# **Project Approval**

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

I approve the project referred to in Schedule 1, subject to the conditions in Schedules 2 to 4.

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.

Kristina Keneally MP
Minister for Planning

Sydney, 2 Vec.

2008

**SCHEDULE 1** 

**Application Number:** 

06\_0091

Proponent:

Hunter Valley Energy Coal Pty Ltd

**Approval Authority:** 

Minister for Planning

Land:

See Appendix 1

Project:

Mt Arthur Coal Mine - Underground Project

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# **DEFINITIONS**

**AEMR** Annual Environmental Management Report

Building Code of Australia BCA

Community Consultative Committee CCC

Council Muswellbrook Shire Council

**DECC** Department of Environment and Climate Change

Department Department of Planning

Director-General Director-General of Department of Planning, or delegate

DPI Department of Primary Industries Department of Water and Energy DWE

EΑ Environmental Assessment titled Proposed Mt Arthur Underground Project

(Volumes 1 to 4), dated January 2008, including the response to submissions and

preferred project report

**EEC** Endangered ecological community

EP&A Act Environmental Planning and Assessment Act 1979 Environmental Planning and Assessment Regulation 2000 **EP&A Regulation** 

**EPL Environment Protection Licence** 

Land Land means the whole of a lot, or contiguous lots owned by the same landowner,

in a current plan registered at the Land Titles Office at the date of this approval

MAN Mount Arthur North

Includes all coal extraction, processing, and transportation activities carried out on Mining Operations

site

Minister for Planning, or delegate Minister

MOP Mining Operations Plan

Mount Arthur Mine Complex The combined operations of the Mount Arthur North mine (DA 144-05-2000), the

Bayswater No. 2 mine, the Bayswater No. 3 mine (DA 210/93), the South Pit

Extension Project (MP 06\_0108), and the project

**MSB** Mine Subsidence Board

Offset Strategy The conservation and enhancement program described in the EA Preferred Project Report The Proponent's preferred project report, dated August 2008

Land that is not owned by a public agency, or a mining company (or its Privately owned land

subsidiary), or Macquarie Generation

Proiect The development as described in the EA

Hunter Valley Energy Coal Pty Limited, or its successors Proponent

Reasonable relates to the application of judgement in arriving at a decision, taking Reasonable and Feasible

into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements. Feasible

relates to engineering considerations and what is practical to build

Response to Submissions The Proponent's response to issues raised in submissions, dated May 2008

ROM Run of Mine

RTA Roads and Traffic Authority Site The land referred to in Schedule 1 Subsidence Management Plan

Statement of Commitments

The Proponent's commitments in Appendix 3

Subsidence Deformation of the ground mass due to mining, including all mining-induced

ground movements, including both vertical and horizontal displacement, tilt, strain

and curvature

# **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) preferred project report:
  - (c) statement of commitments;
  - (d) conditions of the consent for the Mount Arthur North mine (DA 144-05-2000) and the South Pit Extension Project (MP 06\_0108), as may be modified from time to time or replaced, and as may reasonably be applied to the project; and
  - (e) 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 (excluding the commitments which are directly reflected in, or inconsistent with, the conditions of this approval);
- All conditions of consent for DA 144-05-2000 and MP 06\_0108 apply to the project by way of extended application, unless the contrary is clear. This should not be understood as a new requirement for the conditions of DA 144-05-2000 and MP 06\_0108 to be fulfilled afresh, only that those conditions are extended in their effect to the project the subject of this approval. If there is any uncertainty about the effect or application of the condition/s contained in DA 144-05-2000 and MP 06\_0108 to the project, the matter shall be referred to the Director-General who will determine the effect or application of the condition/s to the project. For the avoidance of doubt, the criteria and requirements contained in the conditions to DA 144-05-2000 and MP 06\_0108 apply to the combined operations of the Mount Arthur mine complex including the project, unless otherwise noted.
- 3. If there is any inconsistency between the above, the conditions of this approval shall prevail to the extent of the inconsistency.
- 4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
  - (a) any reports, plans, programs, strategies or correspondence that are submitted in accordance with this approval; and
  - (b) the implementation of any actions or measures contained in these reports, plans, programs, strategies or correspondence submitted by the Proponent.

# **Limits of Approval**

5. Mining operations may take place until 31 December 2030.

# Notes:

- Under this Approval, the Proponent is required to rehabilitate the site and provide offsets to the satisfaction of the
  Director-General and DPI. Consequently this approval will continue to apply in all other respects other than the right
  to conduct mining operations until the site has been rehabilitated and the offset provided to a satisfactory standard;
- Should the consent for the Mount Arthur North mine (DA 144-05-2000) lapse before this approval lapses, the conditions of DA-144-05-2000 will continue to apply insofar as they relate to the project.
- 6. The Proponent shall not extract more than:
  - (a) 8 million tonnes of ROM coal a year from the project area; and
  - (b) 28 million tonnes of ROM coal a year from the combined Mount Arthur mine complex.
- 7. The Proponent shall:
  - (a) not transport coal from the site by road, except in an emergency situation and with the prior approval of the Director-General in consultation with Council; and
  - (b) restrict train movements on the Antiene rail spur to a maximum of 24 movements per day, for the combined Mount Arthur mine complex, except under an agreement with the Drayton Mine to use some of its approved train movements, where this agreement has been approved by the Director-General.

# **Structural Adequacy**

8. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

#### 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 an existing approval provides otherwise, or where 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.

For the purposes of this condition, an existing approval includes any approval under the EP&A Act or *Mine Subsidence Compensation Act 1961*.

# **Operation of Plant and Equipment**

- 11. The Proponent shall ensure that all plant and equipment used on site is:
  - (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

# **Management Plans/Monitoring Programs**

- 12. Within 12 months of this approval, unless otherwise agreed by the Director-General, the Proponent shall review and update as necessary the environmental management strategies, plans and monitoring programs for the Mount Arthur North mine (DA 144-05-2000 and MP 06\_0108) to encompass and accommodate the project. The strategies/plans/programs shall be prepared in consultation with the relevant government agencies and stakeholders, and to the satisfaction of the Director-General.
- 13. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

# **Planning Agreement**

14. Within 12 months of this approval, unless otherwise agreed by the Director-General, the Proponent shall use its best endeavours to enter into a planning agreement with Council in accordance with Division 6 of Part 4 of the EP&A Act, that provides for a contribution to Council for the purpose of community enhancement to address the social amenity and community infrastructure requirements arising from the project. The contribution shall be generally in accordance with Council's Section 94 Contribution Plan and associated Community Enhancement Program dated June 2006.

# **SCHEDULE 3: SPECIFIC ENVIRONMENTAL CONDITIONS**

# **ACQUISITION OF AFFECTED PROPERTIES**

# **Acquisition Upon Request**

1. Upon receiving a written request for acquisition from the owner of the land listed in Table 1, the Proponent shall acquire the land in accordance with the procedures in the consent for the Mount Arthur North mine (DA 144-05-2000).

Table 1: Land subject to acquisition upon request

#### A1 - Robertson

Note: For more information on the numbering and identification of properties used in this approval, see the Figure in Appendix 5.

# **SUBSIDENCE**

Note: The project will generally be regulated under the approval process for managing the impacts of coal mining subsidence under the Mining Act 1992.

# 330/500kV Transmission Line

- 2. The Proponent shall not cause any subsidence on:
  - the existing easement of Transgrid's 330/500kV transmission line until the line has been relocated in accordance with an agreement with Transgrid, and to the satisfaction of the Director-General; and
  - (b) the relocated transmission line easement 'Option A' at any time, except as may be agreed by Transgrid and the DPI.

#### Notes:

- The transmission line relocation is described in the PPR.
- A copy of any agreement under condition 2(b) shall be forwarded to the Director-General.

# **Subsidence Management Plan**

- 3. The Proponent shall prepare and implement a Subsidence Management Plan for the project to the satisfaction of the Director-General of DPI. This plan must:
  - (a) be prepared in accordance with the latest version or replacement of:
    - New Approval Process for Management of Coal Mining Subsidence Policy; and
    - Guideline for Applications for Subsidence Management Approvals;
  - (b) be approved prior to carrying out any underground mining that could cause subsidence;
  - (c) include detailed procedures to monitor, manage, remediate and/or compensate subsidence-related impacts on:
    - natural features, including:
      - landforms;
      - surface water features, including Saddlers Creek (tributaries), Western Creek and Quarry Creek:
      - o flora and fauna, including threatened species;
    - public utilities, including:
      - Edderton Road and associated culverts and bridges;
      - o the 330/500kV transmission line;
      - o low voltage power lines and underground services;
    - farm land and facilities, including:
      - o agricultural utilisation of the land;
      - o farm buildings/dwellings, improvements and fences;
      - farm dams and bores;
    - areas and items of archaeological and heritage significance; and
  - (d) a program to validate the subsidence prediction methodology for the project, and calibrate it to site specific conditions.

# **End-of-Panel Report**

- 4. Within 4 months of the completion of each longwall panel, or as otherwise agreed by the Director-General, the Proponent shall:
  - (a) prepare an end-of-panel report:
    - reporting all subsidence effects (both individual and cumulative) for the panel;
    - describing in detail all subsidence-related impacts (both individual and cumulative) for the panel: and
    - comparing subsidence impacts and environmental consequences with predictions;
       and
  - (b) submit a copy of the end-of-panel report to the Department, DPI and any other relevant agencies.

# NOISE

# **Additional Noise Mitigation Measures**

- 5. Notwithstanding condition 2 of schedule 2, upon receiving a written request from;
  - a landowner of the land listed in Table 1 (unless the landowner has requested acquisition); or
  - a landowner of the land listed in Table 2 (except where a negotiated noise agreement is in place, or where an acquisition process has commenced),

the Proponent shall implement additional noise mitigation measures such as double glazing, insulation, and/or air conditioning at any residence on the land in consultation with the landowner.

These additional mitigation measures must be reasonable and feasible.

If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.

Within 3 months of this approval, the Proponent shall notify all applicable landowners that they are entitled to receive additional noise mitigation measures, to the satisfaction of the Director-General.

Should a landowner with acquisition rights subsequently request acquisition, then the additional noise mitigation improvements may be excluded from any acquisition offer.

Table 2: Land subject to additional noise mitigation upon request

A2 – Horder	104 – Skinner
215 – Englebrecht	-

Note: For more information on the numbering and identification of properties used in this approval, see the Figure in Appendix 5.

# **SURFACE AND GROUND WATER**

# Site Water Management Plan

- 6. Notwithstanding condition 12 of schedule 2, the Site Water Management Plan must:
  - (a) be submitted prior to carrying out any longwall mining operations; and
  - (b) include:
    - a Site Water Balance for the Mount Arthur Mine Complex, which;
      - includes details of:
        - sources and security of water supply;
        - water use and management on site;
        - any off-site water transfers;
        - reporting procedures; and
      - investigates and describes measures to minimise water use;
    - an Erosion and Sediment Control Plan for all surface and subsidence remediation works in the project area that is consistent with the requirements of the *Managing Urban Stormwater:* Soils and Construction Manual (Landcom 2004, or its latest version);
    - a Surface Water Monitoring Plan, including:
      - detailed baseline data of surface water flows and quality in the watercourses that could be affected by the project;
      - o surface water and stream health impact assessment criteria;

- o a program to monitor:
  - surface water flows, quality and impacts on water users;
  - stream health; and
  - channel stability,

in Saddlers Creek, Western Creek and Quarry Creek;

- a Groundwater Monitoring Plan, including:
  - detailed baseline data of groundwater levels, yield and quality in the region, and privately owned groundwater bores, that could be affected by the project;
  - o groundwater impact assessment criteria;
  - o a program to monitor:
    - groundwater inflows to the underground mining operations;
    - impacts on regional aquifers;
    - impacts on the groundwater supply of potentially affected landowners;
    - impacts on Saddlers Creek alluvial aguifer; and
    - impacts on any groundwater dependent ecosystems and riparian vegetation; and
  - procedures for the verification of the groundwater model, and calibrate it to site specific conditions;
- 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 surface water, stream health and groundwater impact assessment 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.

# REHABILITATION AND LANDSCAPE MANAGEMENT

# Rehabilitation and Offset Strategy

7. The Proponent shall implement the rehabilitation and offset strategy described in the EA and summarised in Table 3 (shown conceptually in Appendix 4), to the satisfaction of the Director-General.

Table 3: Rehabilitation and Offset Strategy

Area	Minimum Size
Saddlers Creek Conservation Area (existing vegetation)	82 ha
Saddlers Creek Conservation Area (vegetation to be established via natural regeneration)	213 ha
Edderton Road Corridor Revegetation Area (vegetation to be established)	154 ha
Total	449 ha

- 8. Within 3 years of the date of this approval, the Proponent shall make suitable arrangements to provide appropriate long term security for the Saddlers Creek Conservation Area, to the satisfaction of the Director-General.
- 9. Within 12 months of the date of this approval, the Proponent shall demonstrate that appropriate monetary bonds are, or will be, in place with applicable authorities to fully implement the offset strategy, to the satisfaction of the Director-General.

# Mt Arthur Conservation Area

10. The Proponent shall design 330/500kV transmission line relocation so as to avoid any impact on the Mt Arthur Conservation Area.

# **HERITAGE**

# **Aboriginal Cultural Heritage**

- 11. Notwithstanding condition 12 of schedule 2, the Aboriginal Cultural Heritage Management Plan must:
  - (a) be prepared in consultation with DECC and all relevant Aboriginal groups;
  - (b) be submitted prior to carrying out any operations that could affect Aboriginal sites; and
  - (c) include:
    - a detailed plan of management for the Saddlers Creek Conservation Area;
    - a program/procedures for:

- salvage, subsurface investigation and management of affected highly significant Aboriginal sites (including sites SC01 and QC01);
- salvage and management of all other affected Aboriginal sites, based on additional assessment in the case of sites affected by the relocation of the 330/500kV transmission line; and
- o protecting, monitoring and managing site QC02 (a scarred tree).

Note: The Aboriginal Cultural Heritage Management Plan may form part of the Archaeology and Cultural Heritage Management Plan, as referred to in the Mount Arthur North mine consent (DA 144-05-2000).

# Non-Aboriginal Heritage

- 12. Notwithstanding condition 12 of schedule 2, the Non-Aboriginal Heritage Management Plan must:
  - (a) be prepared in consultation with the Heritage Office, Council, and local historical organisations;
  - (b) be submitted prior to carrying out any operations that could affect identified heritage items;
  - (c) include:
    - conservation management plans for the Belmont Homestead and Edderton Homestead complexes;
    - details of the Hospital Building relocation;
    - a program/procedures for:
      - photographic and archival recording of potentially affected heritage items, based on additional heritage research:
      - o baseline dilapidation surveys of all potentially affected heritage items;
      - monitoring and managing the effects of subsidence on potentially affected heritage items; and
      - additional archaeological excavation and/or recording of any significant heritage items requiring demolition.

Note: The Non-Aboriginal Heritage Management Plan may form part of the Archaeology and Cultural Heritage Management Plan, as referred to in the Mount Arthur North mine consent (DA 144-05-2000).

# TRAFFIC AND TRANSPORT

- 13. Prior to causing any subsidence on Edderton Road, the Proponent shall prepare (and subsequently implement) a Traffic Management Plan for the project in consultation with Council, MSB and DPI, and to the satisfaction of the Director-General. The plan shall include procedures in relation to:
  - monitoring and remediation of subsidence related impacts on the road, culverts and bridges;
  - temporary road closures, diversions, speed limits and warning signage:
  - ongoing maintenance of subsidence-related impacts to the road; and
  - consultation with the local community and relevant agencies regarding the traffic management measures.
- 14. The Proponent shall implement all reasonable and feasible measures to avoid blocking the railway crossing on Antiene Railway Station Road, to the satisfaction of the Director-General.

# **ENERGY EFFICIENCY AND GREENHOUSE GAS**

15.	Notwithstanding condition 12 of schedule 2, the Energy Savings Action Plan must include a detailed
	feasibility study into the capture and beneficial utilisation of hydrocarbon gas emissions from the project.

# SCHEDULE 4: ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING

# INCIDENT REPORTING

- 1. Within 24 hours of detecting an exceedance of the approved limits/performance criteria at the Mount Arthur mine complex or the occurrence of an incident that causes (or may cause) harm to the environment, the Proponent shall notify the Department and other relevant agencies of the exceedance/incident.
- 2. Within 6 days of notifying the Department and other relevant agencies of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that:
  - (a) describes the date, time, and nature of the exceedance/incident;
  - (b) identifies the cause (or likely cause) of the exceedance/incident;
  - (c) describes what action has been taken to date; and
  - (d) describes the proposed measures to address the exceedance/incident.

# **ACCESS TO INFORMATION**

- 3. Within 3 months of the approval of any strategy/plan/program required under this approval (or any subsequent revision of these strategies/plans/programs), or the completion of the audits or AEMR, required under this approval, the Proponent shall:
  - (a) provide a copy of the relevant document/s to the relevant agencies and CCC;
  - (b) place a copy of the document/s on its website.

Note: References to strategies, plans, programs, audits, AEMR and CCC identified above include those required under the consent for the Mount Arthur North mine (DA 144-05-2000).

- 4. During the project, the Proponent shall:
  - (a) make a summary of monitoring results required under this approval publicly available on its website; and
  - (b) update these results on a regular basis (at least every 3 months).

Note: Monitoring results required under this approval include those required under the consent for the Mount Arthur North mine (DA 144-05-2000).

# INDEPENDENT ENVIRONMENTAL AUDIT

5. Notwithstanding condition 2 of schedule 2, the Proponent shall ensure that the audit team for Independent Environmental Audits includes a suitably qualified and independent subsidence expert, whose appointment has been approved by the Director-General.

# **APPENDIX 1: SCHEDULE OF LAND**

Property ID*	Lot	DP	Owner
1	11	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
2	6	843635	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
3	12	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
4	4	843634	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
5	1	308136	Reference not held
7	10	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
8	6	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
9	2	48776	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
10	5	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
11	46	241179	Macquarie Generation
18	1	238862	Macquarie Generation
20	1	556370	Macquarie Generation
39	1	752486	The State of New South Wales
40	180	812852	Drayton Coal Pty Limited, Anglo Coal (Drayton) Pty Limited
42	1	532672	State Rail Authority of NSW
43	22	241179	Macquarie Generation
44	5	752486	Macquarie Generation
46	44	241179	Macquarie Generation
49	45	241179	Macquarie Generation
74	64	850818	Drayton Coal Pty Limited, Anglo Coal (Drayton) Pty Limited
108	6	701496	Drayton Coal Pty Limited, Anglo Coal (Drayton) Pty Limited
110	115	1078759	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
130	3	701496	Drayton Coal Pty Limited
137	113	1078759	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
135	3	843634	Coal Operations Australia Limited (Mt Arthur Coal)
136	4	701496	Drayton Coal Pty Limited
138	110	727767	Bayswater Colliery Company Pty Ltd (Mt Arthur Coal)
139	10	793428	The State of New South Wales
140	66	850818	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
141	201	842045	Bayswater Colliery Company Pty Ltd (Mt Arthur Coal)
142	63	752449	Bayswater Colliery Company Pty Ltd (Mt Arthur Coal)
143	5	726248	Bayswater Colliery Company Pty Ltd (Mt Arthur Coal)
144	11	632691	The State of New South Wales
151	10	632691	Coal Operations Australia Limited (Mt Arthur Coal)
185	2	515936	Coal Operations Australia Limited (Mt Arthur Coal)
193	1	515936	Coal Operations Australia Limited (Mt Arthur Coal)
194	1	101142	Coal Operations Australia Limited (Mt Arthur Coal)
249	3	27346	Coal Operations Australia Limited (Mt Arthur Coal)
258	111	633293	Coal Operations Australia Limited (Mt Arthur Coal)
259	112	633293	The Council of the Shire of Muswellbrook
260	4	247064	Coal Operations Australia Limited (Mt Arthur Coal)
261	8	27346	Coal Operations Australia Limited (Mt Arthur Coal)
262	1	27346	Coal Operations Australia Limited (Mt Arthur Coal)
263	2	27346	Coal Operations Australia Limited (Mt Arthur Coal)
264	С	407349	Coal Operations Australia Limited (Mt Arthur Coal)
265	3	387021	Coal Operations Australia Limited (Mt Arthur Coal)
266	121	575515	Coal Operations Australia Limited (Mt Arthur Coal)
267	9	655749	Coal Operations Australia Limited (Mt Arthur Coal)
268	12	27346	Coal Operations Australia Limited (Mt Arthur Coal)

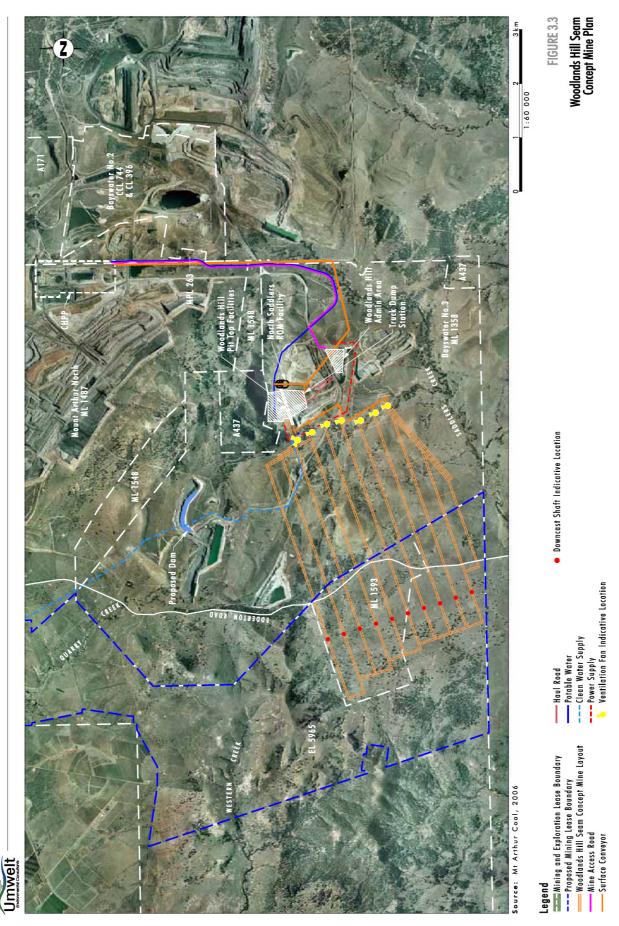
Property ID*	Lot	DP	Owner
269	2	387021	Coal Operations Australia Limited (Mt Arthur Coal)
270	11	27346	Coal Operations Australia Limited (Mt Arthur Coal)
271	14	27346	Coal Operations Australia Limited (Mt Arthur Coal)
272	13	27346	Coal Operations Australia Limited (Mt Arthur Coal)
273	15	27346	Coal Operations Australia Limited (Mt Arthur Coal)
274	16	27346	Coal Operations Australia Limited (Mt Arthur Coal)
275	1	403081	Coal Operations Australia Limited (Mt Arthur Coal)
276	112	246348	Coal Operations Australia Limited (Mt Arthur Coal)
277	123	575515	Coal Operations Australia Limited (Mt Arthur Coal)
278	122	575515	Coal Operations Australia Limited (Mt Arthur Coal)
279	114	246348	Coal Operations Australia Limited (Mt Arthur Coal)
280	115	246348	Coal Operations Australia Limited (Mt Arthur Coal)
281	13	228159	Coal Operations Australia Limited (Mt Arthur Coal)
282	113	246348	Coal Operations Australia Limited (Mt Arthur Coal)
283	111	246348	Coal Operations Australia Limited (Mt Arthur Coal)
284	2	601359	Coal Operations Australia Limited (Mt Arthur Coal)
289	1	573259	Coal Operations Australia Limited (Mt Arthur Coal)
290	2	573259	Coal Operations Australia Limited (Mt Arthur Coal)
291	2	843634	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
292	604	802124	Coal Operations Australia Limited (Mt Arthur Coal)
293	605	802124	Coal Operations Australia Limited (Mt Arthur Coal)
294	4	390143	Coal Operations Australia Limited (Mt Arthur Coal)
295	607	802124	Coal Operations Australia Limited (Mt Arthur Coal)
296	7003	93323	Department of Lands (Crown)
297	9	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
298	1	843634	Coal Operations Australia Limited (Mt Arthur Coal)
299	8	26211	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
300	2	806149	Coal Operations Australia Limited (Mt Arthur Coal)
301	1	806149	Coal Operations Australia Limited (Mt Arthur Coal)
303	20	550431	Coal Operations Australia Limited (Mt Arthur Coal)
304	Α	407349	Coal Operations Australia Limited (Mt Arthur Coal)
305	9	26211	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
306	7	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
307	4	29950	Coal Operations Australia Limited (Mt Arthur Coal)
308	1	47302	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
309	1	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
310	2	29950	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
378	4	27346	Coal Operations Australia Limited (Mt Arthur Coal)
381	5	27346	Coal Operations Australia Limited (Mt Arthur Coal)
387	3	113689	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
388	1	385720	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
393	7	27346	Coal Operations Australia Limited (Mt Arthur Coal)
394	6	27346	Coal Operations Australia Limited (Mt Arthur Coal)
396	124	575515	Coal Operations Australia Limited (Mt Arthur Coal)
397	85	752500	Department of Lands (Crown)
398	2	385720	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
399	1	249536	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
400 401	3	29950	Coal Operations Australia Limited (Mt Arthur Coal)
401	4	204369	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
402 405	49 30	752500 787702	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
405	30	787702	Hunter Valley Energy Coal Limited (Mt Arthur Coal)

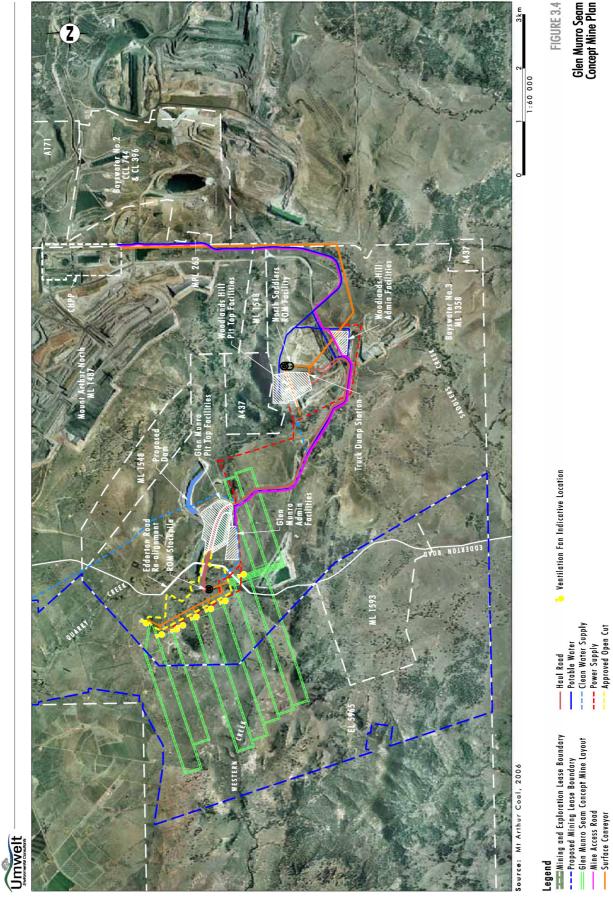
Property ID*	Lot	DP	Owner
441	1	223018	Energy Australia
442	160	722249	The State Of New South Wales
443	159	722249	Coal Operations Australia Limited (Mt Arthur Coal)
444	11	526344	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
504	6	249536	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
505	1	204369	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
506	1	372862	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
507	154	752500	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
508	111	514759	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
509	112	514759	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
510	1	113689	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
511	1	503827	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
512	3	249536	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
513	2	249536	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
514	5	249536	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
515	4	249536	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
536	5	113689	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
541	2	34397	Rosebrook Pty Limited
553	1	34397	Rosebrook Pty Limited
562	3	48776	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
563	4	48776	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
564	9	843635	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
565	7	843635	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
569	8	29950	Coal Operations Australia Limited (Mt Arthur Coal)
571	5	48776	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
572	8	48876	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
573	6	48776	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
574	10	26211	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
575	7	48776	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
576	2	133634	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
577	1	133634	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
578	166	752503	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
579	21	1018587	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
580	1	1004725	Saddlers Creek Coal Pty Limited
581	71	752500	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
582	70	752500	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
583	83	752500	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
584	69	752500	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
585	68	752500	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
586	98	752441	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
588	97	752441	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
589	102	752441	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
591	1	752441	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
594	1	956112	Marcus Humphrey Wolfgang & Robyn Elizabeth Wolfgang
633	4	6090	Philip Richard Burgmann & Margaret Burgmann
650	65	850818	Drayton Coal Pty Limited, Anglo Coal (Drayton) Pty Limited
651	321	625513	Anglo Coal Australia Pty Ltd
652	2	752486	Macquarie Generation
653	1	1090735	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
654	2	1090735	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
655	3	1090735	Hunter Valley Energy Coal Limited (Mt Arthur Coal)

Property ID*	Lot	DP	Owner
656	4	1090735	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
657	5	1090735	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
658	6	1090735	Hunter Valley Energy Coal Limited (Mt Arthur Coal)
-	-	-	Part Antiene Railway Station Road
-	-	-	Part Denman Road
-	-	-	Part Edderton Road
-	-	-	Part McDonalds Road
-	-	-	Part New England Highway
-	_	-	Part Thomas Mitchell Drive

<sup>\*</sup> As identified in the Environmental Assessment

# **APPENDIX 2: PROJECT LAYOUT PLANS**





# **APPENDIX 3: STATEMENT OF COMMITMENTS**

[Note: References to sections, figures, tables and appendices are references to the EA]

# 6.2 Life of Operation, Production, Concept Mine Plan and Rail Haulage

# Rail Haulage

- 6.2.7 Coal transported along the Bayswater Rail Loop from Mt Arthur Coal will be limited to 19 Mtpa.
- 6.2.9 Annual average and maximum daily train movements and tonnages will be reported annually in the AEMR.

# 6.3 Subsidence

- 6.3.2 Where a potential subsidence impact is identified on private property, Mt Arthur Coal will prepare an updated PPP for each of the potentially affected private landholders. These plans will clearly outline impacts of mining on the property and the management and remediation measures to be implemented.
- 6.3.3 Subsidence management measures to be implemented as part of the project will include:
  - visual monitoring of the land surface and drainage lines within the subsidence affectation area pre and post subsidence to identify remediation requirements, if any;
  - detailed subsidence monitoring in accordance with Department of Primary Industry requirements, and utilise this data to regularly update the subsidence predictions for the site;
  - remediation and rehabilitation of subsidence impacts will be carried out, where required, as soon as practicable following subsidence using methods specified in SMPs:
  - 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;
  - 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 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, Mt Arthur Coal will provide an alternate source of water, as required, until the dam is repaired; and
  - all privately owned bores within the subsidence affectation area will be monitored during and following undermining. If the capacity of any utilised private bore is reduced to unacceptable level as a result of subsidence, Mt Arthur Coal will provide an alternative supply of water until such time as the MSB re-establishes or replaces the bore.

# 6.4 Ecology

- 6.4.1 Mt Arthur Coal will, within 6 months of the commencement of operations submit to the Director-General for approval, a revised Mt Arthur Coal complex Ecological Management Plan which integrates management of ecological issues associated with the project with the remainder of Mt Arthur Coal operations. This will include:
  - measures to minimise the impact of subsidence remediation works on ecological values such as
    use small earthmoving machinery to carry out subsidence remediation works within
    woodland/forest areas and use of hand remediation methods for any works within the vicinity of
    the known weeping myall (*Acacia pendula*) Endangered Population and EEC;
  - measures to assist regeneration of vegetation communities affected by subsidence remediation where satisfactory natural regeneration does not occur;
  - a due diligence process for the location of minor surface infrastructure to be implemented when they cannot be located wholly within previously cleared areas;
  - use of existing clearing procedures;
  - continued implementation of existing measures for the replacement of arboreal habitat, should the removal of any hollow bearing trees be required; and
  - expansion of the existing Mt Arthur Coal ecological monitoring program to include monitoring of vegetation condition within subsidence affected areas, rehabilitation works, the weeping myall (*Acacia pendula*) stand and monitoring of fauna in the project area.
- 6.4.2 Mt Arthur Coal will develop a management strategy for the weeping myall (*Acacia pendula*) Endangered Population and EEC located in the project area (this may be included as part of the above Ecological Management Plan). The plan will consider the need for signposting and/or fencing to provide for protection of this area.

6.4.3 Mt Arthur Coal will establish and manage the proposed Saddlers Creek conservation area (refer to Figure 5.12) to protect and enhance its ecological values in perpetuity, to the satisfaction of the Director-General. The management of the proposed conservation area will address the existing degradation of Saddlers Creek.

# 6.5 Heritage

# **Aboriginal Heritage**

- 6.5.1 The Aboriginal Cultural Heritage Management Plan (ACHMP) will:
  - facilitate ongoing management of Aboriginal sites;
  - outline the timing and methodology for the salvage of sites:
  - detail the management strategy for the Saddlers Creek conservation area; and
  - include the establishment of a Management Committee to review and advise in relation to ongoing management of sites within the project area.
- 6.5.2 Aboriginal site loci within the subsidence remediation impact zone (shown on Figure 5.11 or as refined in the SMP process) will be salvaged by surface collection on a per longwall panel basis prior to the commencement of mining in each longwall panel. Salvage works will be undertaken in accordance with the methods outlined in Appendix 7 of the EA.
- 6.5.3 Targeted sub-surface investigation will be carried out within areas of Quarry Creek (QC01), Saddlers Creek tributary (SC09) and Western Creek (WC04) in areas within the subsidence remediation impact zone (shown on Figure 5.11 or as refined in the SMP process) and for Saddlers Creek (SC01) within the proposed conveyor corridor (refer to Figure 5.11). The sub-surface investigations will be undertaken in accordance with the methods outlined in Appendix 7 of the EA.
- 6.5.4 Aboriginal sites (or part thereof) located outside the subsidence remediation impact zone (shown on Figure 5.11 or as refined in the SMP process) and not required to be impacted for establishment of mining, will be conserved *in situ* and managed under the ACHMP for the duration of the project.
- 6.5.5 A report containing the findings of the salvage program and subsequent artefact analysis will be completed for the series of longwall panels in each target coal seam. The report will be prepared within 2 years of the completion of salvage works and 2 copies provided to DECC. Copies will be made available to Aboriginal community groups that participated in the consultation program for the project.
- 6.5.6 Mt Arthur Coal commit to the following Aboriginal cultural heritage offsets:
  - to set aside the proposed Saddlers Creek conservation area to be conserved in perpetuity for its Aboriginal cultural heritage values (refer to Figure 5.12). The proposed conservation area will be managed under an ACHMP prepared in consultation with DECC and the registered Aboriginal stakeholder groups;
  - to fund and construct a Keeping Place within the Proposed Saddlers Creek conservation area, during the period of this project. The Keeping Place will store artefacts salvaged as part of the project and will be staffed an average of 50 days per year by appropriately trained Aboriginal community representatives, or as otherwise agreed with Mt Arthur Coal;
  - to fund the training of 5 representatives from the registered Aboriginal stakeholder groups to undertake 'Collections Training' at the Australian Museum (or similar training) for staffing of the proposed Keeping Place, during the period of this project;
  - to establish within or near to the existing fenced section of Quarry Creek west of Edderton Road, a facility suitable for use by the Aboriginal community when using the area for teaching purposes until such time as the area is impacted by subsidence;
  - to offer training for one member of each of the registered Aboriginal stakeholder groups for the project in relation to site recording and artefact recording and basic analysis; and
  - to establish a Management Committee including at least 5 representatives of the Aboriginal stakeholder groups to guide the ongoing management of sites within the project area for the duration of this project.
- 6.5.7 If any human skeletal material is uncovered during ground disturbing works, all works will cease and the NSW Police Department, DECC and Aboriginal stakeholder groups will be notified. These stakeholder groups will then be consulted in relation to the development of appropriate mitigation measures.

# 6.6 Water Resources

# Surface Water

- 6.6.2 The overland conveyor crossing of Saddlers Creek will have a catch tray system (or similar) on the underside of the conveyor where it passes over the creek to minimise the potential for coal spillage entering the creek.
- 6.6.3 Drainage from pit-top facilities and high traffic hardstand areas, including workshops, will be appropriately managed to contain and treat run-off prior to re-use on-site within the mine water management system.
- 6.6.5 Subsidence impacts on drainage lines will be effectively remediated 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 SMP process, and in consultation with DWE, 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 (including monitoring which aims to assess any loss of flow from third order or higher stream systems);
  - 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. Remediation work will be generally consistent with DWEs Rivers and Estuaries Management Policy and the Australian Stream Rehabilitation Manual 2000;
  - 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
  - following the completion of any required reshaping works, remediated drainage lines will be revegetated and the riparian zone fenced to protect the drainage line and enhance ecological function.
- 6.6.7 Surface water monitoring results will be reported annually in the AEMR.
- 6.6.8 The final design of the proposed Hunter River pump station and any upgrade to the existing extraction point will be determined in consultation with the DWE and Council. Any overland piping associated with these extraction points will be buried unless otherwise discussed with Council.

# Groundwater

- 6.6.10 The results of groundwater monitoring and a comparison of measured and predicted impacts will be reported annually in the AEMR (refer to commitment 6.14.1).
- 6.6.11 Impacts on privately owned bores will be assessed by monitoring and in the event that any utilised privately owned bore is significantly affected, an alternative water supply will be provided by Mt Arthur Coal until such time as the bore is re-established or replaced.

# Monitoring Review

- 6.6.12 Additional groundwater monitoring locations will be established to monitor the impacts of the project on groundwater aquifers as outlined in Appendix 10, or as otherwise agreed by the Director-General in consultation with the DWE.
- 6.6.13 An annual analysis of surface and groundwater monitoring data will be undertaken and will include:
  - identification of any changes or long term trends in surface water quality. Should any adverse trends be identified, an investigation will be implemented to determine if the trend is a result of the project operations and if so, will identify management strategies to be implemented to address the identified issues; and
  - a comparison to modelled groundwater impact predictions.

The monitoring results and analysis findings will be reported in the AEMR.

# 6.7 Noise

- 6.7.2 Project operations will be managed with the aim of achieving the predicted noise levels in Section 5.6 of the EA.
- 6.7.4 Mt Arthur Coal will manage train movement noise impacts from Mt Arthur Coal trains travelling on the Bayswater Rail Loop and Antiene Rail Spur to meet the assumed noise acquisition criteria in the EA at

- all private residences (except East Antiene Location A1, refer to Section 5.6) when Mt Arthur Coal trains are travelling on the Bayswater Rail Loop and Antiene Rail Spur. Details of the measures implemented to manage train noise will be discussed in the AEMR.
- 6.7.7 Mt Arthur Coal will maintain the existing noise monitoring network (or as otherwise agreed with DECC), including real-time directional noise monitoring in accordance with the MAN development consent. In order to assess the compliance of rail passby noise with the applicable criteria, Mt Arthur Coal will undertake annual noise monitoring in east Antiene for a period of 3 years. Monitoring will be undertaken during winter night time periods and will monitor a minimum of 10 train movements. The monitoring program will be reviewed at the end of the 3 year period. Noise monitoring findings relating to the project will be reported annually in the AEMR (refer to commitment 6.14.1).

# 6.8 Air Quality

6.8.3 Mt Arthur Coal will maintain their existing dust monitoring network (or as otherwise agreed with DECC), that includes high volume air samplers measuring PM<sub>10</sub> on a 6 day cycle, real-time samplers measuring PM<sub>10</sub> and dust deposition gauges. Dust monitoring findings relating to the project will be reported annually in the AEMR (refer to commitment 6.14.1).

# 6.9 Greenhouse Gas Emissions

- 6.9.2 Mt Arthur Coal will investigate opportunities for reduction of greenhouse gas emissions from the project. This will include ongoing review of emissions monitoring and management technology.
- 6.9.3 Where gas purity reliably allows, methane emissions from the mine will either be flared or may be beneficially utilised where practical and feasible. Mt Arthur Underground will make application for the appropriate Petroleum tenure so that, subject to that tenure being granted, the opportunity to beneficially reuse methane emissions is available.

# 6.10 Visual

- 6.10.1 Mt Arthur Coal will implement the following visual controls to screen or filter views of project infrastructure from residential and public road locations (refer to Figure 5.25):
  - construction of a 10 metre high bund around the northern and western edge of the Glen Munro pit-top facilities with tree plantings on the bund wall;
  - tree planting around the northern edge of Belmont pit to filter views of the edge of the open cut mining area:
  - tree planting on a rise to the south-west of the North Saddlers ROM facility to filter distant views of the ROM facility from the south-west;
  - all lighting to be 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; and
  - all buildings potentially visible to the public to be coloured in suitable natural tones.

# 6.11 Decommissioning and Rehabilitation

- 6.11.1 A decommissioning plan will be prepared for each mining stage as part of the MOP process and submitted to the DPI for approval approximately 5 years prior to the commencement of decommissioning works (Note: this excludes progressive closure of underground mining facilities such as shafts which will be closed as part of ongoing mining activities will be outlined in the relevant MOP and undertaken in accordance with the requirements of the DPI).
- 6.11.2 Tailings emplacement strategies implemented during the life of the project will be implemented in consultation with, and following approval from, the DPI.
- 6.11.3 Mt Arthur Coal will prepare final void management plans for West Belmont Pit and Saddlers Pit at least 5 years prior to their planned closure. The plans will be incorporated into the MOP submitted to the DPI as part of the closure process.
- 6.11.5 The complex wide rehabilitation and habitat management strategy will be regularly reviewed and revised as part of the ongoing rehabilitation planning process at Mt Arthur Coal, with details of the implementation of the strategy included in the operations various MOPs submitted to the DPI for approval. Progress in implementing the strategy will be reported annually in the AEMR.

# 6.12 Traffic and Transport

- 6.12.1 The Traffic Management Plan will include measures for the management of construction access from Edderton Road for minor surface infrastructure (e.g. ventilation facilities) and measures to minimise inconvenience to the public associated with access and use of Edderton Road. The Plan will be reviewed at least once every 3 years.
- 6.12.2 Mt Arthur Coal will liaise with Anglo Coal, Council, Macquarie Generation and the ARTC to address legal and appropriate access for properties along Antiene Railway Station Road.

# 6.13 Community

6.13.1 Mt Arthur Coal will work with Council and the Department to create an appropriate CCC for the project.

Mt Arthur Coal will provide the CCC with regular information regarding the environmental management performance of the project and any relevant matters regarding community relations.

# 6.14 Environmental Management, Monitoring, Auditing and Reporting

# Annual Environmental Management Report

6.14.1 Mt Arthur Coal will prepare an AEMR for the project. This AEMR may be integrated into a whole-of-site Mt Arthur Coal AEMR.

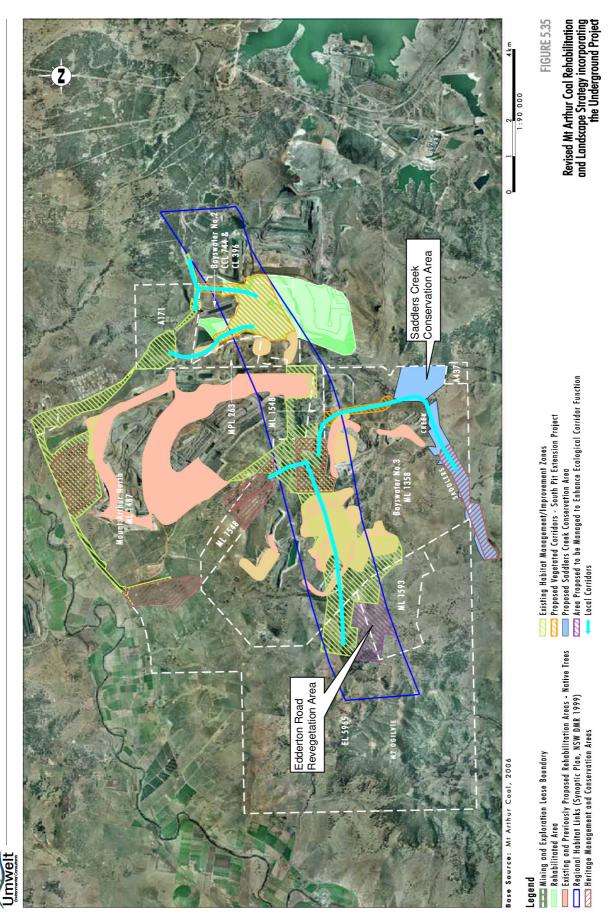
# Waste Management

6.14.2 No waste will be disposed of on site except for inert wastes permissible under the EPL obtained for the project with all other waste disposed of at appropriately licensed waste management facilities located offsite.

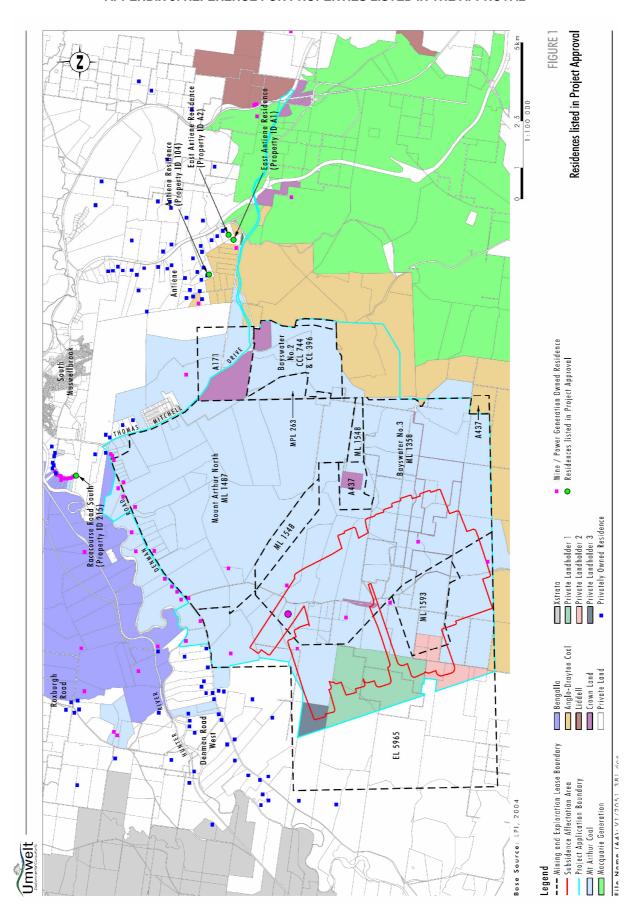
# Independent Environmental Audit

6.14.4 Three years after commencement of project mining operations, and every 3 years thereafter, Mt Arthur Coal will commission and pay the full cost of an Independent Environmental Audit of the project in consultation with the Director-General. A copy of the audit report will be provided to the Director-General of the Department and DPI, DECC, Council, DWE and members of the CCC for the project. This audit may be combined with other independent environmental audits required by Mt Arthur Coal's development consents/Project Approvals as agreed by the Director-General.

APPENDIX 4: REHABILITATION AND OFFSET STRATEGY PLAN



# APPENDIX 5: REFERENCE FOR PROPERTIES LISTED IN THE APPROVAL



# **Independent Dispute Resolution Process** (Indicative only)

