

Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

I approve the project application referred to in schedule 1, subject to the conditions in schedules 2 to 7.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

SIGNED 6 SEPTEMBER 2009

The Hon Kristina Keneally MP
Minister for Planning

Sydney

2009

SCHEDULE 1

Application Number:	08_0111
Proponent:	Austar Coal Mine Pty Ltd
Approval Authority:	Minister for Planning
Land:	See Appendix 1
Project:	Austar Coal Mine Project – Stage 3

May 2010 modification in red type

March 2012 modification in blue type

December 2013 modification in green type

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DEFINITIONS

Approved mine plan	The mine plan for Stage 3 shown in the figures in Appendix 2
Adaptive management	Adaptive management includes monitoring subsidence impacts and subsidence effects and, based on the results, modifying the mining plan as mining proceeds to ensure that the effects, impacts and/or associated environmental consequences remain within predicted and designated ranges
Annual Review	Annual Review of operations, as required under condition 3 of Schedule 7
Austar Mine Complex	The combined operations of the Austar Coal Mine, including Austar Stages 1 to 3 and the former Ellalong, Pelton, Cessnock No.1 and Bellbird South collieries
BCA	Building Code of Australia
Built features	Includes any building or work erected or constructed on land, including dwellings, structures and infrastructure (such as any pipeline or dam; formed road, street, path, walk or driveway; or water, sewer, electricity, telephone, gas or other service main)
CCC	Community Consultative Committee
Conditions of this approval	Conditions contained in schedules 2 to 7 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this approval
Council	Cessnock City Council
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Infrastructure
Director-General	Director-General of the Department, or nominee
Dispute resolution process	The independent dispute resolution process as described in Appendix 6
DRE	Division of Resources and Energy, within the Department of Trade and Industry, Regional Infrastructure and Services
EA	Environmental Assessment titled <i>Austar Coal Mine Environmental Assessment – Proposed Stage 3 Extension to Underground Mining and Associated Infrastructure (Volumes 1 to 3)</i> , prepared by Umwelt (Australia) Pty Limited and dated October 2008, including the response to submissions dated February 2009
EA (MOD 1)	Modification application 08_0111 MOD 1 and supporting documentation dated 9 March 2011
EA (MOD 2)	Environmental Assessment titled <i>Austar Coal Mine Environmental Assessment – Stage 3 Modification (Volumes 1 and 2)</i>, prepared by Umwelt (Australia) Pty Limited, and dated September 2011, including the response to submissions dated November 2011
EA (MOD 3)	Environmental Assessment titled <i>Austar Coal Mine LWA7-A10 Modification Stage 3 Area - Environmental Assessment</i>, prepared by Umwelt (Australia) Pty Limited and dated October 2013
EEC	Endangered ecological community
Environmental consequences	The environmental consequences of subsidence impacts, including: damage to infrastructure, buildings and residential dwellings; loss of surface flows to the subsurface; loss of standing pools; adverse water quality impacts; erosion; rock falls; damage to Aboriginal heritage sites; impacts on aquatic ecology; ponding, etc.
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	Environment Protection Authority
EPL	Environment Protection Licence issued under the POEO Act
Evening	The period from 6pm to 10pm
Executive Director, Mineral Resources	Executive Director Mineral Resources within DRE, or the equivalent role
Feasible	Feasible relates to engineering considerations and what is practical to build
First workings	Development of main headings and gate roads to establish access to the coal in the mining area
Heritage Branch	Heritage Branch of OEH
Incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval
Land	In general, the definition of land is consistent with the definition in the EP&A Act. However, in relation to the noise and air quality conditions in schedules 4 and 5 it means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles

LW	Office at the date of this approval
Material harm to the environment	Longwall Harm to the environment is material if it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Mine complex	Austar Mine Complex
Mining area	The area depicted as longwall panels LW A7 to LW A19 and the surrounding area, bounded by the 20mm subsidence contour, shown in the figures in Appendix 2
Mining operations	Coal extraction activities carried out in Stage 3
Minister	Minister for Planning and Infrastructure , or delegate
Mitigation	Activities associated with reducing the environmental impacts
MSB	Mine Subsidence Board
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
NOW	NSW Office of Water, within the Department of Primary Industries
OEH	Office of Environment and Heritage
Offset strategy	The conservation and enhancement program described in the EA
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency, or a mining company (or its subsidiary)
Project	The development described in the EA, EA (MOD 1), EA (MOD 2) and EA (MOD 3)
Proponent	Austar Coal Mine Pty Ltd, or its successors in title
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Reasonable Costs	The costs agreed between the Department and the Proponent for obtaining independent experts to review the adequacy of any aspects of the extraction plan, or where such costs cannot be agreed, the costs determined by the Dispute Resolution Process
Rehabilitation	The treatment or management of land disturbed by the project for the purpose of establishing a safe, stable and non-polluting environment
Remediation	The treatment or management of land subject to subsidence effects to partially or fully repair or remediate subsidence impacts or environmental consequences
Response to submissions	The Proponent's response to issues raised in submissions, dated February 2009
RMS	Roads and Maritime Services
ROM coal	Run-of-mine coal
Safe, serviceable and repairable	Safe means no danger to users, serviceable means available for its intended use, and repairable means damaged components can be repaired economically
Second workings	Extraction of coal from longwall panels, mini-wall panels or pillar extraction
Site	All land to which the project application applies, comprising the mining area and the surface facilities area, as listed in Appendix 1 and shown in the figures in Appendix 2
Stage 3	Mining operations in longwall panels A7 – A19
Statement of commitments	The Proponent's commitments in Appendix 3
Steep slope	An area of land having a natural gradient of between 33 ^o and 66 ^o
Subsidence	The totality of subsidence effects, subsidence impacts and environmental consequences of subsidence impacts
Subsidence effects	Deformation of the ground mass due to mining, including all mining-induced ground movements, including both vertical and horizontal displacement, tilt, strain and curvature
Subsidence impacts	Physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs
Surface Infrastructure Site	The surface infrastructure site shown in the figures in Appendix 2

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

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.

TERMS OF APPROVAL

2. The Proponent shall carry out the project generally in accordance with the:
 - (a) EA;
 - (b) EA (MOD 1);
 - (c) EA (MOD 2);
 - (d) EA (MOD 3);
 - (e) statement of commitments; and
 - (f) conditions of this approval.

Notes:

- *The general layout of the project is shown in Appendix 2;*
- *The statement of commitments is reproduced in Appendix 3.*

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.
4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, or correspondence that are submitted in accordance with this approval; and
 - (b) the implementation of any actions or measures contained in these documents.

LIMITS ON APPROVAL

5. Mining operations in Stage 3 may take place until 31 December 2030.

Note: Under this approval, the Proponent is required to rehabilitate the site and perform additional undertakings to the satisfaction of the Director-General and the Executive Director, Mineral Resources. 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.

6. The Proponent shall not extract more than 3.6 million tonnes of ROM coal a year from the Austar Mine Complex.
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.

STRUCTURAL ADEQUACY

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:
 - (a) the relevant requirements of the BCA; and
 - (b) any additional requirements of the MSB in areas where subsidence effects are likely to occur.

Notes:

- *Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works;*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.*

DEMOLITION

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.

PROTECTION OF PUBLIC INFRASTRUCTURE

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:
 - (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; or
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.

OPERATION OF PLANT AND EQUIPMENT

11. The Proponent 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.

STRATEGIES, PLANS AND PROGRAMS

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.
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.

**SCHEDULE 3
SPECIFIC ENVIRONMENTAL CONDITIONS – MINING**

KEY PERFORMANCE MEASURES

1. The Proponent shall ensure that the project does not cause any exceedance of the key performance measures in Table 1.

Table 1: Subsidence Impact Performance Measures

Water Resources and Flooding	
Flooding	No significant increased risk on built features, unless the landowner agrees otherwise in writing.
Built Features	
Built features	Safe, serviceable and repairable, unless the owner agrees otherwise in writing.

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).

ACQUISITION OF AFFECTED RESIDENCES

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 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:

- (a) 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
- (b) the landowner has agreed to the MSB purchasing the land or otherwise compensating the impacts under the *Mine Subsidence Compensation Act 1961*.

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.

FIRST WORKINGS

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.

SECOND WORKINGS

Extraction Plan

4. 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:
 - (a) 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;
 - (b) include a detailed plan for the second workings, which has been prepared to the satisfaction of DRE, and provides for adaptive management;
 - (c) include detailed plans of any associated surface construction works;
 - (d) include the following to the satisfaction of DRE:
 - a coal resource recovery plan that demonstrates effective recovery of the available resource;
 - 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
 - a Subsidence Monitoring Program to:
 - validate the subsidence predictions; and
 - analyse the relationship between the subsidence effects and subsidence impacts of the Extraction Plan and any ensuing environmental consequences;

- (e) include a:
- Watercourse Management Plan, which has been prepared in consultation with [OEH and NOW](#), to manage the environmental consequences of second workings on watercourses (including flooding and ponding) and alluvial aquifers;
 - Biodiversity Management Plan, which has been prepared in consultation with [OEH](#), to manage the potential environmental consequences of second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species;
 - Land Management Plan, to manage the potential environmental consequences of second workings on steep slopes and land in general;
 - Heritage Management Plan, which has been prepared in consultation with [OEH](#) and the relevant Aboriginal groups, to manage the potential environmental consequences of second workings on heritage sites or values;
 - 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
- (f) include a Public Safety Management Plan, which has been prepared in consultation with [DRE](#), to ensure public safety in the mining area.

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.*
- *The Watercourse Management Plan must be integrated with all relevant aspects of the Site Water Management Plan required under condition 8 of schedule 4.*

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.

Payment of Reasonable Costs

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.

**SCHEDULE 4
SPECIFIC ENVIRONMENTAL CONDITIONS – GENERAL**

CONSTRUCTION

Surface Infrastructure Site – Shaft Construction Management

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:
 - minimising and managing the disturbance area;
 - protecting vegetation and soil outside the disturbance area;
 - controlling erosion and sedimentation, and managing water use;
 - undertaking pre-clearance surveys and managing impacts on fauna;
 - managing any Aboriginal objects or skeletal remains discovered during the project;
 - traffic management; and
 - noise, vibration and dust management.

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.

NOISE

Noise Impact Assessment Criteria

2. The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in:
 - (a) Table 2, for noise generated by the Surface Infrastructure Site; and
 - (b) any relevant EPL, for noise generated by all other components of the project.

Table 2: Noise impact assessment criteria – Surface Infrastructure Site, dB(A)

Day/Evening/Night <i>L_{Aeq}(15 minute)</i>	Night <i>L_{A1}(1 minute)</i>	Land
35	45	<i>All privately owned land</i>

Notes:

- *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).*

Noise and Vibration Management

3. The Proponent shall prepare and implement a Noise Management Plan for the mine complex, to the satisfaction of the Director-General. This plan must:
 - (a) be prepared in consultation with EPA, 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);
 - (b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7):
 - a noise monitoring program providing for a combination of continuous and supplementary attended monitoring measures;
 - a vibration monitoring program that is capable of recording ground vibrations on the surface emanating from underground mining activities; and
 - a detailed continual improvement program for investigating, implementing and reporting on all reasonable and feasible measures to reduce noise levels and vibration impacts generated by the mine complex.

AIR QUALITY AND GREENHOUSE GAS

Impact Assessment Criteria

4. 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:
- Tables 3, 4 and 5 for dust generated by the Surface Infrastructure Site; and
 - 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.

Table 3: Long term impact assessment criteria for particulate matter – Surface Infrastructure Site

Pollutant	Averaging period	Criterion
Total suspended particulate (TSP) matter	Annual	90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	30 µg/m ³

Table 4: Short term impact assessment criterion for particulate matter – Surface Infrastructure Site

Pollutant	Averaging period	Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	50 µg/m ³

Table 5: Long term impact assessment criteria for deposited dust – Surface Infrastructure Site

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month

Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 2003, AS 3580.10.1-2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.

Operating Conditions

5. The Proponent shall:
- 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
 - 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.

Air Quality and Greenhouse Gas Management

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:
- be prepared in consultation with EPA, 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
 - include, in addition to the standard requirements for management plans (see condition 2 of schedule 7):
 - an air quality monitoring program providing for a combination of continuous monitors, high volume samplers and dust deposition gauges;
 - an energy savings action plan, including a feasibility study into the capture and beneficial utilisation of methane gas emissions from the project; and
 - a detailed continual improvement program for investigating, implementing and reporting on all reasonable and feasible measures to reduce dust generated by the mine complex.

METEOROLOGICAL

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.

SURFACE AND GROUND WATER

Discharge Limits

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*.

Site Water Management Plan

9. 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:
 - (a) be prepared in consultation with EPA, NOW and DRE, 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
 - (b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7):
 - (i) a Site Water Balance, which details:
 - sources and security of water supply;
 - water use and management on site;
 - any off-site water transfers or discharges; and
 - measures to minimise water use by the project;
 - (ii) an Erosion and Sediment Control Plan;
 - (iii) a Surface Water Monitoring Program, including programs to monitor:
 - surface water flows and quality, stream health and channel stability in Black Creek, Cony Creek, Sandy Creek and Quorrobolong Creek; and
 - impacts on water users and water levels in farm dams;
 - (iv) a Ground Water Monitoring Program, including programs to monitor:
 - groundwater volumes and quality seeping into the underground mine workings;
 - impacts on regional aquifers;
 - impacts on the groundwater supply of potentially affected landowners;
 - impacts on the alluvial aquifers in Black Creek, Cony Creek, Sandy Creek and Quorrobolong Creek; and
 - impacts on groundwater dependent ecosystems and riparian vegetation (including the River-flat Eucalypt Forest EEC); and
 - (v) a Surface and Ground Water Response Plan, which describes the measures and/or procedures that would be implemented to:
 - respond to any exceedances of the relevant performance measures/criteria;
 - compensate landowners of privately-owned land whose water supply is adversely affected by the project; and
 - mitigate and/or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation.

Note: The Department acknowledges that certain monitoring requirements under this plan may be subject to the granting of access on privately-owned land.

HERITAGE

Aboriginal Cultural Heritage

10. 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:
 - (a) be prepared by a suitably qualified archaeologist in consultation with OEH 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
 - (b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7) ,a program/procedures for:
 - salvage and management of Aboriginal sites within the Surface Infrastructure Site disturbance area;

- monitoring and management of Aboriginal sites within the mining area;
- managing the discovery of any new Aboriginal objects or skeletal remains discovered during the project;
- undertaking additional archaeological surveys on any areas subject to extensive remediation activities;
- 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
- ongoing consultation with and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site.

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).

Historic Heritage

11. The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Director-General. The plan must:
- (a) be prepared by a suitably qualified heritage consultant in consultation with Council and the Heritage Branch, 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
 - (b) include, in addition to the standard requirements for management plans (see condition 2 of schedule 7), a program/procedures for:
 - monitoring and management of identified heritage sites within the mining area and other disturbance areas;
 - 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;
 - 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
 - managing the discovery of any new heritage items during the project.

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.

TRANSPORT

Road Upgrades

12. 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 RMS:
- (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;
 - (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;
 - (c) upgrade the road level crossing at Vincent Street, Kitchener, 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), prior to the commencement of construction of the Surface Infrastructure Site; and
 - (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:
 - Cessnock Road, Kearsley;
 - Neath Road, Neath; and
 - Mitchell Avenue, Weston.

Note: The relevant reject emplacement areas referred to in (a) are shown on the figure in Appendix 4.

Road Maintenance Contributions

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.

VISUAL

14. The Proponent shall:
- (a) take all reasonable and feasible measures to mitigate visual and off-site lighting impacts of the project; and
 - (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.

WASTE

Waste Minimisation

15. The Proponent shall:
- (a) minimise the waste (including coal reject) generated by the project;
 - (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of; and
 - (c) report on waste management and minimisation in the Annual Review, to the satisfaction of the Director-General.

Reject Emplacement

16. If reject emplacement outside the existing operational West Open Cut, East Open Cut and Aberdare emplacement areas is proposed, the Proponent shall:
- (a) at least 12 months before reject emplacement into existing operational emplacement areas is complete, after consultation with the [Executive Director, Mineral Resources](#) and to the satisfaction of the Director-General:
 - justify the need for the use of additional emplacement area/s;
 - provide reports on geotechnical investigations and engineering specifications for the proposed emplacement area/s; and
 - investigate and report on the possibility of disposal of all reject into a single additional emplacement area; and
 - (b) emplace coal reject in the additional emplacement area/s subject to such conditions as the Director-General may impose.

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.

SCHEDULE 5 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. 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.
2. 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.

INDEPENDENT REVIEW

3. 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 project on his/her land.

If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 2 months of the Director-General's decision:

- (a) consult with the landowner to determine his/her concerns;
 - (b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to:
 - determine whether the project is complying with the relevant impact assessment criteria in schedule 4; and
 - identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and
 - (c) give the Director-General and landowner a copy of the independent review.
4. 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.

If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 4, then the Proponent shall:

- (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
- (b) secure a written agreement with the landowner to allow exceedances of the relevant impact assessment criteria, to the satisfaction of the Director-General.

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.

LAND ACQUISITION

5. 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:
 - (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:
 - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and
 - 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;
 - (b) the reasonable costs associated with:

- relocating within the Cessnock local government area, or to any other local government area determined by the Director-General;
 - 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
- (c) reasonable compensation for any disturbance caused by the land acquisition process.

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.

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:

- (a) consider submissions from both parties;
- (b) 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;
- (c) prepare a detailed report setting out the reasons for any determination; and
- (d) provide a copy of the report to both parties.

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.

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.

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-General determines otherwise.

6. The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.
7. 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.

SCHEDULE 6 REHABILITATION AND OFFSETS

REHABILITATION AND BIODIVERSITY OFFSETS

Rehabilitation Objectives

- The Proponent shall achieve the rehabilitation objectives in Table 6 to the satisfaction of the [Executive Director, Mineral Resources](#).

Table 6: Rehabilitation Objectives

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 landuse approved by the Director-General Additional objectives/criteria to be set through condition 4 below
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, landuse 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 <i>Mine Subsidence Compensation Act 1961</i> is made for the repairs, restoration or replacement
Community	Minimise the adverse socio-economic effects associated with mine closure

Progressive Rehabilitation

- To the extent that mining operations permit, the Proponent shall carry out rehabilitation progressively, that is, as soon as reasonably practicable following the disturbance.

Long Term Security of Offset Area

- 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.

Note: The offset area is described in the EA and shown conceptually in Appendix 5.

Landscape Management Plan

- The Proponent shall prepare and implement a Landscape Management Plan for the project to the satisfaction of the Director-General and the [Executive Director, Mineral Resources](#). This plan must:
 - 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);
 - in addition to the standard requirements for management plans (see condition 2 of schedule 7), include:
 - the rehabilitation objectives for the site and offset area;
 - a description of the short, medium, and long term measures that would be implemented to:
 - rehabilitate the site;
 - implement the offset strategy; and
 - manage the remnant vegetation and habitat on the site and in the offset area;
 - performance and completion criteria for the rehabilitation of the site and implementation of the offset strategy;
 - a detailed description of the measures would be implemented over the next 3 years, including the procedures to be implemented for:

- minimising and rehabilitating disturbed areas;
- implementing the offset strategy;
- protecting vegetation and soil outside the disturbance areas;
- undertaking pre-clearance surveys;
- managing impacts on fauna;
- landscaping the site to minimise visual impacts;
- conserving and reusing topsoil;
- collecting and propagating seed for rehabilitation works;
- salvaging and reusing material from the site for habitat enhancement;
- controlling weeds and feral pests;
- controlling access; and
- bushfire management.

SCHEDULE 7
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. 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:
 - (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);
 - (b) provide the strategic framework for environmental management of the mine complex;
 - (c) identify the statutory approvals that apply to the mine complex;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the mine complex;
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the mine complex;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the project;
 - respond to any non-compliance; and
 - respond to emergencies;
 - (f) include:
 - copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved; and
 - a clear plan depicting all the monitoring to be carried out in relation to the mine complex.

Management Plan Requirements

2. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria;
 - 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;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - impacts and environmental performance of the project;
 - effectiveness of any management measures (see (c) above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences;
 - (f) a program to investigate and implement ways to continually improve the environmental performance of the project over time;
 - (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and
 - (h) a protocol for periodic review of the plan.

Annual Review

3. Each year, the Proponent shall review the environmental performance of the mine complex to the satisfaction of the Director-General. This review must:
 - (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;
 - (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
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the EA and Extraction Plan;

- (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
- (d) identify any trends in the monitoring data over the life of the mine complex;
- (e) identify any discrepancies between the predicted and actual impacts of the mine complex, and analyse the potential cause of any significant discrepancies; and
- (f) describe what measure will be implemented over the next year to improve the environmental performance of the mine complex.

Revision of Strategies, Plans and Programs

4. Within 3 months of:
- (a) the submission of an annual review under Condition 3 above;
 - (b) the submission of an incident report under Condition 6 below;
 - (c) the submission of an audit report under Condition 7 below; or
 - (d) any modification to the conditions of this approval, (unless the conditions require otherwise),
- the Proponent shall review the strategies, plans, and programs required under this approval, to the satisfaction of the Director-General. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted for the approval of the Director-General.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the project.

Community Consultative Committee

5. 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).

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 general community.

INCIDENT REPORTING

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.

INDEPENDENT ENVIRONMENTAL AUDIT

7. 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:
- (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the 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);
 - (d) review the adequacy of strategies, plans or programs required under these approvals; and
 - (e) 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.

Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Director-General.

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.

ACCESS TO INFORMATION

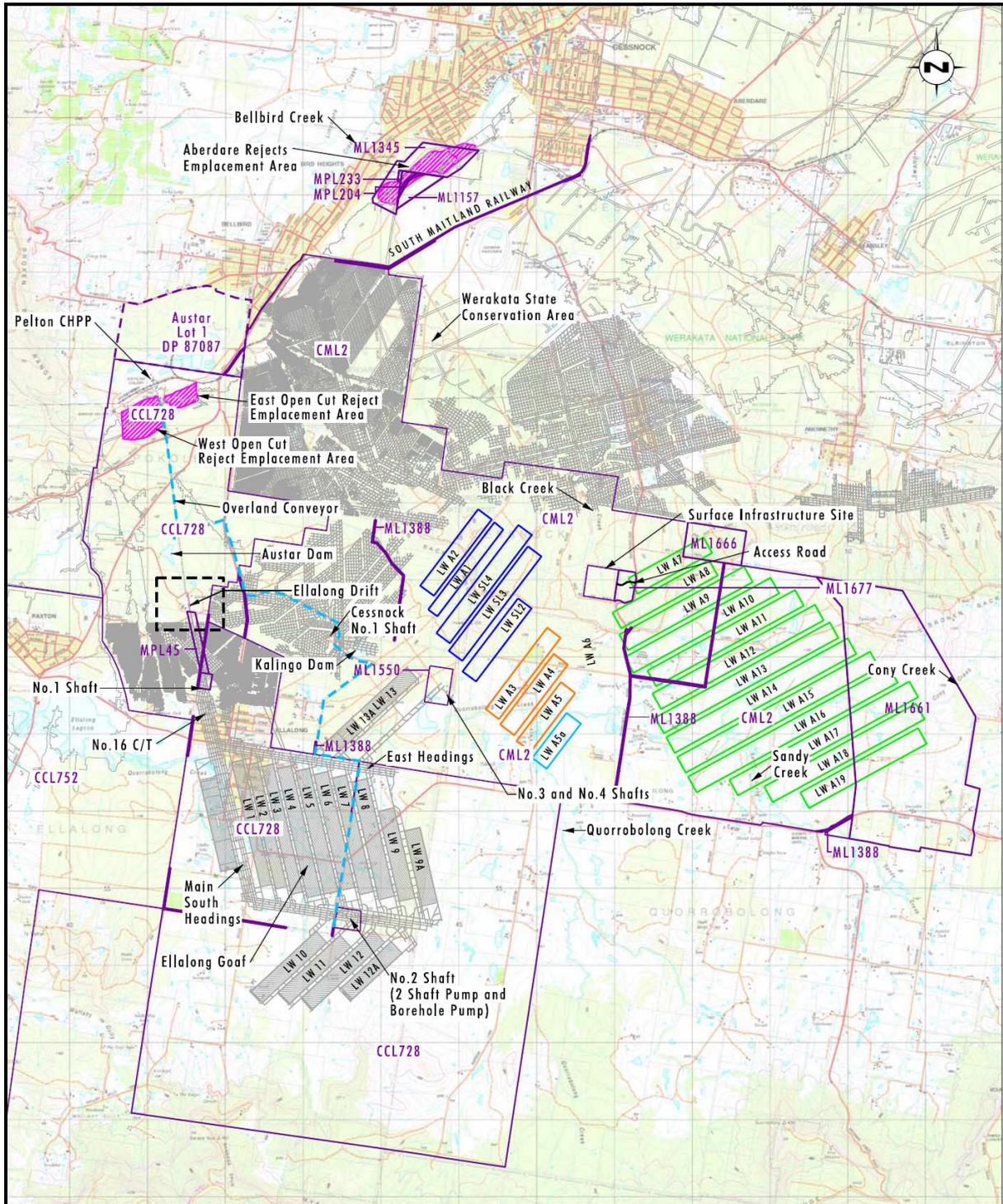
9. From the end of 2009, the Proponent shall make the following information publicly available on its website:
- (a) a copy of all current statutory approvals for the mine complex;

- (b) a copy of the current environmental management strategy and associated plans and programs;
- (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.

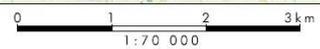
**APPENDIX 1
SCHEDULE OF LAND**

Lot	DP	Lot	DP	Mining Leases
1	DP69968	100	DP755254	CCL728
2	DP69968	1	DP775718	CML2
5	DP69968	2	DP775718	DSL89
8	DP69968	51	DP794214	ML1157
9	DP69968	1	DP798955	ML1283
10	DP69968	101	DP803246	ML1345
11	DP69968	973	DP804896	ML1388
13	DP69968	351	DP808936	ML1550
1	DP87087	352	DP808936	ML1661 (MLA322)
1	DP115675	60	DP814379	ML1677 (MLA330)
1	DP124547	61	DP814379	ML1666 (MLA333)
3	DP124547	1	DP819222	MPL23
1	DP170894	2	DP819222	MPL204
1	DP171040	1	DP828916	MPL217
1	DP185087	2	DP828916	MPL233
1	DP240664	1	DP834889	MPL269
2	DP240664	2	DP834889	MPL1364
3	DP240664	1	DP841360	
4	DP240664	2	DP841360	
7	DP240664	31	DP847374	
8	DP240664	32	DP847374	
9	DP240664	30	DP849031	
10	DP240664	31	DP849031	
2	DP243366	41	DP850188	
100	DP255530	42	DP850188	
104	DP255530	1	DP852328	
4	DP571638	1001	DP856790	
1	DP575428	110	DP859794	
2	DP575428	111	DP859794	
3	DP575428	11	DP866231	
2	DP595102	12	DP866231	
51	DP599170	13	DP866231	
52	DP599170	1	DP873717	
2	DP614784	2	DP873717	
2	DP714067	1	DP950221	
3	DP714067	1	DP996145	
4	DP714067	9	DP999962	
553	DP725104	10	DP1000136	
1	DP738718	11	DP1000136	
1	DP738726	521	DP1003186	
3	DP745656	522	DP1003186	
2	DP747207	1	DP1016843	
20	DP755215	581	DP1017350	
21	DP755215	21	DP1034264	
26	DP755215	341	DP1044033	
32	DP755215	342	DP1044033	
35	DP755215	21	DP1052169	
36	DP755215	22	DP1052169	
117	DP755215	91	DP1064579	
	DP755215	21	DP1079917	
2	DP755225	22	DP1079917	
4	DP755225	210	DP1083970	
12	DP755225	10	DP1093269	
13	DP755225	11	DP1093269	
14	DP755225	836	DP1112858	
15	DP755225	621	DP1124419	
19	DP755225	622	DP1124419	
48	DP755225	201	DP1136015	
49	DP755225	202	DP1136015	
50	DP755225	1	DP1145356	
63	DP755225	2	DP1145356	
75	DP755225	7323	DP1157245	
120	DP755225	7320	DP1157260	
249	DP755225	1	DP1164334	
54	DP755254	2	DP1164334	
72	DP755254	1	DP1168335	
72	DP755254	2	DP1168335	
75	DP755254	1	DP1173947	
96	DP755254	2	DP1173947	
98	DP755254	215	DP1185596	
99	DP755254			
Various Crown land, road and rail reserves				

APPENDIX 2 PROJECT LAYOUT PLANS



Data Source: Topo Maps: LPI NSW, Longwall Layouts: Auster Coal Mine

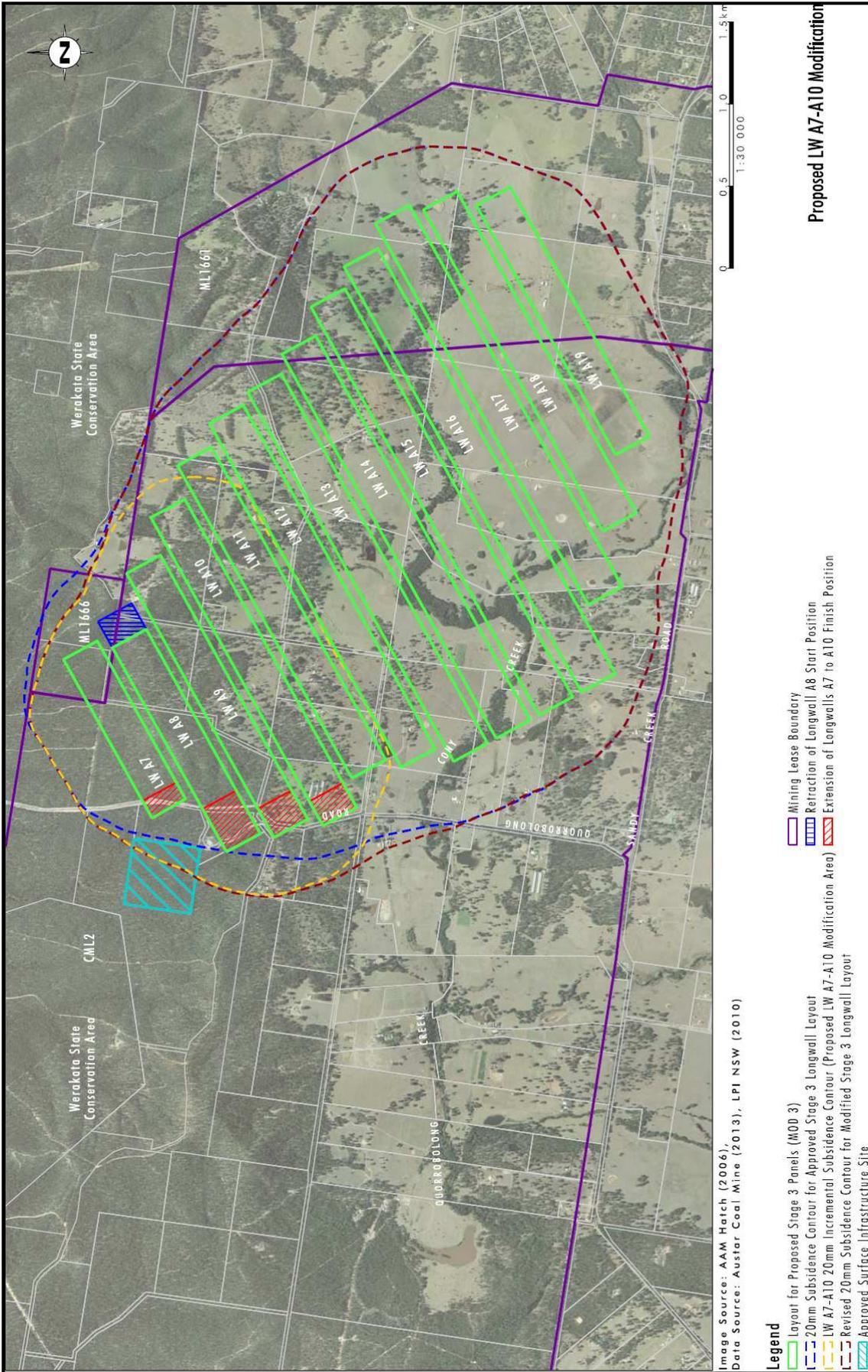


Legend

- Layout for Stage 1 Longwall Panels (complete)
- Layout for Stage 2 Longwall Panels (complete)
- Layout for Stage 2 Extension Longwall Panel (complete)
- Layout for Proposed Stage 3 Longwall Panels (MOD 3)
- Reject Emplacement Areas
- Old Workings
- Mining Lease Boundary
- Auster owned CHPP Land
- Water Pipeline

FIGURE 1.1

Auster Mine Complex



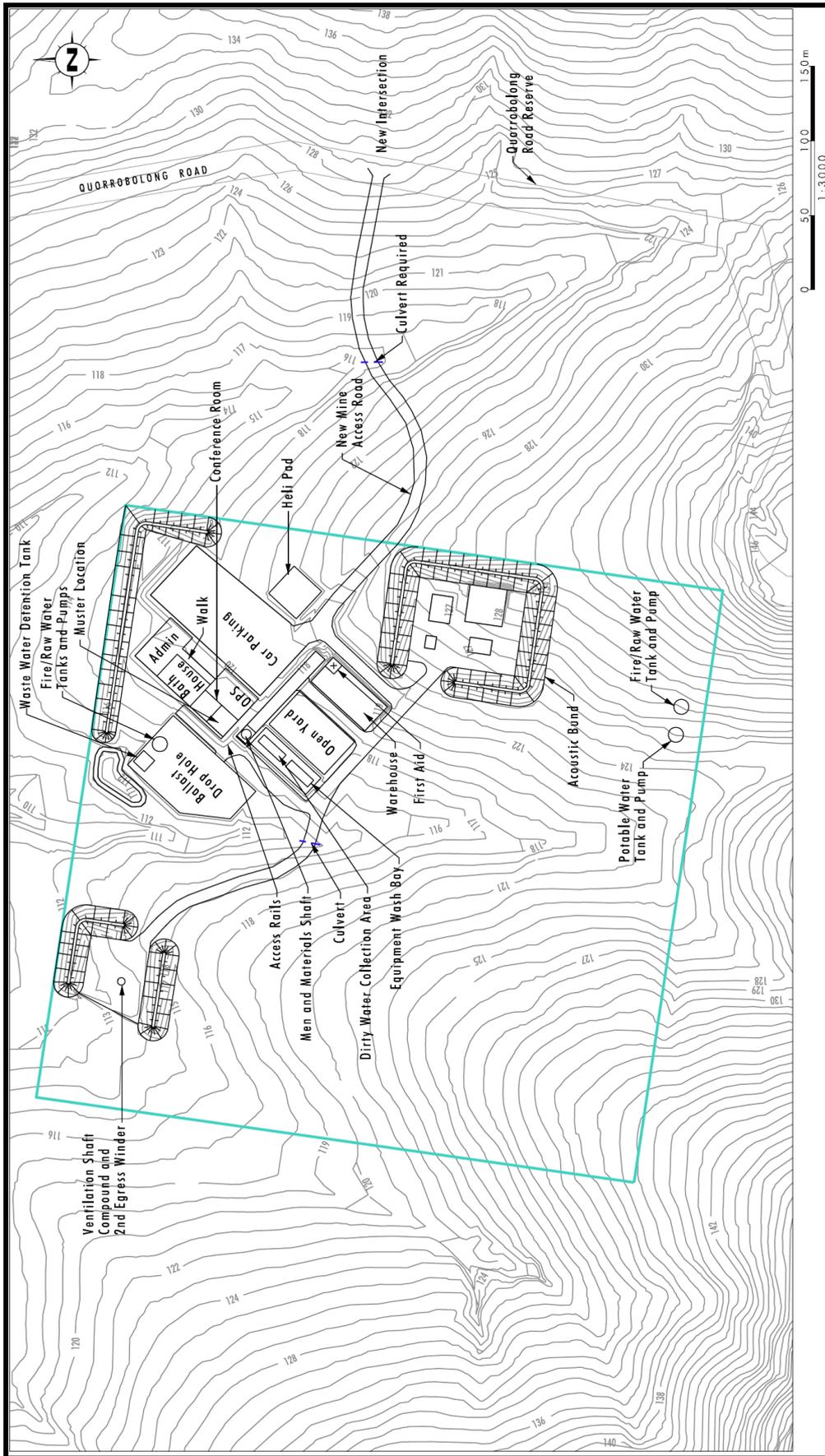


FIGURE 3.4
Conceptual Layout for Proposed
Surface Infrastructure Site

Legend
 Surface Infrastructure Site

Note: Contour Interval 1m

APPENDIX 3 STATEMENT OF COMMITMENTS

[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:

1.1 Compliance with the EA

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.

1.2 Life of Stage 3 Concept Mine Plan

Project Life

- 1.2.1 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.

Production Limits

- 1.2.2 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.

Hours of Operation

- 1.2.3 Mining and associated activities for the Stage 3 Project may be undertaken 24 hours a day, seven days a week.

Refinement of Mine Plan

- 1.2.4 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.
- 1.2.5 Mining parameters for the proposed mine plan as detailed in the EP will be designed to ensure that predicted systemic subsidence in terms of subsidence, tilt, tensile strain and compressive strain will comply with or be less than the Upper Bound predictions detailed in the EA. Those being:
- 3000 mm subsidence;
 - 11 mm/m tilt;
 - 0.09km^{-1} total conventional hogging curvature; and
 - 0.15km^{-1} total conventional sagging curvature.
- 1.2.6 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.

1.3 Subsidence

- 1.3.1 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.
- 1.3.2 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:
- **Maximum Upper Bound** subsidence ranges from approximately 825 mm for LWA7 to approximately 3000 mm for LWA19.
 - **Maximum Upper Bound** tilt ranges from approximately 4.0 mm/m for LWA7 to approximately 11 mm/m for LWA19.

- **Maximum Upper Bound** conventional hogging curvature ranges from approximately 0.2 mm/m for LWA7 to approximately 0.09km⁻¹ for LWA19.
- **Maximum Upper Bound** conventional sagging curvature ranges from approximately 0.06km⁻¹ for LWA7 to approximately 0.15km⁻¹ for LWA19.

1.3.3 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.

1.3.4 Subsidence management measures to be implemented as part of the project will include:

- subsidence monitoring lines to be located as determined as part of the EP process where access is granted;
- 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;
- detailed subsidence monitoring in accordance with **DRE** requirements. This data will be utilised to regularly update the subsidence predictions for Stage 3;
- 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;
- 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 ;
- informing all relevant service providers of the potential impacts of mining subsidence on services;
- 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;
- 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
- 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.

1.3.5 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 **DRE** and to the satisfaction of the Director-General.

1.3.6 Austar Coal Mine will prepare management plans in consultation with 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.

1.4 Ecology

1.4.1 Austar Coal Mine will establish and manage the proposed Biodiversity Offset Area (refer to **Figure 7.1 of the EA**) to protect and enhance its ecological values in perpetuity, to the satisfaction of the Director-General.

1.4.2 A Weed Management Plan will be developed for the Surface Infrastructure Site.

1.4.3 The Austar bushfire management strategy will be revised to include the specific requirements of the Surface Infrastructure Site during the construction and operation phases.

1.4.4 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:

- clearing procedures for establishment of the Surface Infrastructure Site and associated access road/services easement;
- replacement of arboreal habitat within surrounding areas or within the Biodiversity Offset Area, should the removal of any hollow-bearing trees be required; and
- extension of the existing Austar Coal Mine ecological monitoring program to include monitoring of vegetation condition within subsidence affected areas.

- 1.4.5 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.
- 1.4.6 An appropriate speed limit on access roads will be implemented to minimise the risk of vehicle collision with ground-dwelling fauna dispersing between adjacent habitats.
- 1.4.7 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.
- 1.4.8 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.
- 1.4.9 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.

1.5 Heritage

- 1.5.1 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.
- 1.5.2 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.
- 1.5.3 No Aboriginal archaeological site be visited, or have works done there, without Aboriginal stakeholders in attendance.
- 1.5.4 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.
- 1.5.5 Aboriginal stakeholders (and an archaeologist if requested by Aboriginal stakeholders) will provide relevant Austar personnel with a cultural heritage awareness training session.
- 1.5.6 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.
- 1.5.7 If remediation works are required on any of the creeklines within the Stage 3 area, an archaeological survey with Aboriginal stakeholders will be undertaken prior to commencement of any works where access is granted.
- 1.5.8 Historic Heritage Management Plan incorporating all of Austar Mine Complex will be developed.

1.6 Surface Water and Drainage

- 1.6.1 Austar will develop a detailed Soil and Water Management Plan for the Surface Infrastructure Site prior to commencement of construction.
- 1.6.2 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 Minesites (Draft) (DLWC, 1999).
- 1.6.3 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 [NOW](#), 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:
- detailed monitoring protocols;
 - a program to complete drainage remediation works in a timely manner, post-subsidence to limit the potential for surface water capture;
 - 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;
 - 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
 - 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 [NOW](#) and [DRE](#) and submitted to the Director-General prior to the commencement of construction of the Surface Infrastructure Site.
- 1.6.4 Surface water monitoring results will be reported annually in the [Annual Review](#).

1.7 Groundwater

- 1.7.1 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 [NOW](#).
- 1.7.2 The results of groundwater monitoring and a comparison of measured and predicted impacts will be reported annually in the Annual Environmental Management Report.
- 1.7.3 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.
- 1.7.4 An annual analysis of surface and groundwater monitoring data will be undertaken and will include:
- comparison of groundwater levels with rainfall information;
 - identification of any changes or long-term trends in groundwater levels; and
 - visual inspection of creeks and drainage lines
- 1.7.5 The monitoring results and analysis findings will be reported in the [Annual Review](#).

1.8 Noise and Blasting

- 1.8.1 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.

Table 1.1 – Project Specific Noise Criteria

Location	Period	Intrusiveness Criteria $L_{Aeq(15minute)}$	Amenity Criteria $L_{Aeq(Period)}$	Project Specific Noise Criteria $L_{Aeq(15minute)}$
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Location	Period	Intrusiveness Criteria $L_{Aeq(15minute)}$	Amenity Criteria $L_{Aeq(Period)}$	Project Specific Noise Criteria $L_{Aeq(15minute)}$
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, Penney and Linton Property	Day	37 dBA	50 dBA	37 dBA
	Evening	37 dBA	45 dBA	37 dBA
	Night	35 dBA	40 dBA	35 dBA

- 1.8.2 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).
- 1.8.3 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.
- 1.8.4 The ventilation fan outlet will be directed to the west.
- 1.8.5 Man and materials winder and second egress winder motors will be enclosed.
- 1.8.6 Blasting will generally take place only once per day and will be undertaken between the hours of 9.00 am to 5.00 pm Monday to Saturday with no blasting on Sundays or Public Holidays.
- 1.8.7 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.
- 1.8.8 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 not exceed 5 mm/s for more than 5% of blasts over a 12 month period.

1.9 Air Quality

- 1.9.1 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.

Table 1.2 - Dust Deposition Criteria

Pollutant	Averaging Period	Maximum Increase in Deposited Dust Level	Maximum Total Deposited Dust Level
Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month

Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS 3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.

- 1.9.2 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 Review](#).

1.10 Energy and Greenhouse Gas

- 1.10.1 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:
- energy efficiency in plant and equipment procurement, consideration be given to the life cycle costs advantages obtained by using energy efficient components;
 - the opportunity to install additional sub-metering for offices, workshops and winders;
 - operational initiatives such as turning off idling plant equipment;

- control and temperature settings for air conditioning units in offices and switchrooms;
- automatic control of external and internal lighting;
- potential energy efficiency opportunities in water pumping and dust suppression systems (for example, variable speed drive pumps);
- review changes in power consumption with installation of new equipment and install power factor correction equipment to suit; and
- review workshop and bathhouse lighting and office and high bay lighting.

1.11 Visual

1.11.1 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:

- Maintain a vegetative screen along the edges of the access road to the Surface Infrastructure Site.
- Limit clearing on the Surface Infrastructure Site to that required for construction and bushfire protection purposes.
- 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.
- 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.
- All buildings potentially visible to the public to be coloured in suitable natural tones.

1.12 Transport

1.12.1 To mitigate potential traffic impacts associated with the development of the Surface Infrastructure Site, Austar Coal Mine will:

- 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.
- Provide lighting at the proposed pit top facility access intersection on Quorrobolong Road.
- 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).
- 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.

1.13 Community

1.13.1 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 regarding community relations.

1.13.2 Maintain a 24 hour per day community information and complaint line.

1.13.3 Provide regular updates of mine development and monitoring on the Austar Coal Mine website.

1.13.4 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.

- 1.13.5 Install a type F flashing light control at the Vincent Street railway level crossing.
- 1.13.6 Provide support to Kitchener Public School through the provision of sporting equipment and contributions to school/community projects.
- 1.13.7 Contribute to the ongoing maintenance of Poppet Head Reserve, Kitchener.

1.14 Decommissioning and Rehabilitation

- 1.14.1 A decommissioning plan will be prepared for the Surface Infrastructure Site as part of the MOP process and submitted to the [DRE](#) for approval approximately five years prior to the commencement of decommissioning works.

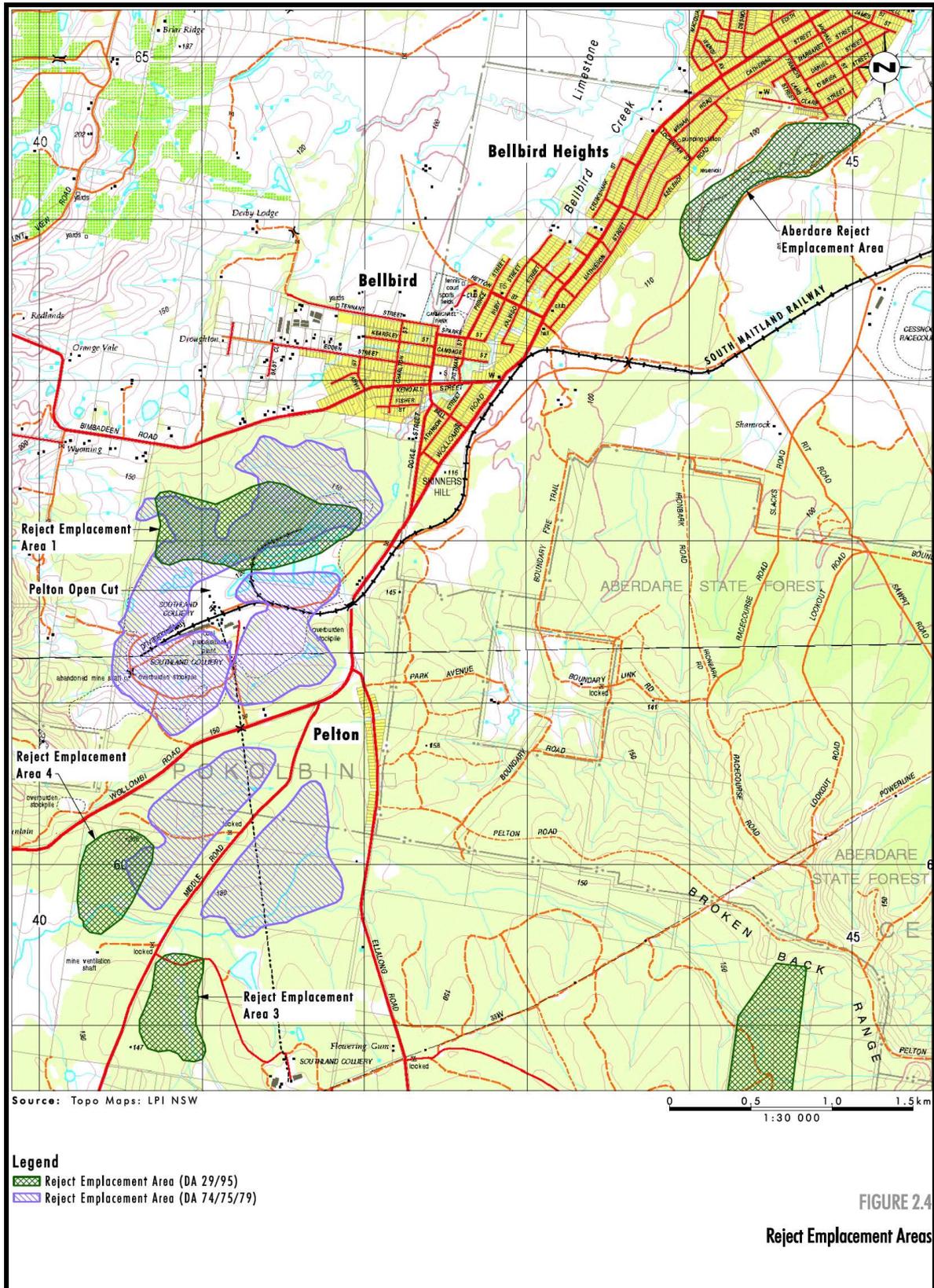
1.15 Continuous Improvement of Existing Operations

- 1.15.1 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 Review](#).
- 1.15.2 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.
- 1.15.3 Austar Coal Mine will continue to implement the voluntary Noise Pollution Reduction Program for Pelton CHPP in consultation with [OEH](#).
- 1.15.4 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.
- 1.15.5 Austar Coal Mine will investigate opportunities for reduction in energy use and greenhouse gas emissions from the Austar Mine Complex. This will include:
- ongoing review of emissions monitoring and management technology;
 - 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
 - consider the application of the in-force National Greenhouse and Energy Reporting System (NGERS) and the Carbon Pollution Reduction System (CPRS) on Austar operations.

1.16 Environmental Management, Monitoring, Auditing and Reporting

- 1.16.1 Austar Coal Mine will incorporate the Stage 3 Project into the [Annual Review](#) for Austar Mine Complex.
- 1.16.2 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 [DRE](#), [OEH](#), [NOW](#), 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 Department.

APPENDIX 4 REJECT EMPLACEMENT AREAS



**APPENDIX 5
BIODIVERSITY OFFSET STRATEGY PLAN**

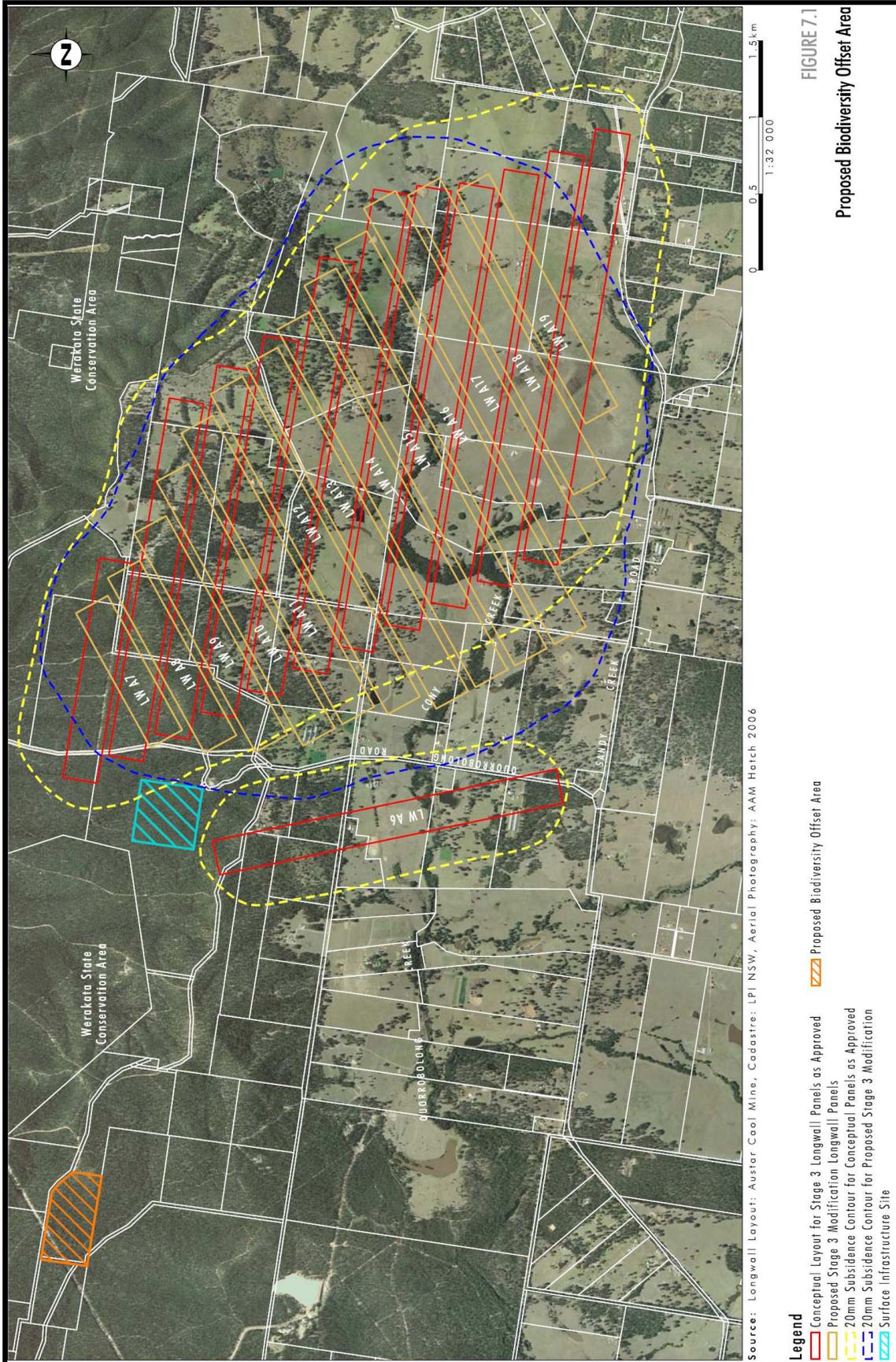


FIGURE 7.1
Proposed Biodiversity Offset Area

APPENDIX 6
INDEPENDENT DISPUTE RESOLUTION PROCESS

