to collect sufficient baseline data for future Extraction Plans; (b) a revised assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this approval; (c) a detailed description of the measures that would be implemented to remediate predicted impacts; and (d) a contingency plan that expressly provides for adaptive management.		Noted	
	<b>Payment of Reasonable Costs</b>			
3/6	The Proponent shall pay all reasonable costs incurred by the Department to engage independent experts to review the adequacy of any aspect of the Extraction Plan.		Noted	
	<b>SCHEDULE 4 SPECIFIC ENVIRONMENTAL CONDITIONS — GENERAL</b>			
	<b>CONSTRUCTION</b>			
	<b>Surface Infrastructure Site — Shaft Construction Management</b>			
4/1	The Proponent shall prepare and implement a Shaft Construction Management Plan for the Surface Infrastructure Site, to the satisfaction of the Director-General. This plan must: (a) be submitted to the Director-General for approval prior to commencement of shaft construction activities on the Surface Infrastructure Site; and (b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7), a description of the measures/procedures to be implemented for: <ul style="list-style-type: none"> <li>• minimising and managing the disturbance area;</li> <li>• protecting vegetation and soil outside the disturbance area;</li> <li>• controlling erosion and sedimentation, and managing water use;</li> <li>• undertaking pre-clearance surveys and managing impacts on fauna;</li> <li>• managing any Aboriginal objects or skeletal remains discovered during the project;</li> <li>• traffic management; and</li> <li>• noise, vibration and dust management.</li> </ul> Note: Shaft construction activities are limited to the construction of the access road to the shafts, erection of security fencing, vegetation clearing (approximately 1.8 hectares), construction of the shafts and minor ancillary works.	<ul style="list-style-type: none"> <li>▪ Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan, Nov 2009</li> <li>▪ Letter from NSW Planning re Approval of the Shaft Construction Environmental Management Plan, 13 Nov 2009</li> </ul>	C	(a) The Stage 3 Shaft Construction Environmental Management Plan was prepared in November 2009 and submitted to the Director-General prior to commencement of the construction activities: (b) Measures and Procedures to be implemented: <ul style="list-style-type: none"> <li>• section 4 Minimising Disturbance Area</li> <li>• section 5 Minimising Impacts on Fauna and section 5.2 Pre-clearance Procedure</li> <li>• section 6 Erosion and Sediment Control</li> <li>• section 5.3 Vegetation Clearing Procedure</li> <li>• section 8 Managing any Aboriginal Objects or Skeletal Remains Discovered</li> <li>• section 9 Traffic Management</li> <li>• section 10, Noise, section 11 Vibration, and section 12 Dust Management</li> </ul>

MCoA No.	Condition	Verification	Compliance	Comments									
	<b>NOISE</b>												
	<b>Noise Impact Assessment Criteria</b>												
4/2	<p>The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in:</p> <p>(a) Table 2, for noise generated by the Surface Infrastructure Site; and</p> <p>(b) any relevant EPL, for noise generated by all other components of the project.</p> <p><i>Table 2: Noise impact assessment criteria — Surface Infrastructure Site, dB(A)</i></p> <table border="1"> <thead> <tr> <th>Land</th> <th>Day/Evening/Night</th> <th>Night</th> </tr> <tr> <td></td> <th>LAeq(15 minute)</th> <th>LA1(1 minute)</th> </tr> </thead> <tbody> <tr> <td>All privately owned land</td> <td>35</td> <td>45</td> </tr> </tbody> </table> <p><i>Notes:</i>                      The location of the Surface Infrastructure Site is shown in the figures in Appendix 2.                      Noise generated by the project is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.                      The noise limits in Table 2 do not apply if the Proponent has an agreement with the relevant owner/s of these residences/land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.                      The noise limits in Table 2 do not apply to construction of the Surface Infrastructure Site. Noise generated during construction activities is to comply with the requirements of the Interim Construction Noise Guideline (DECCW 2009).</p>	Land	Day/Evening/Night	Night		LAeq(15 minute)	LA1(1 minute)	All privately owned land	35	45	<ul style="list-style-type: none"> <li>Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan, Nov 2009</li> </ul>	Not yet activated	The Kitchener SIS Shaft construction noise management occurs under the Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan, approved in November 2009. Operation of ventilation fans at the Surface Infrastructure Site will trigger the operational noise criteria..
Land	Day/Evening/Night	Night											
	LAeq(15 minute)	LA1(1 minute)											
All privately owned land	35	45											
	<b>Noise and Vibration Management</b>												
4/3	<p>The Proponent shall prepare and implement a Noise Management Plan for the mine complex, to the satisfaction of the Director-General. This plan must:</p> <p>(a) be prepared in consultation with DECCW, and be submitted to the Director-General for approval prior to the commencement of construction of the Surface Infrastructure Site (other than shaft construction referred to in condition 1 above);</p> <p>(b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7):</p> <ul style="list-style-type: none"> <li>a noise monitoring program providing for a combination of continuous and supplementary attended monitoring measures;</li> <li>a vibration monitoring program that is capable of recording ground</li> </ul>	<ul style="list-style-type: none"> <li>Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan, Nov 2009</li> <li>Noise Monitoring Program Austar Coal Mine, Heggies, Jan 2007</li> <li>Vibration Monitoring Plan Longwalls A3, A4 and A5 (Stage 2), Jul 2009</li> </ul>	C	<p>The Noise Management Plan for the Austar Mine Complex will be prepared to cover the Stage 3 prior to operational plant being commissioned (ventilation fans).</p> <p>The construction works for the Stage 3 surface infrastructure site is covered by the Shaft Construction Environmental Management Plan section 10 Noise.</p>									

MCoA No.	Condition	Verification	Compliance	Comments																							
	vibrations on the surface emanating from underground mining activities; and <ul style="list-style-type: none"> <li>a detailed continual improvement program for investigating, implementing and reporting on all reasonable and feasible measures to reduce noise generated by the mine complex.</li> </ul>																										
	<b>AIR QUALITY AND GREENHOUSE GAS</b>																										
	<b>Impact Assessment Criteria</b>																										
<b>4/4</b>	The Proponent shall ensure that the dust emissions generated by the project do not cause additional exceedances of the air quality impact assessment criteria in: <ul style="list-style-type: none"> <li>(a) Tables 3, 4 and 5 for dust generated by the Surface Infrastructure Site; and</li> <li>(b) any relevant EPL, for dust generated by all other components of the project, at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.</li> </ul> <p><i>Table 3: Long term impact assessment criteria for particulate matter— Surface Infrastructure Site</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Total Suspended Particulate (TSP) matter</td> <td>Annual</td> <td>90 µg/m<sup>3</sup></td> </tr> <tr> <td>Particulate Matter &lt;10µm (PM<sub>10</sub>)</td> <td>Annual</td> <td>30 µg/m<sup>3</sup></td> </tr> </tbody> </table> <p><i>Table 4: Short term impact assessment criterion for particulate matter — Surface Infrastructure Site</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate Matter &lt;10µm (PM<sub>10</sub>)</td> <td>24 hour</td> <td>50 µg/m<sup>3</sup></td> </tr> </tbody> </table> <p><i>Table 5: Long term impact assessment criteria for deposited dust — Surface Infrastructure Site</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Max increase in DD level</th> <th>Max total DD level</th> </tr> </thead> <tbody> <tr> <td>Deposited Dust</td> <td>Annual</td> <td>2g/m<sup>2</sup>/mth</td> <td>4g/m<sup>2</sup>/mth</td> </tr> </tbody> </table> <p><i>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 2003, AS 3580.10.12003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.</i></p>	Pollutant	Averaging Period	Criterion	Total Suspended Particulate (TSP) matter	Annual	90 µg/m <sup>3</sup>	Particulate Matter <10µm (PM <sub>10</sub> )	Annual	30 µg/m <sup>3</sup>	Pollutant	Averaging Period	Criterion	Particulate Matter <10µm (PM <sub>10</sub> )	24 hour	50 µg/m <sup>3</sup>	Pollutant	Averaging Period	Max increase in DD level	Max total DD level	Deposited Dust	Annual	2g/m <sup>2</sup> /mth	4g/m <sup>2</sup> /mth		C Ongoing	The Kitchener SIS Shaft construction dust management occurs under the Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan, approved in November 2009. Operation of ventilation fans at the Surface Infrastructure Site will trigger the operational dust criteria.
Pollutant	Averaging Period	Criterion																									
Total Suspended Particulate (TSP) matter	Annual	90 µg/m <sup>3</sup>																									
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Deposited Dust	Annual	2g/m <sup>2</sup> /mth	4g/m <sup>2</sup> /mth																								

MCoA No.	Condition	Verification	Compliance	Comments
	<b>Operating Conditions</b>			
4/5	The Proponent shall: (a) ensure that any visible air pollution generated by the project is assessed regularly and measures are taken to minimise air quality impacts on privately-owned land; and (b) implement all reasonable and feasible measures to minimise the off-site odour and fume emissions generated by the mine complex's ventilation system or any spontaneous combustion on the site, to the satisfaction of the Director-General.	Monthly Environmental Inspection Reports	C	(a) Monthly Environmental Inspections are conducted by the Environmental Manager for the Austar Mine Complex facilities and activities and actions presented for completion/close out. Areas covered by the inspections are Pit Top, No.1 Shaft, No. 2 Shaft, No. 3 and 4 Shaft, Washery Area, Coal Storage Area, Dams, Rehabilitation Areas, Reject Area and Kitchener SIS.  (b) Monitoring of gas emissions from the vent/fans is undertaken. Actions and measures to reduce fume emissions and odour are proposed with close-out/completion checked and signed off by the responsible Austar personnel.
	<b>Air Quality and Greenhouse Gas Management</b>			
4/6	The Proponent shall prepare and implement an Air Quality and Greenhouse Gas Management Plan for the mine complex, to the satisfaction of the Director-General. This plan must: (a) be prepared in consultation with DECCW, and be submitted to the Director-General for approval prior to the commencement of construction of the Surface Infrastructure Site (other than shaft construction referred to in condition 1 above); and (b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7): <ul style="list-style-type: none"> <li>• an air quality monitoring program providing for a combination of continuous monitors, high volume samplers and dust deposition gauges;</li> <li>• an energy savings action plan, including a feasibility study into the capture and beneficial utilisation of methane gas emissions from the project; and</li> <li>• a detailed continual improvement program for investigating, implementing and reporting on all reasonable and feasible measures to reduce dust generated by the mine complex.</li> </ul>		Not yet triggered	The Air Quality and Greenhouse Gas Management Plan for the mine complex will be prepared prior to the commencement of construction of the Surface Infrastructure Site.
	<b>METEOROLOGICAL</b>			
4/7	The Proponent shall ensure that there is a suitable meteorological station operating in the vicinity of the project in accordance with the requirements in Approved Methods for Sampling of Air Pollutants in New South Wales and to the satisfaction of the Director-General.		C	The Austar meteorological station has been installed and operates remotely with the data able to be accessed on a continuous basis as required.
	<b>SURFACE AND GROUND WATER</b>			
	<b>Discharge Limits</b>			

MCoA No.	Condition	Verification	Compliance	Comments
4/8	The Proponent shall not discharge any water from the site except as may be expressly provided by an EPL, or in accordance with section 120 of the Protection of the Environment Operations Act 1997.		Noted	Refer to EPL 416 condition L3.2.
	<b>Site Water Management Plan</b>			
4/9	<p>The Proponent shall prepare and implement a Site Water Management Plan for the mine complex to the satisfaction of the Director-General. This plan must:</p> <ul style="list-style-type: none"> <li>(a) be prepared in consultation with DECCW and DII, and be submitted to the Director-General for approval prior to the commencement of second workings in Stage 3 and construction of the Surface Infrastructure Site (other than shaft construction referred to in condition 1 above); and</li> <li>(b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7): <ul style="list-style-type: none"> <li>(i) a Site Water Balance, which details: <ul style="list-style-type: none"> <li>• sources and security of water supply;</li> <li>• water use and management on site;</li> <li>• any off-site water transfers or discharges; and</li> <li>• measures to minimise water use by the project;</li> </ul> </li> <li>(ii) an Erosion and Sediment Control Plan;</li> <li>(iii) a Surface Water Monitoring Program, including programs to monitor: <ul style="list-style-type: none"> <li>• surface water flows and quality, stream health and channel stability in Black Creek, Cony Creek, Sandy Creek and Quorrobolong Creek; and</li> <li>• impacts on water users and water levels in farm dams;</li> </ul> </li> <li>(iv) a Ground Water Monitoring Program, including programs to monitor: <ul style="list-style-type: none"> <li>• groundwater volumes and quality seeping into the underground mine workings;</li> <li>• impacts on regional aquifers;</li> <li>• impacts on the groundwater supply of potentially affected landowners;</li> <li>• impacts on the alluvial aquifers in Black Creek, Cony Creek, Sandy Creek and Quorrobolong Creek; and</li> <li>• impacts on groundwater dependent ecosystems and riparian vegetation (including the River-flat Eucalypt Forest EEC); and</li> </ul> </li> <li>(v) a Surface and Ground Water Response Plan, which describes the measures and/or procedures that would be implemented to: <ul style="list-style-type: none"> <li>• respond to any exceedances of the relevant performance</li> </ul> </li> </ul> </li> </ul>	Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan section 7, Nov 2009	Not yet triggered	The Site Water Management for the Austar Mine Complex will be prepared prior to construction of buildings at the Surface Infrastructure Site and the commencement of second workings in Stage 3. Currently the Shaft Construction Environmental Management Plan has the water management requirements for the Stage 3 shaft construction works at the Kitchener SIS.

MCoA No.	Condition	Verification	Compliance	Comments
	<p>measures/criteria;</p> <ul style="list-style-type: none"> <li>• compensate landowners of privately-owned land whose water supply is adversely affected by the project; and</li> <li>• mitigate and/or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation.</li> </ul> <p><i>Note: The Department acknowledges that certain monitoring requirements under this plan may be subject to the granting of access on privately-owned land.</i></p>			
	<b>HERITAGE</b>			
	<b>Aboriginal Cultural Heritage</b>			
<b>4/10</b>	<p>The Proponent shall prepare and implement an Aboriginal Cultural Heritage Management Plan for the project to the satisfaction of the Director-General. The plan must:</p> <p>(a) be prepared by a suitably qualified archaeologist in consultation with DECCW and the relevant Aboriginal groups, and be submitted to the Director-General for approval prior to the commencement of second workings in Stage 3 and construction of the Surface Infrastructure Site (other than shaft construction referred to in condition 1 above); and</p> <p>(b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7) ,a program/procedures for:</p> <ul style="list-style-type: none"> <li>• salvage and management of Aboriginal sites within the Surface Infrastructure Site disturbance area;</li> <li>• monitoring and management of Aboriginal sites within the mining area;</li> <li>• managing the discovery of any new Aboriginal objects or skeletal remains discovered during the project;</li> <li>• undertaking additional archaeological surveys on any areas subject to extensive remediation activities;</li> <li>• undertaking additional archaeological surveys to the satisfaction of the Director-General, prior to commencing activities in undisturbed reject emplacement areas (as shown on the figure in Appendix 4); and</li> <li>• ongoing consultation with and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site.</li> </ul> <p><i>Note: The Proponent has committed to a \$100,000 contribution to Aboriginal projects to offset the potential impact on an axe grinding groove (see Appendix 3).</i></p>	Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan, Nov 2009	Not yet triggered	The Aboriginal Cultural Heritage Management Plan will be prepared prior to the commencement of second workings in Stage 3 and construction of the Surface Infrastructure Site. The current shaft construction works are managed in accordance with section 8 Managing and Aboriginal Objects or Skeletal Remains, Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan section 7, November 2009.
	<b>Historic Heritage</b>			

MCoA No.	Condition	Verification	Compliance	Comments
4/11	<p>The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Director-General. The plan must:</p> <ul style="list-style-type: none"> <li>(a) be prepared by a suitably qualified heritage consultant in consultation with Council and the Heritage Office, and be submitted to the Director-General for approval prior to the commencement of second workings in Stage 3 and construction of the Surface Infrastructure Site (other than shaft construction referred to in condition 1 above); and</li> <li>(b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7), a program/procedures for: <ul style="list-style-type: none"> <li>• monitoring and management of identified heritage sites within the mining area and other disturbance areas;</li> <li>• undertaking a Heritage Impact Assessment to the satisfaction of the Director-General, prior to re-commencing any mining activities at the Cessnock No.1 Colliery surface facilities at Kalingo;</li> <li>• obtaining relevant approvals under the Heritage Act 1977 for any works proposed to be undertaken on or under Lot 1 DP 87087 and Part Lot 1 DP 69968 County of Northumberland, Parish of Heddon; and</li> <li>• managing the discovery of any new heritage items during the project.</li> </ul> </li> </ul> <p><i>Note: Lot 1 DP 87087 and Part Lot 1 DP 69968 County of Northumberland, Parish of Heddon is currently subject to a section 130 order under the Heritage Act 1977 to prevent harm to buildings, works, relics etc of the South Maitland Railway, gazetted 16 September, 1983.</i></p>		Not triggered	A Heritage Management Plan will be prepared prior to the commencement of construction of the Surface Infrastructure Site and second workings in Stage 3.
	<b>TRANSPORT</b>			
	<b>Road Upgrades</b>			
4/12	<p>The Proponent shall undertake the following road upgrade works generally in accordance with the recommendations in the EA, and to the satisfaction of Council and/or the RTA:</p> <ul style="list-style-type: none"> <li>(a) provide crossings over Wollombi Road and Middle Road, prior to the commencement of any reject emplacement south of those roads other than to the Aberdare emplacement areas;</li> <li>(b) construct the Surface Infrastructure Site access intersection on Quorrobolong Road (including lighting and signage) and upgrade the Wollombi Road / West Avenue intersection to provide a designated right turn into West Avenue, prior to the commencement of construction of buildings on the Surface Infrastructure Site;</li> <li>(c) upgrade the road level crossing at Vincent Street, Kitchener, as recommended in Austar Coal Mine Pty Limited Report on Four</li> </ul>	<ul style="list-style-type: none"> <li>• Letter to DoP re Extension for Completion of Road Level Crossing at Vincent Street Kitchener, 21 Jan 2009</li> <li>• Letter from DoP re Approval for Extension of Time to Complete Works, 2 Feb 2009</li> <li>• Letter from Cessnock City Council re Notice of Determination for Proposed Works Vincent Street Cessnock, 26 May 2009.</li> </ul>	Noted Not yet triggered	<ul style="list-style-type: none"> <li>(a) not triggered</li> <li>(b) not triggered</li> <li>(c) Vincent Street level crossing was upgraded by Austar, and completed in 2009.</li> <li>(d) Cessnock Road, Kearsley level crossing upgraded by federal government. Neath and Weston crossings not upgraded - in consultation with South Maitland Railway.</li> </ul>

MCoA No.	Condition	Verification	Compliance	Comments
	<p>Rail Level Crossings in Cessnock LGA Stage 5 Road Safety Audit (GHD March 2007), prior to the commencement of construction of the Surface Infrastructure Site; and</p> <p>(d) use its best endeavours to upgrade the following road level crossings, as recommended in Austar Coal Mine Pty Limited Report on Four Rail Level Crossings in Cessnock LGA Stage 5 Road Safety Audit (GHD March 2007), in consultation with South Maitland Railway, prior to the commencement of construction of buildings on the Surface Infrastructure Site:</p> <ul style="list-style-type: none"> <li>• Cessnock Road, Kearsley;</li> <li>• Neath Road, Neath; and</li> <li>• Mitchell Avenue, Weston.</li> </ul>	<ul style="list-style-type: none"> <li>• Inspection of completed Vincent Street level crossing during Audit.</li> </ul>		
	<b>Road Maintenance Contributions</b>			
4/13	From the end of 2009, the Proponent shall make an appropriate annual contribution to Council for the maintenance of local roads that are used as haulage routes by the project. If there is any dispute over the amount of the contribution, the matter shall be referred to the Director-General for resolution.	Letter to Cessnock City Council re Haulage Road Contributions from Stage 3, 8 Feb 2010	Not yet triggered	The annual contributions to the Cessnock City Council will occur for maintenance of roads used when road haulage of coal from the Stage 3 project commences.
	<b>VISUAL</b>			
4/14	<p>The Proponent shall:</p> <p>(a) take all reasonable and feasible measures to mitigate visual and off-site lighting impacts of the project; and</p> <p>(b) ensure that all external lighting associated with the project complies with Australian Standard AS4282 (INT) 1995 — Control of Obtrusive Effects of Outdoor Lighting, to the satisfaction of the Director-General.</p>		C Ongoing	<p>(a) Lighting from the Stage 3 shaft construction has not resulted in any complaints to the date of this audit.</p> <p>(b) External lighting is managed in accordance with the relevant standards.</p>
	<b>WASTE</b>			
	<b>Waste Minimisation</b>			
4/15	<p>The Proponent shall:</p> <p>(a) minimise the waste (including coal reject) generated by the project;</p> <p>(b) ensure that the waste generated by the project is appropriately stored, handled and disposed of; and</p> <p>(c) report on waste management and minimisation in the Annual Review, to the satisfaction of the Director-General.</p>	<ul style="list-style-type: none"> <li>• 2010-2011 AEMR s 2.7</li> <li>• 2009-2010 AEMR s 2.7</li> <li>• 2008-2009 AEMR s 2.7</li> </ul>	C Ongoing	<p>(a) the waste from the Austar Mine Complex is managed by Transpacific Industries Group that provides a monthly waste management report used to improve waste management on site.</p> <p>(b) all waste generated by the Austar Mine Complex activities is segregated and placed in waste specific bins.</p> <p>(c) Section 2.7 of the AEMR's describes the waste management aspects of the operations.</p>

MCoA No.	Condition	Verification	Compliance	Comments
	<b>Reject Emplacement</b>			
4/16	<p>If reject emplacement outside the existing operational West Open Cut, East Open Cut and Aberdare emplacement areas is proposed, the Proponent shall:</p> <p>(a) at least 12 months before reject emplacement into existing operational emplacement areas is complete, after consultation with DII and to the satisfaction of the Director-General:</p> <ul style="list-style-type: none"> <li>• justify the need for the use of additional emplacement area/s;</li> <li>• provide reports on geotechnical investigations and engineering specifications for the proposed emplacement area/s; and</li> <li>• investigate and report on the possibility of disposal of all reject into a single additional emplacement area; and</li> </ul> <p>(b) emplace coal reject in the additional emplacement area/s subject to such conditions as the Director-General may impose.</p> <p><i>Note: The existing operational reject emplacement areas are shown on the Austar mine complex figure in Appendix 2. Both the existing operational and additional (formerly-approved) reject emplacement areas are shown on the figure in Appendix 4.</i></p>		Not yet activated	
	<b>SCHEDULE 5 ADDITIONAL PROCEDURES</b>			
	<b>NOTIFICATION OF LANDOWNERS</b>			
5/1	<p>If the results of the monitoring required in schedule 4 identify that impacts generated by the project are greater than the relevant impact assessment criteria, except where a negotiated agreement has been entered into in relation to that impact, then the Proponent shall, within 2 weeks of obtaining the monitoring results, notify the Director-General, the affected landowners and tenants (including tenants of mine owned properties) accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the criteria in schedule 4.</p>		Not triggered	
5/2	<p>If the results of monitoring required in schedule 4 identify that impacts generated by the project are greater than the relevant air quality impact assessment criteria in schedule 4, then the Proponent shall send the relevant landowners and tenants (including tenants of mine owned properties) a copy of the NSW Health fact sheet entitled "Mine Dust and You" (and associated updates) in conjunction with the notification required in condition 1.</p>		Not triggered	
	<b>INDEPENDENT REVIEW</b>			
5/3	<p>If a landowner of privately-owned land considers the project to be exceeding the impact assessment criteria in schedule 4, then he/she may ask the Director-General in writing for an independent review of the impacts of the</p>		Not triggered	

MCoA No.	Condition	Verification	Compliance	Comments
	<p>project on his/her land.</p> <p>If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 2 months of the Director-General's decision:</p> <ul style="list-style-type: none"> <li>(a) consult with the landowner to determine his/her concerns;</li> <li>(b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to: <ul style="list-style-type: none"> <li>• determine whether the project is complying with the relevant impact assessment criteria in schedule 4; and</li> <li>• identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and</li> </ul> </li> <li>(c) give the Director-General and landowner a copy of the independent review.</li> </ul>			
5/4	<p>If the independent review determines that the project is complying with the relevant impact assessment criteria in schedule 4, then the Proponent may discontinue the independent review with the approval of the Director-General.</p> <p>If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 4, then the Proponent shall:</p> <ul style="list-style-type: none"> <li>(a) implement all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria, and conduct further monitoring to determine whether these measures ensure compliance; or</li> <li>(b) secure a written agreement with the landowner to allow exceedances of the relevant impact assessment criteria,</li> </ul> <p>to the satisfaction of the Director-General.</p> <p>If the further monitoring referred to under paragraph (a) above determines that the project is complying with the relevant impact assessment criteria, then the Proponent may discontinue the independent review with the approval of the Director-General.</p>		Not activated	
	<b>LAND ACQUISITION</b>			
5/5	<p>Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:</p> <ul style="list-style-type: none"> <li>(a) the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the project the subject of the project application, having regard to the: <ul style="list-style-type: none"> <li>existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and</li> <li>presence of improvements on the property and/or any approved building or</li> </ul> </li> </ul>		Not activated	

MCoA No.	Condition	Verification	Compliance	Comments
	<p>structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date;</p> <p>(b) the reasonable costs associated with:</p> <ul style="list-style-type: none"> <li>• relocating within the Cessnock local government area, or to any other local government area determined by the Director-General;</li> <li>• obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and</li> </ul> <p>(c) reasonable compensation for any disturbance caused by the land acquisition process.</p> <p>However, if following this period, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.</p> <p>Upon receiving such a request, the Director-General shall request the President of the NSW Division of the Australian Property Institute (the API) to appoint a qualified independent valuer to:</p> <ul style="list-style-type: none"> <li>• consider submissions from both parties;</li> <li>• determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above;</li> <li>• prepare a detailed report setting out the reasons for any determination; and</li> <li>• provide a copy of the report to both parties.</li> </ul> <p>Within 14 days of receiving the independent valuer's report, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.</p> <p>However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Director-General for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Director-General shall determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above and the independent valuer's report. Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Director-General's determination.</p> <p>If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land shall cease, unless the Director-</p>			

MCoA No.	Condition	Verification	Compliance	Comments												
	<p>General determines otherwise.</p> <p>The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.</p> <p>If the Proponent and landowner agree that only part of the land shall be acquired, then the Proponent shall also pay all reasonable costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of the plan at the Office of the Registrar-General.</p>															
	<b>SCHEDULE 6 REHABILITATION AND OFFSETS</b>															
	<b>REHABILITATION AND BIODIVERSITY OFFSETS</b>															
	<b>Rehabilitation Objectives</b>															
6/1	<p>The Proponent shall achieve the rehabilitation objectives in Table 6 to the satisfaction of the Director-General of DII.</p> <p><i>Table 6: Rehabilitation Objectives</i></p> <table border="1"> <thead> <tr> <th>Domain</th> <th>Rehabilitation objective</th> </tr> </thead> <tbody> <tr> <td>Surface Infrastructure Site</td> <td>Revegetate the cleared portion of the site with a structured native vegetation community similar to that existing pre-mining, or other land use approved by the Director-General</td> </tr> <tr> <td>Biodiversity offset area</td> <td>Implement the offset strategy described in the EA and shown conceptually in Appendix 5 Additional objectives/criteria to be set through condition 4 below</td> </tr> <tr> <td>Land affected by the project (including watercourses and steep slopes)</td> <td>Rehabilitate landform, land use and ecosystem function to that existing pre-mining and consistent with the surrounding landform Reduce safety hazards to no more than those existing pre-mining Minimise erosion risk</td> </tr> <tr> <td>Built features</td> <td>Repair/restore/replace to pre-mining condition or better, unless a claim under the Mine Subsidence Compensation Act 1961 is made</td> </tr> <tr> <td>Community</td> <td>Minimise the adverse socio-economic effects associated with mine closure</td> </tr> </tbody> </table>	Domain	Rehabilitation objective	Surface Infrastructure Site	Revegetate the cleared portion of the site with a structured native vegetation community similar to that existing pre-mining, or other land use approved by the Director-General	Biodiversity offset area	Implement the offset strategy described in the EA and shown conceptually in Appendix 5 Additional objectives/criteria to be set through condition 4 below	Land affected by the project (including watercourses and steep slopes)	Rehabilitate landform, land use and ecosystem function to that existing pre-mining and consistent with the surrounding landform Reduce safety hazards to no more than those existing pre-mining Minimise erosion risk	Built features	Repair/restore/replace to pre-mining condition or better, unless a claim under the Mine Subsidence Compensation Act 1961 is made	Community	Minimise the adverse socio-economic effects associated with mine closure		Noted	
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Built features	Repair/restore/replace to pre-mining condition or better, unless a claim under the Mine Subsidence Compensation Act 1961 is made															
Community	Minimise the adverse socio-economic effects associated with mine closure															
	<b>Progressive Rehabilitation</b>															
6/2	To the extent that mining operations permit, the Proponent shall carry out rehabilitation progressively, that is, as soon as reasonably practicable		Noted Ongoing													

MCoA No.	Condition	Verification	Compliance	Comments
	following the disturbance.			
	<b>Long Term Security of Offset Area</b>			
6/3	<p>Within 2 years of the date of this approval, the Proponent shall make suitable arrangements to provide appropriate long term conservation security for the offset area to the satisfaction of the Director-General.</p> <p><i>Note: The offset area is described in the EA and shown conceptually in Appendix 5</i></p>	<ul style="list-style-type: none"> <li>Letter from B&amp;M Properties re Austar Mine Purchase from Minister for National Parks and Wildlife Act, 11 Dec 2009</li> <li>Transfer Certificate of Title 3/755225 to Austar Coal Mine Pty Ltd – Stamped Transfer of Folio Identifier 1/1145356</li> <li>NPWS plan showing offset area is now part of NPWS estate.</li> </ul>	C	A land swap with National Parks has occurred for the long term conservation security of the nominated offset area. The transfer of the title to Austar Coal Mine of Certificate of Title 3/755225 occurred from the Minister administering the National Parks and Wildlife Act 1974, on 11 December 2009.
	<b>Landscape Management Plan</b>			
6/4	<p>The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Director-General and the Director-General of DII. This plan must:</p> <p>(a) be prepared in consultation with the relevant stakeholders by suitably qualified expert/s whose appointment/s have been endorsed by the Director-General, and be submitted to the Director-General for approval prior to the commencement of second workings in Stage 3 and construction of the Surface Infrastructure Site (other than shaft construction referred to in condition 1 of schedule 4);</p> <p>(b) in addition to the standard requirements for management plans (see condition 2 of schedule 7), include:</p> <p>(i) the rehabilitation objectives for the site and offset area;</p> <ul style="list-style-type: none"> <li>a description of the short, medium, and long term measures that would be implemented to:</li> <li>rehabilitate the site;</li> <li>implement the offset strategy; and</li> <li>manage the remnant vegetation and habitat on the site and in the offset area;</li> </ul> <p>(i) performance and completion criteria for the rehabilitation of the site and implementation of the offset strategy;</p> <p>(ii) a detailed description of the measures would be implemented over the next 3 years, including the procedures to be implemented for:</p> <ul style="list-style-type: none"> <li>minimising and rehabilitating disturbed areas;</li> </ul>		Not triggered	A Landscape Management Plan will be prepared prior to construction of the Surface Infrastructure Site and the commencement of second workings in Stage 3.

MCoA No.	Condition	Verification	Compliance	Comments
	<ul style="list-style-type: none"> <li>• implementing the offset strategy;</li> <li>• protecting vegetation and soil outside the disturbance areas;</li> <li>• undertaking pre-clearance surveys;</li> <li>• managing impacts on fauna;</li> <li>• landscaping the site to minimise visual impacts;</li> <li>• conserving and reusing topsoil;</li> <li>• collecting and propagating seed for rehabilitation works;</li> <li>• salvaging and reusing material from the site for habitat enhancement;</li> <li>• controlling weeds and feral pests;</li> <li>• controlling access; and</li> <li>• bushfire management.</li> </ul>			
	<b>SCHEDULE 7 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING</b>			
	<b>ENVIRONMENTAL MANAGEMENT</b>			
	<b>Environmental Management Strategy</b>			
7/1	<p>The Proponent shall prepare and implement an Environmental Management Strategy for the Austar Mine Complex, to the satisfaction of the Director-General. The strategy must:</p> <ol style="list-style-type: none"> <li>(a) be submitted to the Director-General for approval prior to the commencement of second workings in Stage 3 and construction of the Surface Infrastructure Site (other than shaft construction referred to in condition 1 of schedule 4);</li> <li>(b) provide the strategic framework for environmental management of the mine complex;</li> <li>(c) identify the statutory approvals that apply to the mine complex;</li> <li>(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the mine complex;</li> <li>(e) describe the procedures that would be implemented to: <ul style="list-style-type: none"> <li>• keep the local community and relevant agencies informed about the operation and environmental performance of the mine complex;</li> <li>• receive, handle, respond to, and record complaints;</li> <li>• resolve any disputes that may arise during the course of the project;</li> <li>• respond to any non-compliance; and</li> <li>• respond to emergencies;</li> </ul> </li> </ol>	<p>Environmental Management Strategy, Jun 2010  Letter from Planning re Approval of Environmental Management Strategy and Environmental Monitoring Program, 18 Jun 2010</p>	In progress	<p>The Austar Environmental Management Strategy was revised by in June 2010:</p> <ol style="list-style-type: none"> <li>(f) Section 2 Purpose of the EMS</li> <li>(g) Section 6 Statutory Obligations</li> <li>(h) Section 12 Monitoring, Review and Improvement</li> <li>(i) Procedures to be implemented: <ul style="list-style-type: none"> <li>• Section 10.1 Community Involvement</li> <li>• Section 10.2 Complaint Protocol</li> <li>• Section 9 Cumulative Impacts</li> <li>• Section 11 Incident Response</li> </ul> </li> <li>(j) Section 7.1 Roles and Responsibilities</li> </ol> <p>The Environmental Strategy will be further revised as necessary prior to construction of the Surface Infrastructure Site and the commencement of second workings in Stage 3.</p>

MCoA No.	Condition	Verification	Compliance	Comments
	(f) include: <ul style="list-style-type: none"> <li>• copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and</li> <li>• a clear plan depicting all the monitoring to be carried out in relation to the mine complex.</li> </ul>			
	<b>Management Plan Requirements</b>			
7/2	The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include: <ul style="list-style-type: none"> <li>(a) detailed baseline data;</li> <li>(b) a description of:                             <ul style="list-style-type: none"> <li>• the relevant statutory requirements (including any relevant approval, licence or lease conditions);</li> <li>• any relevant limits or performance measures/criteria;</li> <li>• the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management 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 style="list-style-type: none"> <li>• impacts and environmental performance of the project;</li> <li>• effectiveness of any management measures (see (c) above);</li> </ul> </li> <li>(e) a contingency plan to manage any unpredicted impacts and their consequences;</li> <li>(f) a program to investigate and implement ways to continually improve the environmental performance of the project over time;</li> <li>(g) a protocol for managing and reporting any:                             <ul style="list-style-type: none"> <li>• incidents;</li> <li>• complaints;</li> <li>• non-compliances with statutory requirements; and</li> <li>• exceedances of the impact assessment criteria and/or performance criteria; and</li> </ul> </li> <li>(h) a protocol for periodic review of the plan.</li> </ul>		In progress	The management plans will be prepared in accordance with the requirements of this condition prior to construction of the Surface Infrastructure Site and the commencement of second workings in Stage 3.
	<b>Annual Review</b>			
7/3	Each year, the Proponent shall review the environmental performance of the	2010-2011 AEMR	C	The description of Stage 3 components will be included in the Annual Review for the Austar Mine

MCoA No.	Condition	Verification	Compliance	Comments
	<p>mine complex to the satisfaction of the Director-General. This review must:</p> <ul style="list-style-type: none"> <li>(a) describe the works that were carried out in the past year, and the works that are proposed to be carried out over the next year;</li> <li>(b) include a comprehensive review of the monitoring results and complaints records of the mine complex over the past year, which includes a comparison of these results against the :                             <ul style="list-style-type: none"> <li>• relevant statutory requirements, limits or performance measures/criteria;</li> <li>• the monitoring results of previous years; and</li> <li>• the relevant predictions in the EA and Extraction Plan;</li> </ul> </li> <li>(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;</li> <li>(d) identify any trends in the monitoring data over the life of the mine complex;</li> <li>(e) identify any discrepancies between the predicted and actual impacts of the mine complex, and analyse the potential cause of any significant discrepancies; and</li> <li>(f) describe what measure will be implemented over the next year to</li> </ul>		Ongoing	Complex as the Stage 3 works progress.
	<b>Revision of Strategies, Plans and Programs</b>			
7/4	<p>Within 3 months of the submission of an:</p> <ul style="list-style-type: none"> <li>(a) audit under condition 7 of schedule 7;</li> <li>(b) incident report under condition 6 of schedule 7; and</li> <li>(c) Annual Review under condition 3 of schedule 7,</li> </ul> <p>the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the D-G.</p> <p><i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.</i></p>		Noted	
	<b>Community Consultative Committee</b>			
7/5	<p>The Proponent shall maintain a Community Consultative Committee (CCC) for the mine complex to the satisfaction of the Director-General. This CCC must be operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version).</p> <p><i>Note: The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval. In accordance with the Guideline, the Committee should comprise an independent chair and appropriate representation from the Proponent, affected councils, recognised environmental groups and the</i></p>	<ul style="list-style-type: none"> <li>• Letter from Planning reappointment of Community Consultative Committee Members, 15 Dec 2009</li> <li>• CCC Meeting Minutes 14 Nov 2011</li> <li>• CCC Meeting Minutes 8 Aug 2011</li> </ul>	C	<p>The Community Consultative Committee (CCC) members was approved by NSW Planning and CCC Meetings have been held quarterly. The members of the CCC are:</p> <p><b>Chairman</b> - Hon Garry West</p> <p><b>Community Representatives:</b> Louise Dews, David Holmes, Peter Sturrock and Alan Smith</p> <p><b>Cessnock City Council Representative:</b></p>

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	<i>general community.</i>	<ul style="list-style-type: none"> <li>CCC Meeting Minutes 26 Aug 2010</li> </ul>		Cr Jeff Maybury <b>Austar Representatives:</b> Gary Mulhearn , David MacLean, Adrian Moodie
	<b>INCIDENT REPORTING</b>			
7/6	The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the mine complex as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.		Noted	
	<b>INDEPENDENT ENVIRONMENTAL AUDIT</b>			
7/7	<p>By end of December 2011, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the mine complex. This audit must:</p> <ol style="list-style-type: none"> <li>be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;</li> <li>include consultation with the relevant agencies;</li> <li>assess the environmental performance of the mine complex and assess whether it is complying with the requirements in relevant project approvals and development consents and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);</li> <li>review the adequacy of strategies, plans or programs required under these approvals; and</li> <li>recommend appropriate measures or actions to improve the environmental performance of the mine complex, and/or any assessment, plan or program required under these approvals.</li> </ol> <p><i>Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Director-General.</i></p>	<ul style="list-style-type: none"> <li>Letter from DP&amp;I re Approval of Independent Environmental Audit Team, 20 Oct 2011</li> </ul>	C	<p>This Independent Environmental Audit conducted on the 28 November to 3 December 2010 addresses the status of the Stage 3 activities as part of the overall Austar Mine Complex audit.</p> <p>Stage 3 activities had not commenced at the time of this audit with the only activity being construction of the No. 5 Shaft at the Kitchener SIS. No other surface infrastructure works or longall mining had commenced.</p>
7/8	Within 6 weeks of the completing of this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.		Noted	
	<b>ACCESS TO INFORMATION</b>			
7/9	<p>From the end of 2009, the Proponent shall make the following information publicly available on its website:</p> <ol style="list-style-type: none"> <li>a copy of all current statutory approvals for the mine complex;</li> <li>a copy of the current environmental management strategy and associated plans and programs;</li> </ol>	<p><a href="http://www.austarcoal.com.au/Community">www.austarcoal.com.au/Community</a> and <a href="http://www.austarcoal.com.au/Environment">www.austarcoal.com.au/Environment</a></p>	C Ongoing	<ol style="list-style-type: none"> <li>copy of consents and modifications are provided on the Austar website.</li> <li>Summary of monitoring/ AEMR's will be placed on the website as they become available.</li> </ol>

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	(c) a summary of the monitoring results of the mine complex, which have been reported in accordance with the various plans and programs approved under the conditions of this approval; (d) a complaints register, which is to be updated on a monthly basis; (e) a copy of the minutes of CCC meetings; (f) a copy of any Annual Reviews (over the last 5 years); (g) a copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; and (h) any other matter required by the Director-General.			(f) Documentation on the website will be updated as required.

## Attachment C

### STATEMENTS OF COMMITMENT

SoC No.	Statement of Commitment	Verification	Compliance	Comment
[Note: References to sections, figures and appendices are references to the EA] Statement of Commitments — Austar Coal Mine Stage 3 EA. As part of approval under Part 3A of the EP&A Act for the proposed Stage 3 Project, Austar Coal Mine will commit to the following controls:				
<b>SoC1.1</b>	<b>Compliance with the EA</b> Operation of the Stage 3 development will be undertaken in accordance with the environmental controls and commitments as described in the EA or as specified in this Statement of Commitments.	Stage 3 Environmental Assessment, Umwelt (Australia) Pty Limited, October 2008	Noted	
<b>SoC 1.2</b>	<b>Life of Stage 3 Concept Mine Plan</b>			
<b>SoC1.2.1</b>	<b>Project Life</b> The project approval life will be until 31 December 2030. Closure and rehabilitation activities may continue beyond this period and will be undertaken in accordance with an approved Mining Operations Plan.		Noted	Refer to PA 08-0111 schedule 2 condition 5
<b>SoC1.2.2</b>	<b>Production Limits</b> Underground mining in Stage 3 will produce up to 3.6 Mtpa ROM coal by LTCC methods. This coal will be conveyed, handled, processed and transported using Austar Mine Complex infrastructure.		Noted	Refer to PA 08-0111 schedule 2 condition 6
<b>SoC1.2.3</b>	<b>Hours of Operation</b> Mining and associated activities for the Stage 3 Project may be undertaken 24 hours a day, seven days a week.		Noted	
<b>SoC1.2.4</b>	<b>Refinement of Mine Plan</b> Any material changes to the concept mine plan outlined in this EA report will be detailed and assessed as part of Extraction Plans (EPs) and Mining Operations Plan (MOP) prepared by Austar Coal Mine.	<ul style="list-style-type: none"> <li>▪ Letter to Planning re Modification to First Workings, 21 Jul 2010</li> <li>▪ Letter from Planning re First Workings, 13 Jan 2010</li> <li>▪ Figure 3 Revised First Workings</li> </ul>	C	A request to modify the first workings layout for Stage 3 was granted by NSW Planning on 13 August 2010 in relation to Figure 3 submitted with the request.
<b>SoC1.2.5</b>	Mining parameters for the proposed mine plan as detailed in the EP will be designed to ensure that predicted systemic subsidence in terms of		Noted	The Extraction Plan for the Stage 3 Area long-walls will be prepared for approval prior to the

SoC No.	Statement of Commitment	Verification	Compliance	Comment
	subsidence, tilt, tensile strain and compressive strain will comply with or be less than the Upper Bound predictions detailed in the EA. Those being: <ul style="list-style-type: none"> <li>• 3040 mm subsidence;</li> <li>• 10 mm/m tilt;</li> <li>• 1.2 mm/m tensile strain; and</li> <li>• 3.0 mm/m compressive strain.</li> </ul>			commencement of second workings.
<b>SoC1.2.6</b>	The locations of any minor surface infrastructure that may be required to implement the project will be detailed and assessed as part of MOP's prepared by Austar Coal Mine.	<ul style="list-style-type: none"> <li>• Mining Operations Plan, 2008-2015</li> <li>• Letter from DPI re Approval of MOP, 30 Jun 2008</li> </ul>	Noted	The MOP will be revised and amended if required for the Stage 3 Area works.
<b>SoC1.3</b>	<b>Subsidence</b>	•		
<b>SoC1.3.1</b>	Austar Coal Mine will manage the impacts of mining subsidence. as required by the conditions of the consent, conditions of the ML and other DII conditions.	<ul style="list-style-type: none"> <li>• Subsidence Management Plan for long-walls A4 and A5, 24 Dec 2009</li> <li>• Subsidence Management Plan Approval Long-wall 5A, 27 Apr 2011</li> </ul>	C	Refer to Project Approval Schedule 3 conditions 3 and 4
<b>SoC1.3.2</b>	The Mine Plan submitted as part of the EP for longwall extraction will take into consideration monitoring results from previous Austar Mine Complex operations and will be designed to ensure that subsidence as a result of mining does not exceed Upper Bound predictions as set out in the EA for subsidence, tilt, tensile strain and compressive strain. Those being: <ul style="list-style-type: none"> <li>• Maximum Upper Bound subsidence ranges from approximately 425 mm for LWA7 to approximately 3040 mm for LWA17.</li> <li>• Maximum Upper Bound tilt ranges from approximately 1.9 mm/m for LWA7 to approximately 10 mm/m for LWA17.</li> <li>• Maximum Upper Bound tensile strain ranges from approximately 0.2 mm/m for LWA7 to approximately 1.2 mm/m for LWA17.</li> <li>• Maximum Upper Bound compressive strain ranges from approximately 0.5 mm/m for LWA7 to approximately 3.0 mm/m for LWA17.</li> </ul>	<ul style="list-style-type: none"> <li>• Stage 2 End of Panel Report – Long-wall A3, July 2010</li> </ul>	C	Refer to Project Approval Schedule 3 conditions 3 and 4
<b>SoC1.3.3</b>	Where a potential subsidence impact is identified on private property, Austar Coal Mine will prepare a Built Features Management Plan in consultation with the property owner. This plan will clearly outline impacts of mining on the property and the management and remediation measures to be implemented.		Noted	Refer to Project Approval Schedule 3 conditions 3 and 4
<b>SoC1.3.4</b>	Subsidence management measures to be implemented as part of the project will include:		C	Refer to Project Approval Schedule 3 conditions 3 and 4

SoC No.	Statement of Commitment	Verification	Compliance	Comment
	<ul style="list-style-type: none"> <li>subsidence monitoring lines to be located as determined as part of the EP process where access is granted;</li> <li>visual assessment of all natural features and items of surface infrastructure before, during and following mining to detect subsidence impacts such as surface cracking, irregularities in the subsidence profile, erosion, damage to structures, changes in drainage patterns or loss of water from drainage structures where access is granted;</li> <li>detailed subsidence monitoring in accordance with DII requirements. This data will be utilised to regularly update the subsidence predictions for Stage 3;</li> <li>remediation and rehabilitation of subsidence impacts will be carried out, where required, as soon as practicable following subsidence using methods specified in the EP where access is granted;</li> <li>building structures located within the subsidence affectation area will be inspected by a structural engineer prior to and after undermining and appropriate management measures implemented where access is granted ;</li> <li>informing all relevant service providers of the potential impacts of mining subsidence on services;</li> <li>farm dams within the subsidence affectation area will be monitored during and following undermining where access is granted, to ensure they remain in a safe and serviceable condition. Remediation works will be undertaken as required;</li> <li>in the event of any significant loss of water from a privately-owned farm dam, Austar Coal Mine will provide an alternate source of water, as required, until the dam is repaired where access is granted ; and</li> <li>any privately-owned bores within the subsidence affectation area will be monitored during and following undermining where access is granted. If the capacity of any utilised private bore is reduced to unacceptable level as a result of subsidence, Austar Coal Mine will provide an alternative supply of water until such time as the MSB re-establishes or replaces the bore.</li> </ul>			
<b>SoC1.3.5</b>	Austar Coal Mine will, prior to undermining of Quorrobolong Road, Nash Lane and Coney Creek Lane prepare and implement a Traffic Management Plan to manage any subsidence impacts on the roads and associated culverts and bridges in consultation with Cessnock City Council and DII and to the satisfaction of the Director-General.	<ul style="list-style-type: none"> <li>Subsidence Management Plan for long-walls A4 and A5, 24 Dec 2009</li> <li>Subsidence Management Plan Approval Long-wall 5A, 27 Apr 2011</li> </ul>	Noted	Refer to Project Approval Schedule 3 conditions 3 and 4
<b>SoC1.3.6</b>	Austar Coal Mine will prepare management plans in consultation with		Noted	

SoC No.	Statement of Commitment	Verification	Compliance	Comment
	relevant service providers, for the protection of infrastructure and services within the potential Stage 3 mine subsidence area to ensure these remain in a safe and serviceable condition throughout the mining period. These plans will be submitted to the Director General for approval as part of the EP prior to undermining of the services.			
<b>SoC1.4</b>	<b>Ecology</b>			
<b>SoC1.4.1</b>	Austar Coal Mine will establish and manage the proposed Biodiversity Offset Area (refer to Figure 7.1) to protect and enhance its ecological values in perpetuity, to the satisfaction of the Director-General.	Letter from B&M Properties re Austar Mine Purchase from Minister for National Parks and Wildlife Act, 11 Dec 2009 Transfer Certificate of Title 3/755225 to Austar Coal Mine Pty Ltd – Stamped Transfer of Folio Identifier 1/1145356	C	<b>Refer to PA 08-0111 Schedule 6 condition 3</b> A land swap with National Parks has occurred for the long term conservation security of the offset area. The transfer of the title to Austar Coal Mine of land Certificate of Title 3/755225 occurred from the Minister administering the National Parks and Wildlife Act 1974, on 11 December 2009.
<b>SoC1.4.2</b>	A Weed Management Plan will be developed for the Surface Infrastructure Site.		Not yet triggered	A Weed Management Plan will be prepared prior to commencement of the construction on the Surface Infrastructure Site.
<b>SoC1.4.3</b>	The Austar bushfire management strategy will be revised to include the specific requirements of the Surface Infrastructure Site during the construction and operation phases.	Bushfire Management Plan, Sep 2002	In progress	Revision of the existing Bushfire Management Strategy will occur prior to commencement of construction of buildings at the Surface Infrastructure Site commence.
<b>SoC1.4.4</b>	Prior to the commencement of construction of the Surface Infrastructure Site (other than for those works identified in the Shaft Construction Management Plan), an Austar Mine Complex Ecological Management Plan which integrates management of ecological issues associated with construction of the Surface Infrastructure Site, Stage 3 underground mining and with the remainder of Austar Coal Mine operations will be submitted to the Director-General for approval. This will include: <ul style="list-style-type: none"> <li>clearing procedures for establishment of the Surface Infrastructure Site and associated access road/services easement;</li> <li>replacement of arboreal habitat within surrounding areas or within the Biodiversity Offset Area, should the removal of any hollow-bearing trees be required; and</li> <li>extension of the existing Austar Coal Mine ecological monitoring program to include monitoring of vegetation condition within subsidence affected areas.</li> </ul>	Shaft Construction Environmental Management Plan, Nov 2009 Ecological Monitoring Program for the Stage 2 Long-wall Mining, Austar Coal Mine, Quorrobolong, Mar 2009	Not yet triggered	The Ecological Management Plan will be prepared prior to the commencement of surface works at the Surface Infrastructure Site.  The Shaft Construction Environmental Management Plan includes a pre-clearance procedure (section 5.2), and the Ecological Monitoring Program for the Stage 2 Long-wall Mining will be continued and extended to cover the Stage 3 area.
<b>SoC1.4.5</b>	Clearing of vegetation will be restricted to the minimum area necessary to construct the proposed infrastructure and provide adequate fire protection and will be undertaken in accordance with the tree felling procedure outlined in Section 7.5.3 of the EA.	Clearing, Excavation, Stake or Pile Driving Permits (EMP-P-007)	C	Any disturbance of land or vegetation requires completion of form EMP-P-007 and approval prior to vegetation removal for approved works.
<b>SoC1.4.6</b>	An appropriate speed limit on access roads will be implemented to minimise		C	Speed limits are imposed on all mine roads and

SoC No.	Statement of Commitment	Verification	Compliance	Comment
	the risk of vehicle collision with ground-dwelling fauna dispersing between adjacent habitats.			speed limits on public access roads will be complied with by mine related traffic.
SoC1.4.7	An appropriately designed nest box will be erected (either within remaining bushland areas or within the Biodiversity Offset Area) for the compensation of each tree hollow removed as a result of clearing required for construction of the proposed Surface Infrastructure Site.		Not triggered	No tree hollows were identified in trees removed for the recent mine development.
SoC1.4.8	Any outbreaks of invasive weeds observed on the property boundary will be appropriately controlled to avoid their escape into the surrounding Werakata State Conservation Area and subsequently competing with threatened flora species. Early detection will ensure the management required is not extensively onerous.		Noted	The management of weeds will be addressed in the Weed Management Plan to be prepared under SoC1.4.2.
SoC1.4.9	Any landscaping undertaken around infrastructure areas will use only locally occurring native plant species to reduce the risk of invasive plant species escaping into the adjacent reserve and competing with threatened flora species. Particular care will be taken to avoid planting species which are known to escape and naturalise into native bushland.		Noted	
SoC1.5	<b>Heritage</b>			
SoC1.5.1	An Aboriginal Cultural Heritage Management Plan (ACHMP) will be prepared for the Austar Mine Complex to outline all Aboriginal heritage management strategies for the project, responsibilities of all parties and the timeframe for required heritage works.	Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan, Nov 2009	Not triggered	<b>Refer to PA 08-0111 Schedule 4 condition 10</b> The Aboriginal Cultural Heritage Management Plan for Stage 3 Area will be revised/prepared prior to construction of the Surface Infrastructure Site and the commencement of second workings in Stage 3. The current shaft construction works are managed in accordance with Section 8 Managing and Aboriginal Objects or Skeletal Remains, Stage 3 Infrastructure Site Shaft Construction Environmental Management Plan section 7, November 2009.
SoC1.5.2	Austar will make a monetary contribution of \$100,000 to an Aboriginal project or program (to be decided by Aboriginal stakeholders) as an offset for any subsidence impacts that affect the grinding groove site. Austar will make this contribution when all necessary government approvals for the Project have been obtained.		Not triggered	
SoC1.5.3	No Aboriginal archaeological site be visited, or have works done there, without Aboriginal stakeholders in attendance.		Noted	
SoC1.5.4	Known sites on accessible properties will be included in a monitoring program. This will involve recording each site before and after subsidence to identify any impacts. This will be done by an archaeologist and Aboriginal stakeholders.		Noted	
SoC1.5.5	Aboriginal stakeholders (and an archaeologist if requested by Aboriginal stakeholders) will provide relevant Austar personnel with a cultural heritage awareness training session.		Noted	

SoC No.	Statement of Commitment	Verification	Compliance	Comment
SoC1.5.6	If any additional sites are found within the Project area, these will be inspected by an archaeologist and Aboriginal stakeholders where access is granted to assess the site and decide on how it should be managed.		Not triggered	
SoC1.5.7	If remediation works are required on any of the creek lines within the Stage 3 area, an archaeological survey with Aboriginal stakeholders will be undertaken prior to commencement of any works where access is granted.		Not triggered	
SoC1.5.8	Historic Heritage Management Plan incorporating all of Austar Mine Complex will be developed.		Not triggered	A Heritage Management Plan will be prepared prior to construction of buildings at the Surface Infrastructure Site and the commencement of second workings in Stage 3.
SoC1.6	<b>Surface Water and Drainage</b>			
SoC1.6.1	Austar will develop a detailed Soil and Water Management Plan for the Surface Infrastructure Site prior to commencement of construction.	<ul style="list-style-type: none"> <li>Shaft Construction Environmental Management Plan, Stage 3 Surface Infrastructure Site, Nov 2009</li> </ul>	Not triggered	Soil and water management is included in the Shaft Construction Environmental Management Plan, Stage 3 Surface Infrastructure Site, section 6 Erosion and Sediment Control, and section 7 Managing Water Use. A Soil and Water Management Plan for the Surface Infrastructure Site surface works will be prepared prior to commencement of construction.
SoC1.6.2	Erosion and sediment control measures will be designed and implemented for construction of surface infrastructure to a standard consistent with Managing Urban Stormwater: Soils and Construction (NSW Landcom 2004) (the Blue Book) and Guidelines for Establishing Drainage Lines on Rehabilitated Mine sites (Draft) (DLWC, 1999).	<ul style="list-style-type: none"> <li>Shaft Construction Environmental Management Plan, Stage 3 Surface Infrastructure Site, Nov 2009</li> </ul>	Not triggered	
SoC1.6.3	Any subsidence impacts on drainage lines will be effectively remediated where access is granted such that there is no significant impact on downstream water users and environmental flows. Drainage line monitoring and remediation protocols will be developed as part of the EP process, and in consultation with DECCW, to guide the management of subsidence impacts and drainage line remediation works on surface water systems. The drainage line monitoring and remediation protocols will include: <ul style="list-style-type: none"> <li>detailed monitoring protocols;</li> <li>a program to complete drainage remediation works in a timely manner, post-subsidence to limit the potential for surface water capture;</li> <li>details of the design of drainage line remediation works such that the rehabilitated drainage lines maintain a similar channel form and sinuosity to the pre-mining environment, to ensure that the overall erosive power of the creek system is consistent with that existing pre-mining;</li> <li>assessment of the viability and benefits of applying proactive measures such as the installation of liners or geo-fabrics in drainage lines prior to subsidence; and</li> </ul>		Not triggered	The existing Subsidence Management Plans for Long-walls A3 to A5 and A5A include procedures for managing subsidence impacts on drainage lines. A Subsidence Management Plan/Extraction Plan for the Stage 3 Area mining works will be prepared prior to commencement of long-wall coal extraction.

SoC No.	Statement of Commitment	Verification	Compliance	Comment
	<ul style="list-style-type: none"> <li>the existing Austar Site Water Management Plan will be extended to include the Surface Infrastructure Site and Stage 3 underground mining. The plan will be updated in consultation with DECCW and DII and submitted to the Director-General prior to commencement of construction of the Surface Infrastructure Site.</li> </ul>			
SoC1.6.4	Surface water monitoring results will be reported annually in the Annual Environmental Management Report.	<ul style="list-style-type: none"> <li>2010-2011 AEMR section 3.5</li> </ul>	C	<i>Refer PA 08-0111 Schedule 4 condition 9(b)(iii)</i> Surface water monitoring is reported in the annual reports (AEMR's).
SoC1.7	<b>Groundwater</b>			
SoC1.7.1	A groundwater monitoring program will be implemented for the project as outlined in Appendix 14, or as otherwise agreed by the Director-General in consultation with the DECCW.		C	<i>Refer to Project Approval Schedule 3 condition 9(iv)</i>
SoC1.7.2	The results of groundwater monitoring and a comparison of measured and predicted impacts will be reported annually in the Annual Environmental Management Report.	<ul style="list-style-type: none"> <li>2010-2011 AEMR section 3.6</li> </ul>	Ongoing	<i>Refer PA 08-0111 Schedule 4 condition 9(b)(iv)</i> Groundwater monitoring is reported in the annual reports (AEMR's).
SoC1.7.3	Impacts on privately-owned bores will be assessed by monitoring where access is granted and in the event that any utilised privately-owned bore is significantly affected, an alternative water supply will be provided by Austar Coal Mine until such time as the bore is re-established or replaced.		Noted	
SoC1.7.4	An annual analysis of surface and groundwater monitoring data will be undertaken and will include: <ul style="list-style-type: none"> <li>comparison of groundwater levels with rainfall information;</li> <li>identification of any changes or long-term trends in groundwater levels; and</li> <li>visual inspection of creeks and drainage lines</li> </ul>	<ul style="list-style-type: none"> <li>2010-2011 AEMR section 3.6</li> </ul>	C	<i>Refer PA 08-0111 Schedule 4 condition 9(b)(iv)</i> Groundwater monitoring is reported in the annual reports (AEMR's).
SoC1.7.5	The monitoring results and analysis findings will be reported in the Annual Environmental Management Report.	<ul style="list-style-type: none"> <li>2010-2011 AEMR section 3.6</li> </ul>	C	<i>Refer PA 08-0111 Schedule 4 condition 9(b)(iv)</i> Groundwater monitoring is reported in the annual reports (AEMR's).
SoC1.8	<b>Noise and Blasting</b>			

SoC No.	Statement of Commitment	Verification	Compliance	Comment		
<b>SoC1.8.1</b>	Unless otherwise agreed with the landowner, Austar Coal Mine will manage operations associated with the Stage 3 underground mining and Surface Infrastructure Site such that the noise emissions from these operations comply with the noise criteria included in Table 1.1 at surrounding residences for the range of meteorological conditions modelled in the EA. <i>Table 1.1 — Project Specific Noise Criteria</i>		Noted	<b>Refer to PA 08-0111 Schedule 4 condition 2</b>  As Stage 3 Area activities have not yet commenced, no noise monitoring has been conducted except for around the Kitchener SIS in accordance with the Shaft Construction Environmental Management Plan, Stage 3 Surface Infrastructure Site, November 2009.		
	<b>Location</b>	<b>Period</b>	<b>Intrusiveness Criteria LAeq(15minute)</b>		<b>Amenity Criteria Leq(Period)</b>	<b>Project Spec Noise Criter Lmq(15minu</b>
	Kitchener Residences	Day	38 dBA		50 dBA	38 dBA
		Evening	35 dBA		45 dBA	35 dBA
		Night	35 dBA		40 dBA*	35 dBA
	Serradilla Residence, Kauter Residence	Day	37 dBA		50 dBA	37 dBA
		Evening	37 dBA		45 dBA	37 dBA
Night		35 dBA	40 dBA	35 dBA		
<b>SoC1.8.2</b>	Unless otherwise agreed with the landowner, Austar Coal Mine will manage the construction phase of the Surface Infrastructure Site in accordance with the requirements of DECCW's Interim Construction Noise Guideline (2009).	• Shaft Construction Environmental Management Plan, Stage 3 Surface Infrastructure Site, Nov 2009	Noted			
<b>SoC1.8.3</b>	Acoustic bunding will be constructed to a height of 3.5 metres above ground level along the northern boundary adjacent to the car park and bathhouse.		Noted			
<b>SoC1.8.4</b>	The ventilation fan outlet will be directed to the west.		Noted	Not yet installed.		
<b>SoC1.8.5</b>	Man and materials winder and second egress winder motors will be enclosed.		Noted	Not yet installed.		
<b>SoC1.8.6</b>	Blasting will generally take place only once per day and will be undertaken between the hours of 9.00am to 5.00 pm Monday to Saturday with no blasting on Sundays or Public Holidays.		Noted			
<b>SoC1.8.7</b>	Airblast overpressure from blasting associated with shaft development at the Surface Infrastructure Site when measured at residences not associated with the development will not exceed a maximum of 120 dBL Linear Peak at any time and will not exceed 115 dBL for more than 5% of blasts over a 12 month period.		Noted	No blasting has been undertaken.		
<b>SoC1.8.8</b>	Peak particle velocity from blasting associated with shaft development at the Surface Infrastructure Site when measured at residences not associated with the development will not exceed a maximum of 10 mm/s at any time and will		Noted	No blasting has been undertaken.		

SoC No.	Statement of Commitment	Verification	Compliance	Comment								
	not exceed 5 mm/s for more than 5% of blasts over a 12 month period.											
<b>SoC1.9</b>	<b>Air Quality</b>											
<b>SoC1.9.1</b>	<p>Austar Coal Mine will manage operations associated with the operation of the Surface Infrastructure Site so that dust deposition as a result of the development does not exceed levels set out in Table 1.2 at nearest non-project related residences.</p> <p><i>Table 1.2 - Dust Deposition Criteria</i></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Maximum Increase in Deposited Dust Level</th> <th>Maximum Total</th> </tr> </thead> <tbody> <tr> <td>Deposited dust</td> <td>Annual</td> <td>2 g/m<sup>2</sup>/month</td> <td>4 g/m<sup>2</sup>/month</td> </tr> </tbody> </table> <p><i>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.</i></p>	Pollutant	Averaging Period	Maximum Increase in Deposited Dust Level	Maximum Total	Deposited dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month		Noted	<b>Refer to PA 08-0111 Schedule 4 condition 4</b>
Pollutant	Averaging Period	Maximum Increase in Deposited Dust Level	Maximum Total									
Deposited dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month									
<b>SoC1.9.2</b>	Austar Coal Mine will expand the existing dust monitoring network to include dust deposition gauges at locations to the south and north of the proposed Surface Infrastructure Site. Dust monitoring findings relating to the Surface Infrastructure Site will be reported annually in the Annual Environmental Management Report.		Noted	Expansion of the dust monitoring program will occur prior to commissioning of the Stage 3 shaft at Kitchener site. Air quality results are reported in the AEMR's section 3.3.								
<b>SoC1.10</b>	<b>Energy and Greenhouse Gas</b>											
<b>SoC1.10.1</b>	<p>Austar Coal Mine will develop and maintain an internal energy and GHG Management Plan for Stage 3 operations in accordance with Austar Coal Mine requirements. This will include reviewing:</p> <ul style="list-style-type: none"> <li>energy efficiency in plant and equipment procurement, consideration be given to the life cycle costs advantages obtained by using energy efficient components;</li> <li>the opportunity to install additional sub-metering for offices, workshops and winders;</li> <li>operational initiatives such as turning off idling plant equipment;</li> <li>control and temperature settings for air conditioning units in offices and switchrooms;</li> <li>automatic control of external and internal lighting;</li> <li>potential energy efficiency opportunities in water pumping and dust suppression systems (for example, variable speed drive pumps);</li> <li>review changes in power consumption with installation of new equipment and install power factor correction equipment to suit; and</li> <li>review workshop and bathhouse lighting and office and high bay lighting.</li> </ul>		Noted	<b>Refer to PA 08-0111 Schedule 4 condition 6</b> The Air Quality and Greenhouse Gas Management Plan for the mine complex will be prepared prior to the commencement of construction of the Surface Infrastructure Site.								
<b>SoC1.11</b>	<b>Visual</b>											

SoC No.	Statement of Commitment	Verification	Compliance	Comment
<b>SoC1.11.1</b>	<p>Austar Coal Mine will implement the following visual controls to screen or reduce the visual impact from views of the Surface Infrastructure Site from residential areas and public road locations:</p> <ul style="list-style-type: none"> <li>• Maintain a vegetative screen along the edges of the access road to the Surface Infrastructure Site.</li> <li>• Limit clearing on the Surface Infrastructure Site to that required for construction and bushfire protection purposes.</li> <li>• Use appropriate natural tones on the winder building to ensure that it blends into the backdrop of native forest when viewed from Kitchener and sections of Quorrobolong Road.</li> <li>• Direct night-time security lights into the site and ensure that all lighting is located and directed so as to not directly impact on residential or road locations. Lighting will be designed to minimise excessive night glow in a manner consistent with AS 4282 Control of the Obtrusive Effects of Outdoor Lighting.</li> <li>• All buildings potentially visible to the public to be coloured in suitable natural tones.</li> </ul>		Not yet triggered	<p><b>Refer to PA 08-0111 Schedule 4 condition 14</b></p> <p>The visual controls will be implemented when the Surface Infrastructure Site is constructed to screen or reduce the visual impact from residential areas and public road locations.</p>
<b>SoC1.121</b>	<b>Transport</b>			
<b>SoC1.12.1</b>	<p>To mitigate potential traffic impacts associated with the development of the Surface Infrastructure Site, Austar Coal Mine will:</p> <ul style="list-style-type: none"> <li>• Construct an Austroads type AUR intersection treatment with an auxiliary passing lane for through traffic on Quorrobolong Road around right turning traffic at the proposed Surface Infrastructure Site access.</li> <li>• Provide lighting at the proposed pit top facility access intersection on Quorrobolong Road.</li> <li>• Erect a left side road junction (W2-4) warning sign for northbound traffic approaching the proposed Surface Infrastructure Site access intersection to compensate for less than desirable Safe Intersection Site Distance (SISD).</li> <li>• Prepare a traffic management plan for oversize and heavy vehicle movements to and from the Surface Infrastructure Site during construction of the Stage 3 development. This Plan will take into consideration specific measures that may be required in regard to address school bus movements on Quorrobolong Road during the construction phase.</li> </ul>			<p><b>Refer to PA 08-0111 Schedule 4 condition 12</b></p> <p>Road works associated with the Surface Infrastructure Site will occur as the construction of the site progresses.</p>
<b>SoC1.13</b>	<b>Community</b>			
<b>SoC1.13.1</b>	<p>Austar Coal Mine will work with Cessnock City Council, the Department and Community Consultative Committee to incorporate representatives from the Stage 3 Project area. Austar Coal Mine will provide the Community Consultative Committee with regular information regarding the environmental management performance of the Stage 3 Project and any relevant matters</p>		C	<p><b>Refer to 08-0111 Schedule 7 condition 5</b></p> <p>The Community Consultative Committee (CCC) meets quarterly. The members of the CCC are: <b>Chairman</b> - Hon Garry West</p>

SoC No.	Statement of Commitment	Verification	Compliance	Comment
	regarding community relations.			<b>Community Representatives:</b> Louise Dews, David Holmes, Peter Sturrock and Alan Smith (three are from Stage 3 area) <b>Cessnock City Council Representative:</b> Cr Jeff Maybury <b>Austar Representatives:</b> Gary Mulhearn , David MacLean, Adrian Moodie
SoC1.13.2	Maintain a 24 hour per day community information and complaint line.		C	<b>Refer to EPL 416 condition M5.1</b> Austar Coal have a Community Contact Line set up for the sole purpose of receiving enquiries about the operations – 1800 701 986
SoC1.13.3	Provide regular updates of mine development and monitoring on the Austar Coal Mine website.		C	<b>Refer to PA 08-0111 Schedule 7 condition 9</b> Austar Coal place updates of mine development and monitoring on the company website: <a href="http://www.austarcoalmine.com.au">http://www.austarcoalmine.com.au</a>
SoC1.13.4	Austar Coal Mine will in consultation with Cessnock City Council contribute to the upgrade of the Wollombi Road/West Avenue intersection prior to commissioning of the Surface Infrastructure Site to provide a designated right turn lane into West Avenue to formalise traffic movements in this area and improve existing traffic problems associated with the right turn movement using the through lane and through vehicles passing in the bicycle lane/parking area.		Noted	<b>Refer to PA 08-0111 Schedule 4 condition 13</b>
SoC1.13.5	Install a type F flashing light control at the Vincent Street railway level crossing.		C Closed	Upgrading of the Vincent Street railway crossing includes a type F flashing light control.
SoC1.13.6	Provide support to Kitchener Public School through the provision of sporting equipment and contributions to school/community projects.		Not yet commenced	
SoC1.13.7	Contribute to the ongoing maintenance of Poppet Head Reserve, Kitchener.		Ongoing	Discussions are being held with Cessnock City Council.
SoC1.14	<b>Decommissioning and Rehabilitation</b>			
SoC1.14.1	A decommissioning plan will be prepared for the Surface Infrastructure Site as part of the MOP process and submitted to the DII for approval approx five years prior to the commencement of decommissioning works.		Not triggered	
SoC1.15	<b>Continuous Improvement of Existing Operations</b>			
SoC1.15.1	Austar Coal Mine will review and extend its current Site Water Management Plan for Austar Mine Complex to include Stage 3 operations and operation of the Surface Infrastructure Site. The water performance of the water management system will be reported in the Annual Environmental Management Report.		Noted	

Independent Environmental Audit – Austar Coal Mine – November 2011

SoC No.	Statement of Commitment	Verification	Compliance	Comment
SoC1.15.2	Activities within Austar Mine complex will be undertaken in accordance with approved Mining Operation Plan that will be reviewed and updated at least every seven years.	<ul style="list-style-type: none"> <li>• Mining Operations Plan 2008-2015</li> </ul>	C	The current Austar operations are undertaken in accordance with the MOP prepared for the period 2008 to 2015. A review and/or update will occur as required, or at least each 7 years.
SoC1.15.3	Austar Coal Mine will continue to implement the voluntary Noise Pollution Reduction Program for Pelton CHPP in consultation with DECCW.	<ul style="list-style-type: none"> <li>• CHPP Noise Pollution Reduction Program Status Report, July 2011</li> <li>• CHPP Noise Pollution Reduction Program Status Report, January 2011</li> <li>• CHPP Noise Pollution Reduction Program Status Report, July 2010</li> </ul>	C Ongoing	<b>Refer to EPL 416 conditions U1</b> A pollution reduction program related to the CHPP has been implemented and Austar have provided 6 monthly reports to the EPA on the progress with the upgrades to the CHPP to reduce noise impact from the operations of the plant
SoC1.15.4	Austar Coal Mine will commit to a Noise Management Plan that incorporates current noise monitoring, the voluntary Noise Pollution Reduction Program and associated noise management for Austar Mine Complex operations and will investigate reasonable and feasible noise mitigation strategies where appropriate.		C	<b>Refer to PA 08-0111 Schedule 4 condition 3</b>
SoC1.15.5	Austar Coal Mine will investigate opportunities for reduction in energy use and greenhouse gas emissions from the Austar Mine Complex. This will include: <ul style="list-style-type: none"> <li>• ongoing review of emissions monitoring and management technology;</li> <li>• review of coal operations and potential for improvement as part of producing clean coal through coal preparation to reduce moisture and ash content, sulphur, nitrogen and other contaminants. This results in reduced emissions of greenhouse gases and other pollutants when the coal is used; and</li> <li>• consider the application of the in-force National Greenhouse and Energy Reporting System (NGERS) and the Carbon Pollution Reduction System (CPRS) on Austar operations.</li> </ul>		Noted Ongoing	
SoC1.16	<b>Environmental Management, Monitoring, Auditing and Reporting</b>			
SoC1.161.	Austar Coal Mine will incorporate the Stage 3 Project into the Annual Environmental Management Report for Austar Mine Complex.	2010-2011 AEMR	C	The 2010-2011 AEMR includes some comments on the Stage 3 Area.
SoC1.16.2	Three years after commencement of the Stage 3 Project, and every three years thereafter, Austar Coal Mine will commission and pay the full cost of an Independent Environmental Audit of the project in consultation with the Director-General of the Department. A copy of the audit report will be provided to the Director-General of the Department and DII, DECCW, Cessnock City Council, and members of the Community Consultative Committee for the Stage 3 Project. This audit may be combined with other independent environmental audits 'required by the Director-General of the		Not triggered	

SoC No.	Statement of Commitment	Verification	Compliance	Comment
	Department.			

## Attachment D

### Environment Protection Licence No. 0416

EPL	Condition	Verification	Compliance	Comments								
<b>1</b>	<b>Administrative conditions</b>											
<b>A1</b>	<b>What the licence authorises and regulates</b>											
<b>A1.1</b>	Not applicable											
<b>A1.2</b>	<p>This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.</p> <p><b>Scheduled Activity</b>      Mining for Coal                         Coal Works</p> <p><b>Fee Based Activity</b>                      <b>Scale</b></p> <p>Mining for coal                              &gt; 500000 - 2000000 T produced</p> <p>Coal works                                      0 - 2000000 T loaded</p>		C	<p>Total ROM coal extracted by the Austar Mine during the 2009-2011 period was compliant with the Fee Based Activity limitation:</p> <table border="1"> <thead> <tr> <th>Period</th> <th>ROM Tonnage</th> </tr> </thead> <tbody> <tr> <td>2010-2011</td> <td>1,847,148</td> </tr> <tr> <td>2009-2010</td> <td>1,724,466</td> </tr> <tr> <td>2008-2009</td> <td>1,537,132</td> </tr> </tbody> </table>	Period	ROM Tonnage	2010-2011	1,847,148	2009-2010	1,724,466	2008-2009	1,537,132
Period	ROM Tonnage											
2010-2011	1,847,148											
2009-2010	1,724,466											
2008-2009	1,537,132											
<b>A1.3</b>	Not applicable.		NA									
<b>A2</b>	<b>Premises to which this licence applies</b>											
<b>A2.1</b>	The licence applies to the following premises:											
	<p><b>Premises Details</b></p> <p>Austar Coal Mine                      Wollombi Road, Pelton, NSW 2325                      Southland Colliery Holding, refer to locality plan Figure 1.1 forwarded to the EPA on 21/8/01.</p>		Noted									
<b>A3</b>	<b>Other activities</b>											
<b>A3.1</b>	Not applicable		NA									
<b>A4</b>	<b>Information supplied to the EPA</b>											
<b>A4.1</b>	<p>Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.</p> <p>In this condition the reference to "the licence application" includes a reference to:</p> <p>(a) the applications for any licences (including former pollution</p>		Noted									

EPL	Condition	Verification	Compliance	Comments											
	control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence														
<b>2</b>	<b>Discharges to air and water and applications to land</b>														
<b>P1</b>	<b>Location of monitoring/discharge points and areas</b>														
<b>P1.1</b>	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. <i>Air</i>		C	A meteorological station has been established by Austar Coal at the CHPP site to measure wind speed and direction, sigma/theta temperature, rainfall, dew point.											
	<table border="1"> <thead> <tr> <th>EPL Ident. No.</th> <th>Type of Monitoring Point</th> <th>Description of Location</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>Weather</td> <td>To be provided by licensee</td> </tr> </tbody> </table>	EPL Ident. No.	Type of Monitoring Point	Description of Location	7	Weather	To be provided by licensee								
EPL Ident. No.	Type of Monitoring Point	Description of Location													
7	Weather	To be provided by licensee													
<b>P1.2</b>	The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.														
<b>P1.3</b>	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. <i>Water and land</i>	<ul style="list-style-type: none"> <li>Site Water Management Plan, Mar 2009</li> <li>Surface Water Monitoring Program, dated Mar 2009</li> </ul>	C	Austar have included each of the approved monitoring /discharge points in the Surface Water Monitoring Program, dated March 2009											
	<table border="1"> <thead> <tr> <th>EPL No.</th> <th>Type of Monitoring / Discharge Point</th> <th>Description of Location</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Wet weather discharge; Discharge quality monitoring; Volume monitoring</td> <td>Spillway of emergency dam at the Pelton Coal Preparation Plant site, labelled 1 on amended Figure 5, Water Management System, submitted to the EPA on 21/11/01.</td> </tr> <tr> <td>2</td> <td rowspan="2">Ambient water quality monitoring</td> <td>Bellbird Creek labelled as 4 on amended Figure 5 entitled Water Management System, submitted to the EPA on 21/11/01</td> </tr> <tr> <td>4</td> <td>Bellbird Creek labelled as 4 on amended Figure 5 entitled Water Management System, submitted to the EPA on 21/11/01</td> </tr> </tbody> </table>	EPL No.	Type of Monitoring / Discharge Point	Description of Location	1	Wet weather discharge; Discharge quality monitoring; Volume monitoring	Spillway of emergency dam at the Pelton Coal Preparation Plant site, labelled 1 on amended Figure 5, Water Management System, submitted to the EPA on 21/11/01.	2	Ambient water quality monitoring	Bellbird Creek labelled as 4 on amended Figure 5 entitled Water Management System, submitted to the EPA on 21/11/01	4	Bellbird Creek labelled as 4 on amended Figure 5 entitled Water Management System, submitted to the EPA on 21/11/01			
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EPL	Condition		Verification	Compliance	Comments
	5		The unnamed creek labelled as 5 on amended Figure 5 entitled Water Management System, submitted to the EPA on 21/11/01.at the Western Boundary of the Pelton Mine landholding.		
	6	Discharge to waters; Discharge quality monitoring; Volume monitoring	Discharge from 1ML permeate tank as shown on Drawing No. Proposed Relocation of EPL 416 Discharge Point 6, dated 8/12/09.		
<b>3</b>	<b>Limit conditions</b>				
<b>L1</b>	<b>Pollution of waters</b>				
<b>L1.1</b>	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 Environment Operations Act 1997</i> .		<i>Protection of the Environment Operations Act 1997, section 120</i>	Noted	
<b>L1.2</b>	Discharge from Point 1 is permitted only when the discharge occurs solely as a result of rainfall at the premises exceeding: a) total of 168 millimetres over any consecutive five day period; or b) 48 millimetres in less than any consecutive 12 hour period			C	No discharge has occurred from Point 1 during the 2008-2011 period.
<b>L2</b>	<b>Load limits</b>				
<b>L2.1</b>	Not applicable.			NA	
<b>L3</b>	<b>Concentration limits</b>				
<b>L3.1</b>	For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.			Noted	
<b>L3.2</b>	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges:			Noted	

EPL	Condition	Verification	Compliance	Comments																											
	<p><i>Water and Land</i></p> <p><b>Point 1</b></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of Measure</th> <th>100 percentile Conc Limit</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>pH Units</td> <td>6.5 to 8.5</td> </tr> <tr> <td>Iron</td> <td rowspan="3">milligrams per litre</td> <td>1</td> </tr> <tr> <td>Total Dissolved Solids</td> <td>6000</td> </tr> <tr> <td>Total Suspended Solids</td> <td>50</td> </tr> </tbody> </table> <p><b>Point 6</b></p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Units of Measure</th> <th>100 percentile Conc Limit</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>pH Units</td> <td>6.5 to 8.5</td> </tr> <tr> <td>Electrical Conductivity</td> <td>microsiemens per centimetre</td> <td>600</td> </tr> <tr> <td>Iron</td> <td rowspan="2">milligrams per litre</td> <td>1</td> </tr> <tr> <td>Total Suspended Solids</td> <td>50</td> </tr> </tbody> </table>	Pollutant	Units of Measure	100 percentile Conc Limit	pH	pH Units	6.5 to 8.5	Iron	milligrams per litre	1	Total Dissolved Solids	6000	Total Suspended Solids	50	Pollutant	Units of Measure	100 percentile Conc Limit	pH	pH Units	6.5 to 8.5	Electrical Conductivity	microsiemens per centimetre	600	Iron	milligrams per litre	1	Total Suspended Solids	50		Noted	
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L3.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.		Noted																												
L4	<b>Volume and mass limits</b>																														
L4.1	<p>For each discharge point or utilisation area specified below (by a point number), the volume/mass of:</p> <p>(a) liquids discharged to water; or;</p> <p>(b) solids or liquids applied to the area;</p> <p>must not exceed the volume/mass limit specified for that discharge point or area.</p> <table border="1"> <thead> <tr> <th>Point</th> <th>Units of Measure</th> <th>Volume/Mass Limit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Kilolitres per day</td> <td>2000</td> </tr> <tr> <td>6</td> <td>Measure 1</td> <td>2000</td> </tr> </tbody> </table> <p>For the purpose of this condition 'Measure 1' means KL/day measured as an annual average</p>	Point	Units of Measure	Volume/Mass Limit	1	Kilolitres per day	2000	6	Measure 1	2000	<ul style="list-style-type: none"> <li>Annual Return 31 Dec 2009 to 30 Dec 2010</li> <li>Annual Return 31 Dec 2008 to 30 Dec 2009</li> <li>Annual Return 31 Dec 2007 to 30 Dec 2008</li> </ul>	C	<p>The Annual Return to the EPA provides the volumes of water discharged from Point 6 (no discharge has occurred from Point 1). The annual average discharge is compliant with the L4.1 criteria:</p> <table border="1"> <thead> <tr> <th colspan="4">Volume/Mass Monitoring Summary</th> </tr> <tr> <th></th> <th>2010-11</th> <th>2009-10</th> <th>2008-09</th> </tr> </thead> <tbody> <tr> <td>Point 1</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Point 6</td> <td>919kl/d</td> <td>649kl/d</td> <td>16.94kl/d</td> </tr> </tbody> </table>	Volume/Mass Monitoring Summary					2010-11	2009-10	2008-09	Point 1	0	0	0	Point 6	919kl/d	649kl/d	16.94kl/d		
Point	Units of Measure	Volume/Mass Limit																													
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Point 6	919kl/d	649kl/d	16.94kl/d																												
L5	<b>Waste</b>																														
L5.1	Not applicable																														
L6	<b>Noise Limits</b>	*****																													

EPL	Condition	Verification	Compliance	Comments
L6.1	Not applicable		NA	
<b>4</b>	<b>Operating conditions</b>			
<b>O1</b>	<b>Activities must be carried out in a competent manner</b>			
<b>O1.1</b>	Licensed activities must be carried out in a competent manner. This includes: (a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and (b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.		Noted	
<b>O2</b>	<b>Maintenance of plant and equipment</b>			
<b>O2.1</b>	All plant and equipment installed at the premises or used in connection with the licensed activity: (a) must be maintained in a proper and efficient condition; and (b) must be operated in a proper and efficient manner		Noted	
<b>O3</b>	<b>Dust</b>			
<b>O3.1</b>	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.		C	As most of the Austar operations and activities are underground (except for the CHPP area), dust generation is not a major issue. Dust deposition monitoring has indicated compliance with the dust criteria for the Austar operations.
<b>5</b>	<b>Monitoring and recording conditions</b>			
<b>M1</b>	<b>Monitoring records</b>			
<b>M1.1</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		Noted	
<b>M1.2</b>	All records required to be kept by this licence must be: (a) in a legible form, or in a form that can readily be reduced to a legible form; (b) kept for at least 4 years after the monitoring or event to which they relate took place; and (c) produced in a legible form to any authorised officer of the EPA who asks to see them		Noted	
<b>M1.3</b>	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: (a) the date(s) on which the sample was taken; (b) the time(s) at which the sample was collected; (c) the point at which the sample was taken; and		C	All monitoring records kept by Austar provide the date and time on which the sample was collected, sampling point and name of the person taking the sample.

EPL	Condition	Verification	Compliance	Comments																																									
	(d) the name of the person who collected the sample																																												
<b>M2</b>	<b>Requirement to monitor concentration of pollutants discharged</b>																																												
<b>M2.1</b>	<p>For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:</p> <p><i>Water and Land</i></p> <table border="1"> <thead> <tr> <th>Point 1</th> <th>Units of Measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>pH</td> <td rowspan="4">Special Frequency 1</td> <td rowspan="4">Grab sample</td> </tr> <tr> <td>Conductivity</td> <td>µS/cm</td> </tr> <tr> <td>Iron</td> <td rowspan="2">Milligrams per litre</td> </tr> <tr> <td>TSS</td> </tr> <tr> <td>TDS</td> <td></td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Point 2, 4, and 5</th> <th>Units of Measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>pH</td> <td rowspan="4">Special Frequency 2</td> <td rowspan="4">Grab sample</td> </tr> <tr> <td>Conductivity</td> <td>µS/cm</td> </tr> <tr> <td>Iron</td> <td rowspan="2">Milligrams per litre</td> </tr> <tr> <td>TSS</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Point 6</th> <th>Units of Measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>pH</td> <td rowspan="4">Once a month (min. of 4 weeks)</td> <td rowspan="4">Grab sample</td> </tr> <tr> <td>Conductivity</td> <td>µS/cm</td> </tr> <tr> <td>Iron</td> <td rowspan="2">Milligrams per litre</td> </tr> <tr> <td>TSS</td> </tr> </tbody> </table> <p><i>Special Frequency 1 means daily collected at a minimum of twelve hourly intervals when a discharge is occurring.</i></p> <p><i>Special Frequency 2 means three times per week during any period of discharge from Point 1 at a minimum of 48 hour intervals commencing as soon as practical after discharge has commenced.</i></p>	Point 1	Units of Measure	Frequency	Sampling Method	pH	pH	Special Frequency 1	Grab sample	Conductivity	µS/cm	Iron	Milligrams per litre	TSS	TDS		Point 2, 4, and 5	Units of Measure	Frequency	Sampling Method	pH	pH	Special Frequency 2	Grab sample	Conductivity	µS/cm	Iron	Milligrams per litre	TSS	Point 6	Units of Measure	Frequency	Sampling Method	pH	pH	Once a month (min. of 4 weeks)	Grab sample	Conductivity	µS/cm	Iron	Milligrams per litre	TSS	Environmental Monitoring Program, Jun 2010	C	The monitoring requirements in M2.1 are included in Austar Environmental Monitoring Program.
Point 1	Units of Measure	Frequency	Sampling Method																																										
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EPL	Condition	Verification	Compliance	Comments
	<i>Once per month during any period of discharge from Point 6 at a minimum of 4 weekly intervals</i>			
<b>M3</b>	<b>Testing methods - concentration limits</b>			
<b>M3.1</b>	Not applicable		NA	
<b>M3.2</b>	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.		C	All samples are analysed at NATA registered laboratories using approved methods.
<b>M4</b>	<b>Recording of pollution complaints</b>			
<b>M4.1</b>	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.		C	Complaints are recorded in a Complaints register maintained by the Environmental Manager.
<b>M4.2</b>	The record must include details of the following: (a) the date and time of the complaint; (b) the method by which the complaint was made; (c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; (d) the nature of the complaint; (e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and (f) if no action was taken by the licensee, the reasons why no action was taken	<ul style="list-style-type: none"> <li>Complaints Register</li> <li>2010-2011 AEMR Appendix G</li> <li>2009-2010 AEMR Appendix G</li> <li>2008-2009 AEMR Appendix G</li> </ul>	C	The Complaints Register records: a) date and time of the complaint; b) method by which the complaint was made; c) details of the complainant which were provided by the complainant; d) nature of the complaint; e) follow up action taken by Austar in relation to the complaint; and f) comments if no action was taken.
<b>M4.3</b>	The record of a complaint must be kept for at least 4 years after the complaint was made		C	A copy of all complaints is retained by the Environmental and Community Manager.
<b>M4.4</b>	The record must be produced to any authorised officer of the EPA who asks to see th		Noted	
<b>M5</b>	<b>Telephone complaints</b>			
<b>M5.1</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	Newcastle Herald, 16 Oct 2009 Community Info Line, Austar Coal Mine website	C	Austar Coal have a Community Contact Line set up for the sole purpose of receiving enquiries about the operations – 1800 701 986. Community Info line for Stage 3 Notified as 02 4993 7200 on the Austar Coal Mine website – <a href="http://www.austarcoalmine.com.au/community">http://www.austarcoalmine.com.au/community</a> .
<b>M5.2</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.	Newcastle Herald, 16 Oct 2009	C	Austar Coal Community Contact Line 1800 701 986 Notified in the Newcastle Herald and on the Austar website.

EPL	Condition	Verification	Compliance	Comments																	
<b>M5.3</b>	Conditions M5.1 and M5.2 do not apply until 3 months after: the date of the issue of this licence or (b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation		Noted																		
<b>M6</b>	<b>Requirement to monitor volume or mass</b>																				
<b>M6.1</b>	For each discharge point or utilisation area specified below, the licensee must monitor: (a) the volume of liquids discharged to water or applied to the area; (b) the mass of solids applied to the area; (c) the mass of pollutants emitted to the air; at the frequency and using the method and units of <table border="1" data-bbox="293 619 943 839"> <thead> <tr> <th colspan="3">Point 1</th> </tr> <tr> <th>Frequency</th> <th>Units of Measure</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>SF1</td> <td>Kilolitres/day</td> <td>In line instrumentation</td> </tr> <tr> <th colspan="3">Point 6</th> </tr> <tr> <th>Frequency</th> <th>Units of Measure</th> <th>Sampling Method</th> </tr> <tr> <td>Monthly</td> <td>Kilolitres/day</td> <td>In line instrumentation</td> </tr> </tbody> </table> <p><i>Special Frequency 1 (SF1) means daily collected at a minimum of twelve hourly intervals when a discharge is occurring.</i></p>	Point 1			Frequency	Units of Measure	Sampling Method	SF1	Kilolitres/day	In line instrumentation	Point 6			Frequency	Units of Measure	Sampling Method	Monthly	Kilolitres/day	In line instrumentation	C	Discharge of permeate from the RO Water Treatment Plan occurs from Point 6 to Bellbird Creek. The volume of discharge is recorded in Kilolitres/day for Point 6.
Point 1																					
Frequency	Units of Measure	Sampling Method																			
SF1	Kilolitres/day	In line instrumentation																			
Point 6																					
Frequency	Units of Measure	Sampling Method																			
Monthly	Kilolitres/day	In line instrumentation																			
<b>M7</b>	<b>Environmental Monitoring</b>																				
<b>M7.1</b>	The meteorological weather station must be maintained so as to be capable of continuously monitoring the parameters specified in condition M7.2.		C																		

EPL	Condition	Verification	Compliance	Comments																					
<b>M7.2</b>	<p>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:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Units of Measure</th> <th>Frequency</th> <th>Averaging Period</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Air temp</td> <td>°C</td> <td rowspan="5">Continuous</td> <td>1 hour</td> <td>AM-4</td> </tr> <tr> <td>Wind direction</td> <td>°</td> <td rowspan="4">15 minute</td> <td rowspan="4"></td> </tr> <tr> <td>Wind speed</td> <td>m/s</td> </tr> <tr> <td>Sigma theta</td> <td>°</td> </tr> <tr> <td>Rainfall</td> <td>mm</td> <td>AM-4</td> </tr> </tbody> </table>	Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method	Air temp	°C	Continuous	1 hour	AM-4	Wind direction	°	15 minute		Wind speed	m/s	Sigma theta	°	Rainfall	mm	AM-4	Email from Carbon Based Environmental re Austar Meteorological Station, 12 Jan 2011	C	<p>Carbon Based Environmental provided advice that the Vantage Pro 2 Complete System installed at the Austar site meets the class of station that is standard in AM-2 Guide for measurement of horizontal wind for air quality applications (AS2923-1987).</p> <p>Use of the wind sensor and sigma theta calculator the Vantage Pro 2 also complies with the AM-4 Meteorological monitoring guidance for regulatory mining applications (USPA (2000) EPA 454/R-99-005).</p>
Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method																					
Air temp	°C	Continuous	1 hour	AM-4																					
Wind direction	°		15 minute																						
Wind speed	m/s																								
Sigma theta	°																								
Rainfall	mm				AM-4																				
<b>M7.3</b>	Rainfall at the premises must be measured and recorded in millimetres per 24 hour period, at the same time each day.		C	Rainfall is measured continuously and results are available at any nominated time each day.																					
<b>6</b>	<b>Reporting conditions</b>																								
<b>R1</b>	<b>Annual return documents</b>																								
	<b>What documents must an Annual Return contain?</b>																								
<b>R1.1</b>	<p>The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:</p> <p>(a) a Statement of Compliance; and</p> <p>(b) a Monitoring and Complaints Summary.</p> <p>A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA</p>	<ul style="list-style-type: none"> <li>Annual Return 31 Dec 2009 to 30 Dec 2010</li> <li>Annual Return 31 Dec 2008 to 30 Dec 2009</li> <li>Annual Return 31 Dec 2007 to 30 Dec 2008</li> </ul>	C	The Annual Returns prepared by Austar Coal for submission to the EPA include a signed Statement of Compliance and a Monitoring Compliance Summary.																					
	<b>Period covered by Annual Return</b>																								
<b>R1.2</b>	<p>An Annual Return must be prepared in respect of each reporting period, except as provided below.</p> <p><i>Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period</i></p>	<ul style="list-style-type: none"> <li>Annual Return 31 Dec 2009 to 30 Dec 2010</li> <li>Annual Return 31 Dec 2008 to 30 Dec 2009</li> <li>Annual Return 31 Dec 2007 to 30 Dec 2008</li> </ul>	C	The 12 month period covered by the Annual Return for the Austar Mine Complex is 31 December to 30 December.																					

EPL	Condition	Verification	Compliance	Comments
		Dec 2008		
<b>R1.3</b>	<p>Where this licence is transferred from the licensee to a new licensee:</p> <p>(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</p> <p>(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.</p> <p><i>Note: An application to transfer a licence must be made in the approved form for this purpose.</i></p>		Noted	
<b>R1.4</b>	<p>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:</p> <p>(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or</p> <p>(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.</p>		Noted	
	<b>Deadline for Annual Return</b>			
<b>R1.5</b>	The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	<ul style="list-style-type: none"> <li>• Annual Return 31 Dec 2009 to 30 Dec 2010</li> <li>• Letter to EPA with Annual Return 9 Feb 2011</li> <li>• Annual Return 31 Dec 2008 to 30 Dec 2009</li> <li>• Letter to EPA with Annual Return, 24 Feb 2010</li> <li>• Annual Return 31 Dec 2007 to 30 Dec 2008</li> </ul>	C	The Annual Returns have been submitted to the EPA within 60 days of the end of the reporting period.
	<b>Notification where actual load cannot be calculated</b>			
<b>R1.6</b>	Not applicable		NA	
	<b>Licensee must retain copy of Annual Return</b>			
<b>R1.7</b>	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.		C	A copy of each Annual Return is retained by the Environmental Manager.

EPL	Condition	Verification	Compliance	Comments
	<b>Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary</b>			
<b>R1.8</b>	Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: (a) the licence holder; or (b) by a person approved in writing by the EPA to sign on behalf of the licence holder	<ul style="list-style-type: none"> <li>Annual Return 31 Dec 2009 to 30 Dec 2010</li> <li>Annual Return 31 Dec 2008 to 30 Dec 2009</li> <li>Annual Return 31 Dec 2007 to 30 Dec 2008</li> </ul>	C	The Statement of Compliance within the Annual Return has been signed by the Managing Director and a Director or Company Secretary each year.
<b>R1.9</b>	A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.		Noted	
<b>R2</b>	<b>Notification of environmental harm</b>			
<b>R2.1</b>	Notifications must be made by telephoning the Environment Line service on 131 555.		Noted	
<b>R2.2</b>	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	<ul style="list-style-type: none"> <li>Incident Report Sediment Basin Discharge, Surface Infrastructure Site, Kitchener, 10 Jun 2011</li> <li>Incident Report: Pacific National Locomotive Engine Failure, 2 May 2011</li> </ul>	C	The EPA has been notified of incidents and Incident Report submitted to the EPA: <ul style="list-style-type: none"> <li>Incident occurred on 31 May 2011 and the Incident Report Sediment Basin Discharge, Surface Infrastructure Site was submitted to the EPA on 10 June 2011</li> <li>Incident occurred on 23 April 2011 and the Incident Report: Pacific National Locomotive Engine Failure, was submitted to the EPA on 2 May 2011</li> </ul>
<b>R3</b>	<b>Written report</b>			
<b>R3.1</b>	Where an authorised officer of the EPA suspects on reasonable grounds that: (a) where this licence applies to premises, an event has occurred at the premises; or (b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event		Noted	
<b>R3.2</b>	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request		Noted	

EPL	Condition	Verification	Compliance	Comments
<b>R3.3</b>	The request may require a report which includes any or all of the following information: (a) the cause, time and duration of the event; (b) the type, volume and concentration of every pollutant discharged as a result of the event; (c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; (d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; (e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; (f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and (g) any other relevant matters		Noted	
<b>R3.4</b>	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request		Noted	
	<b>General conditions</b>			
<b>G1</b>	<b>Copy of licence kept at the premises</b>			
<b>G1.1</b>	A copy of this licence must be kept at the premises to which the licence applies.		C	Copies of the EPL are kept on site by the Environment Manager.
<b>G1.2</b>	The licence must be produced to any authorised officer of the EPA who asks to see it.		Noted	
<b>G1.3</b>	The licence must be available for inspection by any employee or agent of the licensee working at the premises		Noted	
	<b>Pollution studies and reduction programs</b>			
<b>U1</b>	<b>Coal Handling and Preparation Plant Noise Reduction Program</b>			
<b>U1.1</b>	The licensee must complete the following noise control options as identified in the report " <i>Austar Coal CHPP Assessment of Noise Impacts</i> " prepared by Global Acoustics Pty Ltd and dated 15 September 2008 ("the Report"). a) Upgrade the acoustic performance of the CHPP external walls and roof using one of the methods outlined in Section 4.4.1 of	<ul style="list-style-type: none"> <li>CHPP Noise Pollution Reduction Program Status Report, July 2011</li> <li>CHPP Noise Pollution Reduction Program Status Report, January 2011</li> </ul>	C Ongoing	Austar have provided six monthly reports to the EPA on the progress with the upgrade to the CHPP to reduce noise impact from the operations of the plant including: <div style="border: 1px solid black; padding: 2px; width: fit-content;">Noise Reduction Works on the CHPP Building</div>

EPL	Condition	Verification	Compliance	Comments																	
	<p>the Report. Where practical this includes closing all openings above ground level with either doors or otherwise sealing openings.</p> <p><b>Date for Completion: 31 December 2011</b></p> <p>b) Construct a noise bund around the CHPP as indicated in Figure 15 of the Report.</p> <p><b>Date for Completion: 31 December 2012</b></p>	<ul style="list-style-type: none"> <li>CHPP Noise Pollution Reduction Program Status Report, July 2010</li> </ul>		<table border="1"> <thead> <tr> <th>Works Undertaken</th> <th>Date / Completion</th> </tr> </thead> <tbody> <tr> <td>Western wall of CHPP</td> <td>July 2010</td> </tr> <tr> <td>Roof of CHPP</td> <td>September 2010</td> </tr> <tr> <td>Northern wall of west CHPP building module</td> <td>Q1 2011</td> </tr> <tr> <td>Eastern wall of west CHPP building module</td> <td>Commenced Oct 2010</td> </tr> <tr> <td>North wall CHPP</td> <td>Dors installed Jul 2011</td> </tr> <tr> <td>East wall CHPP</td> <td>July 2011</td> </tr> <tr> <td>South wall CHPP</td> <td>July 2011</td> </tr> </tbody> </table>	Works Undertaken	Date / Completion	Western wall of CHPP	July 2010	Roof of CHPP	September 2010	Northern wall of west CHPP building module	Q1 2011	Eastern wall of west CHPP building module	Commenced Oct 2010	North wall CHPP	Dors installed Jul 2011	East wall CHPP	July 2011	South wall CHPP	July 2011	
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<b>U1.2</b>	<p>The licensee must submit noise monitoring and verification reports to the EPA's Regional Manager, Hunter after the completion of each stage of noise mitigation works. The reports must include, but need not be limited to the following:</p> <p>(a) Results of noise monitoring conducted to verify the noise level predictions in the Report for noise emissions from the CHPP and associated activities following the completion of noise reduction works;</p> <p>(b) A comparison of measured noise levels with the Project Specific Noise Levels identified in the Report;</p> <p>(c) Identification of further noise reduction or mitigation strategies that could be implemented to address noise levels that exceed the Project Specific Noise Levels at any residential or other sensitive receiver;</p> <p><b>Due dates for submission of reports:</b> Every 6 months – with first report due 31 July 2009</p>	<ul style="list-style-type: none"> <li>CHPP Noise Pollution Reduction Program Status Report, July 2011</li> <li>CHPP Noise Pollution Reduction Program Status Report, January 2011</li> <li>CHPP Noise Pollution Reduction Program Status Report, July 2010</li> </ul>	C Ongoing	<p>The six monthly noise reports for the PRP provide noise monitoring data and comments on the progress of the works:</p> <p>(a) Noise monitoring has been conducted and reported in the six monthly reports;</p> <p>(b) Trends in reduced noise levels off site are not yet inferred due to large openings in the building walls during the panel fitting process.</p> <p>(c) Refinement / revision of the noise bund and construction to achieve the noise reduction predicted in the Noise Report modelling is being reviewed. Reduction in noise at the receivers from the noise bund construction is variable and other options for noise reduction are being considered.</p>																	
<b>U1.3</b>	<p>Noise generated from the premises must not exceed the noise limits presented below during the Coal Handling and Preparation Plant Noise Reduction Program:</p> <table border="1"> <thead> <tr> <th>Receiver</th> <th>dB(A)L<sub>90</sub></th> </tr> </thead> <tbody> <tr> <td>Pelton Village</td> <td>43</td> </tr> <tr> <td>Pyne Residence</td> <td>40</td> </tr> <tr> <td>O'Hearn Residence</td> <td>37</td> </tr> </tbody> </table>	Receiver	dB(A)L <sub>90</sub>	Pelton Village	43	Pyne Residence	40	O'Hearn Residence	37	<p>CHPP Noise Pollution Reduction Program Status Report, July 2011</p> <p>CHPP Noise Pollution Reduction Program Status Report, January 2011</p> <p>CHPP Noise Pollution Reduction Program Status Report, July 2010</p>	C	<p>The noise monitoring data has been conducted quarterly since 2007, at five sites in relation to the CHPP noise impact since 2007. The results have indicated that noise received at the sites were generally compliant with the limits presented in U1.3, with noise levels from the CHPP only exceeding the EPL limit by 1-2dB except for two occasions. The exceedences since 2007 were:</p> <table border="1"> <thead> <tr> <th>Site</th> <th>Date</th> <th>L<sub>A90</sub> exceedence</th> </tr> </thead> <tbody> <tr> <td>Day</td> <td></td> <td></td> </tr> <tr> <td>R02</td> <td>19 Apr 2007</td> <td>2</td> </tr> </tbody> </table>	Site	Date	L <sub>A90</sub> exceedence	Day			R02	19 Apr 2007	2
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EPL	Condition	Verification	Compliance	Comments		
				Evening		
				R11	29 Jun 2009	4
				R07	13 Aug 2010	3
				Night		
				R12	10 Apr 2007	1
				R12	26 Jun 2009	1
				R11	5 Aug 2010	1
<b>U1.4</b>	The noise limits apply during day or night-time under winds up to 3 metres per second (measured at 10 metres above ground level) and Pasquill stability class from A to F.		Noted			
<b>U1.5</b>	Noise from the premises is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise limits in Condition L6.1 unless otherwise stated. Where it can be demonstrated that direct measurement of noise from the premises is impractical, the DECCW may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy. The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.		Noted			
<b>U2</b>	<b>Noise Impact Assessment</b>					
<b>U2.1</b>	The Licensee must prepare a noise impact assessment of the following noise generating sites; <ul style="list-style-type: none"> <li>Aberdare reject emplacement area;</li> <li>Current pit top area; and,</li> <li>No.1 shaft area.</li> </ul> The noise impact assessment must be prepared by a suitably qualified acoustic practitioner and be prepared in accordance with the guidelines as described in the "NSW Industrial Noise Policy", Environment Protection Authority 2000. <b>Due date: 30 December 2010</b>	<ul style="list-style-type: none"> <li>Noise Impact Assessment Aberdare Reject Emplacement, Dec 2010</li> <li>Noise Impact Assessment Pit Top Area, Dec 2010</li> <li>Noise Impact Statement No.1 Shaft Area, Dec 2010</li> <li>Letter from EPA re Noise Impact Assessments, 18 Nov 2011</li> </ul>	C	Noise assessments were conducted for the Aberdare reject emplacement area; current pit top area; and No.1 shaft area and submitted to the OEH in accordance with condition U2.1. EPA acknowledged receipt of the reports on 18 November 2011.		
	<b>Special conditions</b>					
<b>E1</b>	<b>E1 Advice to Black Creek Water Users</b>					
<b>E1.1</b>	The licensee must maintain a system acceptable to water users on Black Creek for advising those water users registered with the		Noted	No discharge from Point 1 has occurred during the 2009-2011 period.		

EPL	Condition	Verification	Compliance	Comments
	<p>company of the discharge of waters from discharge point 1.</p> <p>Where possible, water users will be advised within the 24 hour period immediately prior to the commencement of any discharge. Where prior advice is not possible, advice will be given as soon as practicable after discharge commences.</p> <p>The licensee will advise water users of the conductivity of water being discharged. The conductivity of the waters of Bellbird Creek at the intersection of Black Creek with Lomas Lane will be advised to water users on request</p>			

## Attachment E

### Consolidated Mining Lease No. 2 (Instrument of Renewal)

ML No.	Conditions	Verification	Compliance	Comments
	<b>INSTRUMENT OF RENEWAL</b>			
	<p>ML Holder: Austar Coal Mine Pty Limited ACN 111 910 822</p> <p>Date of Lease: 24 March 1993</p> <p>Expiry Date of Lease: 15 May 2009</p> <p>Period of Renewal Until: 6 July 2025</p>			
	<p>ML Area: 3406 hectares</p> <p>as shown on Plan No. M27131</p>			
	<p>Depth Restriction: Various to a maximum depth of 900 metres below Australian Height Datum (AHD)</p> <p>Minerals: Coal</p>			
	<p>Amendments to Conditions of the Consolidated Mine Lease:                      All the Conditions contained in the lease prior to the renewal have been deleted.                      The lease is now subject to the attached Mining Lease Conditions 2008 numbered:                      Conditions 1-23 (inclusive), 25, 26 and 28-35 (inclusive)  <b>(NB: Condition Nos. 2-8 inclusive and 17-23 inclusive are identified as conditions relating to environmental management for the purposes of Sections 125(3) and 374A of the Mining Act 1992).</b></p>			
	<b>CONSOLIDATED MINING LEASE CONDITIONS 2008</b>			
1	<b>Notice to Landholders</b>	<ul style="list-style-type: none"> <li>Cessnock Advertiser, Renewal of</li> </ul>	C	Austar inserted a Notification in the Cessnock Advertiser on 4 March 2009 that the

ML No.	Conditions	Verification	Compliance	Comments
		Consolidated Mining Lease, 4 Mar 2009		Consolidated Mining Lease No. 2 had been granted by the Director-General Department of Primary Industries and that it was valid until 6 July 2025.
2	<p><b>Environmental Harm</b></p> <p>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 development.</p>	<ul style="list-style-type: none"> <li>• Drill Site Safety and Environmental Plan, Austar Technical Services, 27 Oct 2011</li> <li>• Shaft Construction Environmental Management Plan, Nov 2009</li> <li>•</li> </ul>	C	The management plans developed for the drilling and construction works for Austar provide practical measures to minimise environmental harm from the activities.
3	<p><b>Mining Operations Plan</b></p> <p>(a) Mining operations must not be carried out otherwise than in accordance with:</p> <p>(a) a Mining Operations Plan (MOP) which has been approved by the Director-General of the Department of Primary Industries.</p> <p>(b) The MOP must:</p> <p>(i) identify areas that will be disturbed by mining operations;</p> <p>(ii) detail the staging of specific mining operations;</p> <p>(iii) identify how the mine will be managed to allow mine closure;</p> <p>(iv) identify how mining operations will be carried out on site in order to prevent and or minimise harm to the environment;</p> <p>(v) reflect the conditions of approval under:</p> <p>(vi) the Environmental Planning and Assessment Act 1979 the Protection of the Environment Operations Act 1997 and any other approvals relevant to the development including the conditions of this lease; and</p> <p>(vii) have regard to any relevant guidelines adopted by the Director-General.</p> <p>(c) The titleholder may apply to the Director-General to amend an approved MOP at any time.</p> <p>(d) It is not a breach of this condition if:</p> <p>i) the operations constituting the breach were necessary to comply with a lawful order or direction given under the Mining Act 1992, the Environmental Planning and Assessment Act 1979, Protection of the Environment Operations Act 1997 or the Occupational Health and Safety Act 2000; and</p> <p>ii) the Director-General had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out.</p>	<ul style="list-style-type: none"> <li>• Mining Operations Plan 2008-2015</li> <li>• Letter from DPI re Acceptance of Mining Operations Plan, 30 Jun 2008</li> <li>• <i>Guidelines to the Mining, Rehabilitation and Environmental Management Process</i> Department of Primary Industries, Jan 2006</li> </ul>	C	<p>(a) The MOP for the Stage 2 and Stage 3 works was prepared in 2008 and approved by DPI. Any variations to the Stage 3 works will be submitted as a revision to the 2008-2015 MOP prior to commencement of secondary works.</p> <p>(b) The MOP has been prepared in accordance with the Guidelines to the Mining, Rehabilitation and Environmental Management Process (Department of Primary Industries, dated January 2006).</p> <p>(c) The MOP will be revised prior to commencement of the Stage 3 secondary works.</p> <p>(d) Noted</p> <p>(e) The MOP was prepared for the 2008-2015 period (i.e. 7 years).</p>

ML No.	Conditions	Verification	Compliance	Comments
	(e) A MOP ceases to have affect 7 years after date of approval or other such period as identified by the Director-General. An approved amendment to the MOP under condition 5 does not constitute an approval for the purpose of this paragraph unless otherwise identified by the Director-General.			
<b>Environment Management Reporting</b>				
4	The lease holder must lodge Environmental Management Reports (EMR) with the Director-General annually or at dates otherwise directed by the Director-General.		Noted	
5	The EMR must: (a) report against compliance with the MOP; (b) report on progress in respect of rehabilitation completion criteria; (c) report on the extent of compliance with regulatory requirements; and (d) have regard to any relevant guidelines adopted by the Director-General;	Annual Environmental Management Reports: <ul style="list-style-type: none"> <li>2010-2011 AEMR</li> <li>2009-2010 AEMR</li> <li>2008-2009 AEMR</li> </ul>	C Ongoing	The AEMR's addresses: (a) and (b) - section 5.2 Rehabilitation of Disturbed Land reports against compliance with the MOP; (c) AEMR section 3 reports on the extent of compliance with regulatory requirements under each environmental aspect; (d) any new relevant guidelines adopted by the Director-General are considered in the AEMR.
6	Additional environmental reports may be required on specific surface disturbing operations or environmental incidents from time to time as directed in writing by the Director-General and must be lodged as instructed.		Noted	
7	<b>Rehabilitation</b> Disturbed land must be rehabilitated to a sustainable/agreed end land use to the satisfaction of the Director-General.		Noted	
8	<b>Subsidence Management</b> (a) The lease holder shall prepare a Subsidence Management Plan prior to commencing any underground mining operations which will potentially lead to subsidence of the land surface. (b) Underground mining operations which will potentially lead to subsidence include secondary extraction panels such as long-walls or mini-walls, 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 (EDG1 7). (c) The lease holder must not commence or undertake underground mining operations that will potentially lead	<ul style="list-style-type: none"> <li>Subsidence Management Plan Longwalls A4 and A5, Sep 2008</li> <li>Letter from DII re Approval of Austar Mine SMP for Longwalls A4 and A5, 24 Dec 2009</li> <li>Guideline for Applications for Subsidence Management Approvals, DMR</li> </ul>	C Ongoing	(a) A Subsidence Management Plan (SMP) was prepared for Longwalls A3 to A5 in September 2008 prior to commencement of secondary workings for A3 and A5. The SMP was and was approved by DII on 24 December 2008. (b) Noted (c) Noted. See (a) above. (d) The SMP was prepared in accordance with the requirements of the Guideline for Applications for Subsidence Management Approvals, DMR.

ML No.	Conditions	Verification	Compliance	Comments
	<p>to subsidence other than in accordance with a Subsidence Management Plan approved by the Director-General, an approval under the Mine Health &amp; Safety Act 2004, or the document New Subsidence Management Plan Approval Process — Transitional Provisions (EDP09).</p> <p>(d) Subsidence Management Plans are to be prepared in accordance with the Guideline for Applications for Subsidence Management Approvals.</p> <p>(e) Subsidence Management Plans as approved shall form part of the Mining Operations Plan required under Condition 3 and will be subject to the Annual Environmental Management Report process as set out under Condition 4. 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.</p>			(e) Noted
17	<p><b>Exploratory Drilling</b></p> <p>(a) At least twenty eight days prior to commencement of drilling operations the lease holder must notify the relevant Department of Water and Energy Regional Hydrologist of the intention to drill exploratory drill holes together with information on the location of the proposed holes.</p> <p>(b) If the lease holder drills exploratory drill holes he must satisfy the Director-General that:-</p> <p>(i) all cored holes are accurately surveyed and permanently marked in accordance with Departmental guidelines so that their location can be easily established;</p> <p>(ii) all holes cored or otherwise are sealed to prevent the collapse of the surrounding surface;</p> <p>(iii) all drill holes are permanently sealed with cement plugs to prevent surface discharge of ground waters;</p> <p>(iv) if any drill hole meets natural or noxious gases it is plugged or sealed to prevent their escape;</p> <p>(v) if any drill hole meets an artesian or sub-artesian flow it is effectively sealed to prevent contamination of aquifers.</p> <p>(vi) once any drill hole ceases to be used the hole must be sealed in accordance with Departmental guidelines. Alternatively, the hole must be sealed as instructed</p>	<p>Letter to DPI re Austar Exploratory Drilling Program, 20 Dec 2006</p> <p>Letter to NSW Office of Water re Intention to Drill Two Exploration Boreholes EL6598, 10 June 2011</p> <p>Letter from NSW Office of Water re Notification of Coal Exploration Activity, 30 Jun 2011</p> <p>Austar Drill Safety and Environmental Plan for 2011 Exploration</p> <p>Borehole Sealing Requirements on Land: Coal Exploration, Environmental Management Guideline EDG01, Dec 1997</p>	C	<p>(a) The letter to DPI (dated 20 December 2006) was submitted by Austar 28 days prior to commencement of drilling by McDermott Drilling Contractor. A further Notification was submitted to NSW Office of Water on 10 June 2011 re the intention to drill 2 exploration boreholes as part of the planned program for Exploration Licence 6598.</p> <p>(b) The drilling program would be undertaken in accordance with the Austar Drill Safety and Environmental Plan for 2011 Exploration and rehabilitation of the drill holes would be conducted in accordance with EDG01 Borehole Sealing Requirements on Land: Coal Exploration.</p>

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	by the Director-General. (vii) once any drill hole ceases to be used the land and its immediate vicinity is left in a clean, tidy and stable condition.			
18	<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.	Mining Operations Plan 2008-2015, section 3.1 Exploration and Section 7.2 Erosion and Sediment Control	C	The drilling activities have been conducted in an area of minimal disturbance for the drill pad, with topsoil and other excavated material stockpiled in defined areas with sediment fence installed to prevent loss of sediment from the site.
19	<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 he may stipulate.		Noted	Mining operations have not interfered with any transmission line, communication line, pipeline or any other utility on the lease area
20	<b>Fences, Gates</b> (a) Activities on the lease must not interfere with or damage fences without the prior written approval of the owner thereof or the Minister and subject to any conditions the Minister may stipulate. (b) Gates within the lease area must be closed or left open in accordance with the requirements of the landholder.		Noted	Exploration activities have been carried out in a manner that has not interfered with or damaged fences or gates on the lease area.
<b>Roads and Tracks</b>				
21	(a) Operations must not affect any road unless in accordance with an accepted Mining Operations Plan or with the prior written approval of the Director-General and subject to any conditions he may stipulate. (b) The lease holder must pay to the designated authority in control of the road (generally the local council or the Roads and Traffic Authority) the cost incurred in fixing any damage to roads caused by operations carried out under the lease, less any amount paid or payable from the Mine Subsidence Compensation Fund.		Noted	
22	Access tracks must be kept to a minimum and be positioned so that they do not cause any unnecessary damage to the land.		Noted	

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	Temporary access tracks must be ripped, topsoiled and revegetated as soon as possible after they are no longer required for mining operations. The design and construction of access tracks must be in accordance with specifications fixed by the Department of Environment and Climate Change			
23	<p><b>Trees and Timber</b></p> <p>(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, or if such a landholder refuses consent or attaches unreasonable conditions to the consent, without the approval of a warden.</p> <p>(b) The lease holder must not cut, destroy, ringbark or remove any timber or other vegetative cover on the lease area except such as directly obstructs or prevents the carrying on of operations. Any clearing not authorised under the Mining Act 1992 must comply with the provisions of the Native Vegetation Act 2003.</p> <p>(c) The lease holder must obtain all necessary approvals or licences before using timber from any Crown land within the lease area.</p>	Clearing, Excavation, Stake or Pile Driving Permit, EMP-P-007,	C	<p>Management of the areas within the mine lease encompass large areas overlain by a combination Austar owned land, privately owned land and portions of Werakata State Conversation Area (previously Abedere State Forest).</p> <p>Clearance where it is required only occurs following a pre-clearance survey and completion of a Clearing Excavation, Stake or Pile Driving Permit, EMP-P-007, to ensure that threatened flora or fauna are not affected and if any licences were required these would be obtained prior to commencement of any clearing.</p>