

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

**DETERMINATION OF DEVELOPMENT APPLICATION
PURSUANT TO SECTION 101**

I, the Minister for Urban Affairs and Planning, pursuant to Section 101 of the *Environmental Planning and Assessment Act 1979* determine the development application referred to in schedule 1 by granting consent to the application subject to the conditions set out in schedules 2 to 5.

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 development.

SIGNED

Craig Knowles
Minister for Urban Affairs and Planning

Sydney,

7 August 1995

File No: N92/325/005

Red type represents 9 November 2006 modification

Blue type represents 6 December 2007 modification

Green type represents the July 2008 modification

Lavender type represents the October 2011 Modification

SCHEDULE 1

Development Application:	DA 211/93
Applicant:	Bengalla Mining Company Pty Limited
Consent Authority:	Minister for Urban Affairs and Planning
Land:	See Appendix 1
Development:	Construction and operation of the Bengalla open cut coal mine, coal handling and preparation plant, rail loop, loading facilities and associated facilities.

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DEFINITIONS

AHIMS	Aboriginal Heritage Information Management System
Annual review	The review required by condition 3 of schedule 5
Applicant	Bengalla Mining Company Pty Limited, or its successors
ARTC	Australian Rail Track Corporation
BCA	Building Code of Australia
CCC	Community Consultative Committee
COI	Commission of Inquiry into the establishment and operation of the Bengalla open cut coal mine
Conditions of this consent	Conditions contained in schedules 2 to 5 inclusive
Council	Muswellbrook Shire 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
Development	The development described in the EIS and EA
Director-General	Director-General of the Department, or delegate
DPI	Department of Primary Industries
DRE	Division of Resources and Energy, within the Department of Trade and Investment, Regional Infrastructure and Services
EA	Environmental Assessment for modification to the development consent relating to the overburden emplacement strategy (Mod 4), titled <i>Bengalla Mining Company Development Consent Modification Environmental Assessment December 2010</i> , prepared by Hansen Bailey, and including the Response to Submissions, dated February 2011.
EIS	The environmental impact statement for the Bengalla Coal Mine dated November 1993, and associated submissions to the COI, as modified by the: - statement of environmental effects for modifications to mining operations, dated February 2006; - statement of environmental effects for the Wantana Extension dated July 2007, and associated response to submissions dated 17 September 2007; and - environmental assessment for modifications to the development consent relating to relocation of the Bengalla Link Road and ROM Hopper, dated March 2008.
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence issued under the POEO Act
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build
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 consent
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 3 and 4 of this consent it 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 consent
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Mining operations	Includes the removal of overburden and the extraction, processing, handling, storage and transportation of coal
Mine water	Water that accumulates within active mining areas and infrastructure areas, synonymous with dirty water
Minister	Minister for Planning and Infrastructure, or delegate
Minor	Small in quantity, size and degree
Mitigation	Activities associated with reducing the impacts of the development
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
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)
Public Infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, electricity, gas, drainage, sewerage, telephony, communications, etc.

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
Rehabilitation	The treatment or management of land disturbed by the development for the purpose of establishing a safe, stable and non-polluting environment
ROM	Run of Mine
RTA	Roads and Traffic Authority
Site	The land listed in Appendix 1
Statement of commitments	The Applicant's commitments in Appendix 6

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

TERMS OF CONSENT

2. The Applicant shall carry out the development in accordance with the:
 - (a) EIS;
 - (b) EA;
 - (c) statement of commitments; and
 - (d) conditions of this consent.

Notes:

- The general layout of the development is shown in Appendix 2.
- The statement of commitments is reproduced in Appendix 6.

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

LIMITS ON CONSENT

Mining Operations

5. The Applicant may carry out mining operations on the site until 27 June 2017.

Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of both the Director-General and the Executive-Director, Mineral Resources in DRE. Consequently this consent will continue to apply in all other respects - other than the right to conduct mining operations - until the rehabilitation of the site and these additional undertakings have been carried out satisfactorily.

Coal Extraction

6. The Applicant shall not extract more than 10.7 million tonnes of ROM coal from the site in a calendar year.

Coal Transport

7. The Applicant shall:
 - (a) transport all coal from the site by rail; and
 - (b) restrict train movements from the Bengalla load point to a maximum of 16 laden trains a day, unless otherwise approved by the Director-General.

Note: Laden trains may contain coal from either the development or the adjoining Mt Pleasant Coal Mine.

STRUCTURAL ADEQUACY

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

Notes:

- Under Part 4A of the EP&A Act, the Applicant 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 development.
- The development is located in the Muswellbrook Mine Subsidence District. Under Section 15 of the Mine Subsidence Compensation Act 1961, the Applicant is required to obtain the MSB's approval before conducting any improvements on site.

DEMOLITION

9. The Applicant shall ensure that all demolition work on site is carried out in accordance with AS 2601-2001: *The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

10. Unless the Applicant and the applicable authority agree otherwise, the Applicant shall:
- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: This condition does not include matters that are expressly provided for in the conditions of this consent, such as the maintenance of public roads.

OPERATION OF PLANT AND EQUIPMENT

11. The Applicant shall ensure that all plant and equipment used on site, or to transport coal from site, is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

STAGED SUBMISSION OF STRATEGIES, PLANS AND PROGRAMS

12. With the approval of the Director-General, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis.

Note: While any strategy, plan or program may be submitted on a progressive basis, the Applicant will need to ensure that the operations on site are covered by suitable strategies, plans or programs at all times.

13. The Applicant shall continue to implement the existing strategies, plans or programs that apply to the development on site until they are replaced by an equivalent strategy, plan or program approved under this consent.

PLANNING AGREEMENT

14. By the end of March 2012, unless otherwise agreed by the Director-General, the Applicant shall enter into a planning agreement with Council in accordance with:
- (a) Division 6 of Part 4 of the EP&A Act; and
 - (b) the terms of the Applicant's offer dated 6 July 2011 which is summarised in Appendix 4.

This agreement must provide for annual payments (in advance) to be made to Council, with the first period for payment to be backdated to commence on 1 October 2011.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

NOISE

Noise Criteria

- The Applicant shall ensure that the noise generated by the development does not exceed the criteria in Table 1 at any residence on privately-owned land or on more than 25% of any privately-owned land.

Table 1: Noise criteria dB(A)

Location	Day	Evening	Night	
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)
14 Drake	35	35	36	46
34 Moore	35	35	36	45
72 Halloran				
73 Zahra				
82 Latham				
11 Drake (residence)	35	35	37	46
13 Scriven (residence)				
16 Englebrecht				
17 Cridland				
18 Cridland				
19 Good				
20 Keevers				
21 Gleeson				
27 Andrews	35	35	37	45
28 Solway				
45 Roots				
69 Latham				
81 Rankin	35	35	38	45
50 Zahra				
80 Rankin				
47 Rankin				
41 Peel M	36	36	36	45
42 Moore				
22 Sweeney	36	36	37	46
23 Dobie				
24 Robinson				
25 Smith				
26 Barby				
3 Almond				
4 Englebrecht				
68 Jabetin	37	37	37	46
5 Barnett	37	37	38	46
6 McGoldrick				
38 Hamilton	38	38	37	45
40 Ellis				
44 Lane	38	38	38	45
9 Englebrecht	38	38	39	46

Location	Day	Evening	Night	
	$L_{Aeq(15\text{ min})}$	$L_{Aeq(15\text{ min})}$	$L_{Aeq(15\text{ min})}$	$L_{A1(1\text{ min})}$
90 Webber (25% area)	38	38	40	45
10 Race Club	40	40	40	-
All other privately owned land	35	35	35	45

Notes:

- To identify the locations referred to in Table 1, refer to Figure 1 in Appendix 3; and
- Noise generated by the development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner to exceed the criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Noise Acquisition Criteria

- If the noise generated by the development exceeds the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, then upon receiving a written request for acquisition from the landowner, the Applicant shall acquire the land in accordance with the procedures in conditions 6-7 of schedule 4.

Table 2: Land acquisition criteria dB(A)

Location	Day	Evening	Night
	$L_{Aeq(15\text{ minute})}$	$L_{Aeq(15\text{ minute})}$	$L_{Aeq(15\text{ minute})}$
East	43	42	41
All other privately owned land	40	40	40

Notes:

- To identify the locations referred to in Table 2, refer to Figure 1 in Appendix 3;
- Noise generated by the development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy; and
- For this condition to apply, the exceedences of the criteria must be systematic.

Cumulative Noise Criteria

- The Applicant shall implement all reasonable and feasible measures to ensure that the noise generated by the development combined with the noise generated by other mines in the area does not exceed the criteria in Table 3 at any residence on privately owned land or on more than 25% of any privately-owned land:

Table 3: Cumulative noise criteria dB(A) $L_{Aeq(period)}$

Location	Day	Evening	Night
East	55	45	40
All other privately-owned land	50	45	40

Notes:

- To identify the locations referred to in Table 3, refer to Figure 1 in Appendix 3; and
- Cumulative noise is to be measured in accordance with the relevant requirements and exceptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

Cumulative Noise Acquisition Criteria

- If the noise generated by the development combined with the noise generated by other mines in the area exceeds the criteria in Table 4 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, then upon receiving a written request from the landowner, the Applicant shall acquire the land on as equitable basis as possible with the relevant mines, in accordance with the procedures in conditions 6-7 of schedule 4.

Table 4: Cumulative noise acquisition criteria dB(A) $L_{Aeq(period)}$

Location	Day	Evening	Night
East	60	50	45
All privately-owned land	55	50	45

Notes:

- To identify the locations referred to in Table 4, refer to Figure 1 in Appendix 3;

- Cumulative noise is to be measured in accordance with the relevant requirements and exceptions (including certain meteorological conditions) of the NSW Industrial Noise Policy; and
- For this condition to apply, the exceedance of the criteria must be systematic.

Additional Noise Mitigation Measures

- Upon receiving a written request from the owner of any residence on the land listed in Table 5, the Applicant shall implement additional noise mitigation measures (such as double glazing, insulation, and/or air conditioning) at the residence in consultation with the owner. These measures must be reasonable and feasible.

If within 3 months of receiving this request from the owner, the Applicant and the owner 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.

Table 5: Land subject to additional noise mitigation upon request

Receiver	Receiver
9 – Englebrecht	47 – Rankin
38 – Hamilton	50 – Zahra
40 – Ellis	80 – Rankin
44 – Lane	-

Note: To identify the locations referred to in Table 5, see Figure 1 in Appendix 3.

Rail Noise

- The Applicant shall ensure that the rail spur is only accessed by locomotives that are approved to operate on the NSW rail network in accordance with noise limits L6.1 to 6.4 in Railcorp's EPL (No.12208) and ARTC's EPL (No.3142) or a Pollution Control Approval issued under the former *Pollution Control Act 1970*.

Operating Conditions

- The Applicant shall:
 - implement best practice noise management, including all reasonable and feasible noise mitigation measures to minimise the operational, low frequency and rail noise generated by the development;
 - minimise the noise impacts of the development during temperature inversions;
 - regularly assess the real-time noise monitoring and meteorological forecasting data and relocate, modify, and/or stop operations on site to ensure compliance with the relevant conditions of this consent, and
 - co-ordinate the noise management on site with the noise management at nearby mines (including the Mt Pleasant mine) to minimise the cumulative noise impacts of the mines, to the satisfaction of the Director-General.

Noise Management Plan

- The Applicant shall prepare and implement a Noise Management Plan for the development to the satisfaction of the Director-General. This plan must:
 - be prepared in consultation with OEH, and submitted to the Director-General for approval by the end of December 2012;
 - describe the noise mitigation measures that would be implemented to ensure compliance with the relevant conditions of this consent, including a real-time noise management system that employs both reactive and proactive mitigation measures;
 - include a noise monitoring program that:
 - uses a combination of real-time and supplementary attended monitoring measures to evaluate the performance of the development;
 - includes a protocol for determining exceedances of the relevant conditions of this consent; and
 - include a protocol that has been prepared in consultation with the owners of nearby mines (including the Mt Pleasant mine) to minimise the cumulative noise impacts of the mines.

BLASTING

Blasting Criteria

- The Applicant shall ensure that the blasting on the site does not cause exceedances of the criteria in Table 6.

Table 6: Blasting criteria

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Residence on privately owned land ^a	115	5	5% of the total number of blasts over a period of 12 months
	120	10	0%
Heritage sites: Bengalla, Overdene and Edinglassie	-	10	0%
All public infrastructure ^b	-	50 ^b	0%

^a Unless otherwise agreed with the relevant owner/s of the residence, and the Applicant has advised the Department in writing of the terms of this agreement; and

^b Unless otherwise agreed with the relevant infrastructure provider or owner, and the Applicant has advised the Department in writing of the terms of this agreement.

Blasting Hours

10. The Applicant shall only carry out blasting on site between 7am and 5pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the written approval of the Director-General.

Blasting Frequency

11. Except in accordance with written approval by the Director-General, the Applicant may carry out a maximum of:
- (a) 2 blasts per day; and
 - (b) 4 blasts a week averaged over any calendar year.

This condition does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, or to blasts required to ensure the safety of the mine or its workers.

Note: For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the mine.

Property Inspections

12. If the Applicant receives a written request from the owner of any privately-owned land within 2 kilometres of the approved open cut mining pit on site, for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection report updated, then within 2 months of receiving this request the Applicant shall:
- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to:
 - establish the baseline condition of the buildings and/or structures on the land, or update the previous property inspection report; and
 - identify any measures that should be implemented to minimise the potential blasting impacts of the development on these buildings and/or structures; and
 - (b) give the landowner a copy of the new or updated property inspection report.

Property Investigations

13. If the landowner of any privately-owned land claims that the buildings and/or structures on his/her land have been damaged as a result of blasting on site, then within 2 months of receiving this claim the Applicant shall:
- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to investigate the claim; and
 - (b) give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant shall repair the damages to the satisfaction of the Director-General.

If the Applicant or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Director-General for resolution.

Operating Conditions

14. The Applicant shall:
- (a) implement best blasting management practice on site to:
 - protect the safety of people and livestock in the surrounding area;
 - protect public or private infrastructure/property in the surrounding area; and
 - minimise the dust and fume emissions of the blasting on site;

- (b) co-ordinate the blasting on site with the blasting at nearby mines (including the Mount Pleasant mine) to minimise the cumulative blasting impacts of the mines; and
 - (c) operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site,
- to the satisfaction of the Director-General.

15. *The Applicant shall not undertake blasting within 500 metres of:*
- (a) a public road without the approval of Council;
 - (b) the Ulan-Muswellbrook railway line without the approval of the ARTC; and
 - (c) any land outside the site not owned by the Applicant, unless:
 - the Applicant has a written agreement with the relevant landowner to allow blasting to be carried out closer to the land, and the Applicant has advised the Department in writing of the terms of this agreement; or
 - the Applicant has:
 - o demonstrated to the satisfaction of the Director-General that the blasting can be carried out without compromising the safety of the people or livestock on the land, or damaging the buildings and/or structures on the land; and
 - o updated the Blast Management Plan to include the specific measures that would be implemented while the blasting is being carried out within 500m of the land.

Blast Management Plan

16. The Applicant shall prepare and implement a Blast Management Plan for the development to the satisfaction of the Director-General. This plan must:
- (a) be prepared in consultation with OEH, and submitted to the Director-General for approval by the end of December 2012;
 - (b) describe the blast mitigation measures that would be implemented to ensure compliance with the relevant conditions of this consent;
 - (c) describe the measures that would be implemented to ensure the public can get up-to-date information on the proposed blasting schedule on site or any road closures;
 - (d) include a road closure management plan, prepared in consultation with Council and the RTA;
 - (e) include a blast monitoring program for evaluating compliance with the relevant conditions of approval; and
 - (f) include a protocol that has been prepared in consultation with the owners of nearby mines for minimising and managing the cumulative blasting impacts of the mines.

AIR QUALITY & GREENHOUSE GAS

Odour

17. The Applicant shall ensure that no offensive odours are emitted from the site, as defined under the POEO Act, unless otherwise authorised by an EPL.

Greenhouse Gas Emissions

18. The Applicant shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Director-General.

Air Quality Criteria

19. The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not exceed the criteria listed in Tables 7, 8 or 9 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 7: Long term criteria for particulate matter

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

Table 8: Short term criterion for particulate matter

Pollutant	Averaging Period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 9: Long term criteria for deposited dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Notes to Tables 7-9:

^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: *Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method*.

^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Director-General in consultation with OEH.

Air Quality Acquisition Criteria

20. If particulate matter emissions generated by the development exceed the criteria in Tables 10, 11 or 12 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, then upon receiving a written request for acquisition from the landowner the Applicant shall acquire the land in accordance with the procedures in conditions 6-7 of schedule 4.

Table 10: Long term acquisition criteria for particulate matter

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

Table 11: Short term acquisition criteria for particulate matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 150 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	24 hour	^b 50 µg/m ³

Table 12: Long term acquisition criteria for deposited dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Notes to Tables 10-12:

^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: *Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method*.

^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Director-General in consultation with OEH.

Operating Conditions

21. The Applicant shall:
- (a) implement best practice air quality management, including all reasonable and feasible measures to minimise off site odour, fume and dust emissions of the development;
 - (b) minimise any visible off site air pollution;
 - (c) minimise the surface disturbance on site;
 - (d) regularly assess the real-time air quality monitoring and meteorological forecasting data and relocate, modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent; and
 - (e) co-ordinate the air quality management on site with the air quality management at nearby mines (including the Mount Pleasant mine) to minimise the cumulative air quality impacts of the mines, to the satisfaction of the Director-General.

Additional Air Quality Mitigation Measures

22. Upon receiving a written request from the owner of any residences on land listed in Table 13, the Applicant shall implement additional dust mitigation measures (such as a first flush roof system, internal or external air filters, and/or air conditioning) at the residence in consultation with the owner. These measures must be reasonable and feasible.

Table 13: Land subject to additional air quality mitigation upon request

5 – Barnett	9 – Englebrecht
6 – McGoldrick	68 – Jabetin

Note: To identify the locations referred to in Table 13, see the figure 1 in Appendix 3.

If within 3 months of receiving this request from the owner, the Applicant and the owner 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.

Air Quality and Greenhouse Gas Management Plan

23. The Applicant shall prepare and implement an Air Quality and Greenhouse Gas Management Plan for the development to the satisfaction of the Director-General. This plan must:
- (a) be prepared in consultation with OEH, and be submitted to the Director-General for approval by the end of February 2012;
 - (b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this consent, including a real-time air quality management system that employs reactive and proactive mitigation measures;
 - (c) include an air quality monitoring program that:
 - uses a combination of real-time monitors and supplementary monitors to evaluate the performance of the development;
 - includes PM_{2.5} monitoring (although this obligation could be satisfied by the regional air quality monitoring network if sufficient justification is provided);
 - includes a protocol for determining exceedences of the relevant conditions of this consent; and
 - (d) include a protocol that has been prepared in consultation with the owners of nearby mines to minimise the cumulative air quality impacts of the mines.

METEOROLOGICAL MONITORING

24. For the life of the development, the Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in NSW* guideline; and
 - (b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the *NSW Industrial Noise Policy*, or as otherwise approved by the OEH.

SOIL & WATER

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain water licences for the development.

Water Supply

25. The Applicant shall ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of mining operations to match its available supply of water, to the satisfaction of the Director-General.

Water Discharges

26. The Applicant shall ensure that any mine water discharges from the site comply with the:
- (a) discharge limits (both volume and quality) set for the development in any EPL; or
 - (b) relevant provisions in the POEO Act or *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002*.

Compensatory Water Supply

27. The Applicant shall provide compensatory water supply to any landowner of privately owned land whose water entitlements are adversely and directly impacted (other than an impact that is negligible) as a result of the development, in consultation with NOW, and to the satisfaction of the Director-General.

The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the development. Equivalent water supply should be provided (at least on an interim basis) within 24 hours of the loss being identified.

If the Applicant 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.

If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant shall provide alternative compensation to the satisfaction of the Director-General.

Water Management Plan

28. The Applicant shall prepare and implement a Water Management Plan for the development to the satisfaction of the Director-General. This plan must be prepared in consultation with OEH, NOW, DRE and Council, and be submitted to the Director-General for approval by the end of February 2012. The plan must include:
- (a) a Site Water Balance, which must;
 - a. Include details of:
 - i. sources and security of water supply;
 - ii. water use on site;
 - iii. water management on site;
 - iv. any off-site water transfers; and
 - b. investigate and implement all reasonable and feasible measures to minimise water use by the development;
 - (b) a Drainage Path Diversion Plan, which must include:
 - a. detailed design specifications for the drainage path relocation/rehabilitation;
 - b. a construction program for the drainage path relocation/rehabilitation, describing how it would be staged, and integrated with mining operations;
 - c. measures for identifying and managing potential impacts of the drainage path relocation/rehabilitation on:
 - i. ARTC works and assets; and/or
 - ii. existing agricultural activities;
 - d. water quality, ecological, hydrological and geomorphic performance and completion criteria for the drainage path relocation/rehabilitation based on an assessment of baseline conditions; and
 - e. a program to monitor and maintain the water quality, ecology, hydrological and geomorphic integrity of the drainage path relocation/rehabilitation;
 - (c) an Erosion and Sediment Control Plan, which must;
 - a. identify activities that could cause soil erosion and generate sediment or affect flooding;
 - b. describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;
 - c. describe the location, function, and capacity of erosion and sediment control structures and flood management structures; and
 - d. describe what measures would be implemented to maintain the structures over time;
 - (d) a Surface Water Management Plan, which must include;
 - a. detailed baseline data of surface water flows and quality in creeks and other waterbodies that could potentially be affected by the development;
 - b. surface water and stream health impact assessment criteria including trigger levels for investigating any potentially adverse surface water impacts;
 - c. a program to monitor and assess
 - i. surface water flows and quality

- ii. impacts on water uses;
 - iii. stream health;
 - iv. channel stability; and
- (e) a Ground Water Management Plan, which must include:
 - a. detailed baseline data of groundwater levels, yield and quality in the region, and any privately-owned groundwater bores, that could be affected by the development;
 - b. groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
 - c. a description of the measures that will be implemented to minimise any potential impacts on aquifer water quality from the emplacement of overburden on alluvial lands;
 - d. a program to monitor and assess:
 - i. groundwater inflows to the mining operations;
 - ii. impacts on regional and local (including alluvial) aquifers;
 - iii. impacts on the groundwater supply of potentially affected landowners;
 - iv. impacts on any groundwater dependent ecosystems and riparian vegetation;
- (f) a Surface and Ground Water Response Plan, which must include:
 - a response protocol for any exceedence of the surface water and groundwater assessment criteria;
 - measures to offset the loss of any baseline flow to watercourses caused by the development;
 - measures to prevent, minimise or offset groundwater leakage from alluvial aquifers caused by the development;
 - measures to compensate landowners of privately-owned land whose supply is adversely affected by the development; and
 - measures to mitigate and/or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation.

Note: The indicative modified drainage path is shown in Appendix 7.

HERITAGE

Note: Under the National Parks and Wildlife Act 1974 or the Heritage Act 1977, the Applicant is required to obtain approvals for any impacts to Aboriginal objects and/or significant relics.

Aboriginal Cultural Heritage Management Plan

29. The Applicant shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Director-General. This plan must:
- (a) be prepared in consultation with DECCW, the Aboriginal community, the Heritage Branch, Council, local historic organisations and relevant landowners, and be submitted to the Director-General for approval by the end of February 2012;
 - (b) include the following for the management of Aboriginal heritage on site:
 - a program/procedures for:
 - o salvage, excavation and/or management of Aboriginal sites and potential archaeological deposits within the development disturbance area;
 - o protection and monitoring of Aboriginal outside of the disturbance area;
 - o monitoring, notifying and managing the effects of blasting on potentially affected aboriginal sites;
 - o maintaining and managing access to Aboriginal sites by the Aboriginal community;
 - o contributing to Aboriginal cultural heritage management (in accordance with the commitments in the EIS and EA);
 - o managing the discovery of any new Aboriginal objects or skeletal remains identified during the development; and
 - o ongoing consultation and involvement of the Aboriginal communities in the conservation and management of Aboriginal cultural heritage on the site; and
 - (c) include the following for the management of other historic heritage on site:
 - a review of existing heritage items in the vicinity of the development, including an assessment of significance, that may be directly or indirectly affected,
 - photographic and archival recording of heritage items directly or indirectly affected by the project, in accordance with the applicable guidelines of the Heritage Council of NSW;
 - Conservation Management Plans for both the Bengalla and Overdene homesteads including details on access, long-term ownership, maintenance and use of the homesteads;
 - measures to minimise the visual impacts of the development on the Edinglassie and Rous Lench Homesteads; and
 - a description of measures that would be implemented for:
 - o monitoring, notifying and managing the effects of development-related blasting on potentially affected heritage items;
 - o managing the discovery of human remains or previously unidentified heritage items during the development; and

- o heritage inductions for construction personnel (including procedures for keeping records of inductions).

TRANSPORT

Coal Handling Transport

30. If the Mount Pleasant coal mine, or other mining operation, requires the use of the Bengalla rail loop, then the Applicant shall negotiate an agreement to facilitate the future use. This agreement must:
- (a) be dependent on the available capacity of the rail loop;
 - (b) be developed in consultation with the ARTC and Council;
 - (c) consider the requirements for:
 - the provision of an additional loading facility;
 - the sharing of maintenance and operating costs;
 - contributions to amortise capital costs of the establishment of the loop;
 - access to the loop and loading area; and
 - accommodation of a coal transfer and handling system.

Monitoring of Coal Transport

31. The Applicant shall:
- (a) keep records of the:
 - amount of coal transported from the site (on a monthly basis); and
 - date and time of each train movement generated by the development; and
 - (b) make these records available on its website at the end of each calendar year.

Traffic Management

32. The Applicant shall:
- (a) be responsible for the costs of maintenance of Bengalla Link Road from Denman Road to the Western limit of the 1 in 100 year flood level for the life of the mine or as otherwise agreed by Council; and
 - (b) maintain signs giving at least 24 hours notice of road closure on Wybong Road and Bengalla Link Road. The location and the wording of these signs are to be approved by Council.
33. The Applicant shall implement any improvement works recommended by the 2007 road safety audit of night time operations at the Bengalla Link Road/Denman Road intersection, to the satisfaction of the RTA and Council.

VISUAL

Visual Amenity and Lighting

34. The Applicant shall:
- (a) implement all reasonable and feasible measures to mitigate the visual and off-site lighting impacts of the development;
 - (b) ensure no outdoor lights shine above the horizontal;
 - (c) screen all on-site flood lighting and vehicular lights within the development, in accordance with the Connell Wagner Report, and the submission of Kevin Barry to the Commission of Inquiry; and
 - (d) ensure that all external lighting associated with the development complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, to the satisfaction of the Director-General.

Landscape Management Plan

35. The Applicant shall prepare and implement a Landscape Management Plan to mitigate the visual impacts of the development, to the satisfaction of the Director-General. This plan must: be prepared in consultation with Council, and submitted to the Director-General for approval by the end of December 2012; and provide for the establishment of trees and shrubs of the eastern overburden emplacement area.

BUSHFIRE MANAGEMENT

36. The Applicant shall:
- (a) ensure that the development is suitably equipped to respond to any fires on site; and
 - (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the vicinity of the site.

WASTE

37. The Applicant shall:
- minimise the waste (including coal reject) generated by the development;
 - ensure that waste generated by the development is appropriately stored, handled and disposed of;
 - manage on-site sewage treatment and disposal in accordance with the requirements of Council; and
 - report on waste management and minimisation in the Annual Review, to the satisfaction of the Director-General.

AGRICULTURAL PRODUCTIVITY RESEARCH PROGRAM

38. The Applicant shall prepare and implement a Agricultural Productivity Research Program for the development to the satisfaction of the Director-General, and allocate \$1,000,000 towards the implementation of this program. This program must:
- be prepared in consultation with DPI, OEH, CMA and NOW;
 - be submitted to the Director General by the end of 2012;
 - be directed at encouraging or improving agricultural productivity of land within the local region; and
 - be targeted at genuine research, as opposed to implementing the matters required by this consent.

REHABILITATION

Rehabilitation Objectives

39. The Applicant shall rehabilitate the site to the satisfaction of the Executive Director, Mineral Resources in DRE. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EIS and EA, and comply with the objectives in Table 14.

Table 14: Rehabilitation Objectives

Feature	Objective
Mine site (as a whole)	Safe, stable & non-polluting
Surface infrastructure	To be decommissioned and removed, unless the Director-General agrees otherwise
Overburden Dump	Rehabilitate, as soon as practicable, the working face of the overburden dump exposed to the Muswellbrook township and Denman Road. Where reasonable, rehabilitation will include high density tree planting.
Eastern Overburden Dump	Contoured to no more than a 10 degree slope.
Other land affected by the development	Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of: - local native plant species; - extensive areas of Class 3 Agricultural Capability Land; and - a landform consistent with the surrounding environment
Final Void	Safe, stable and non-polluting
Community	Minimise the adverse socio-economic effects associated with mine closure

Progressive Rehabilitation

40. The Applicant shall carry out the rehabilitation of the site progressively, that is, as soon as practicable following disturbance.

Rehabilitation Management Plan

41. The Applicant shall prepare and implement a Rehabilitation Management Plan for the development to the satisfaction of the Executive Director Mineral Resources in DRE. This plan must:
- be prepared in consultation with the Department, OEH, NOW, Council and the CCC;
 - be submitted to the Executive Director Mineral Resources in DRE for approval by the end of December 2012;
 - be prepared in accordance with any relevant DRE guideline, and be consistent with the rehabilitation objectives above;
 - build, to the maximum extent practicable, on the other management plans required under this consent; and
 - address all aspects of rehabilitation, mine closure, final landform including final land use assessment, rehabilitation objectives, domain objectives, completion criteria and rehabilitation monitoring, and include:
 - an evaluation of end land use options for final void/s; and

- a life of mine tailings management strategy, including an environmental risk assessment demonstrating that the emplacements can be designed, managed and rehabilitated appropriately.
42. The Applicant shall maintain the agricultural productivity of the non-alluvial land not being mined or rehabilitated, and ensure that the agricultural potential of the alluvial flats under its control (with the exception of land within the approved 21 year disturbance boundary) is not decreased, to the satisfaction of DPI.
-

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. By the end of November 2011, the Applicant shall:
 - (a) notify in writing the owners of:
 - any residence on the noise-affected land in Table 5 of schedule 3 that they are entitled to ask for additional noise mitigation measures to be implemented at their residence at any stage of the development;
 - any residence on the air quality-affected land listed in Table 13 of schedule 3 that they are entitled to ask for additional air quality mitigation measures to be installed at their residence at any stage of the development;
 - any privately-owned land within 2 kilometres of the approved open cut mining pit on the site that they are entitled to ask for an inspection to establish the baseline condition of any buildings and/or structures on their land, or to have a previous property inspection report updated; and
 - (b) send a copy of the NSW Health fact sheet entitled "*Mine Dust and You*" (as may be updated from time to time) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the EA identify that dust emissions generated by the development are likely to be greater than the relevant air quality criteria in schedule 3 at any time during the life of the development.
2. As soon as practicable after obtaining monitoring results showing:
 - (a) an exceedance of the relevant criteria in schedule 3, the Applicant shall notify the affected landowner and tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the development is complying with the relevant criteria again;
 - (b) an exceedance of the relevant air quality criteria in schedule 3, the Applicant shall send a copy of the NSW Health fact sheet entitled "*Mine Dust and You*" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).

INDEPENDENT REVIEW

3. If an owner of privately-owned land considers the development to be exceeding the criteria in schedule 3, then he/she may ask the Director-General in writing for an independent review of the impacts of the development on his/her land.

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

 - (a) commission a suitably qualified, experienced and independent expert, whose appointment has been approved by the Director-General, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria; and
 - if the development is not complying with these criteria, then:
 - o determine if more than one mine is responsible for the exceedance, and if so the relative share of each mine towards the impact of the land;
 - o identify the measures that could be implemented to ensure compliance with the relevant criteria; and
 - (b) give the Director-General and landowner a copy of the independent review.
4. If the independent review determines that the development is complying with the relevant criteria in Schedule 3, then the Applicant may discontinue the independent review with the approval of the Director-General.

If the independent review determines that the development is not complying with the relevant criteria, and that the development is primarily responsible for this non-compliance, then the Applicant shall:

 - (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring until the development complies with the relevant criteria; or
 - (b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Director-General.

If the independent review determines that the development is not complying with the relevant acquisition criteria, and that the development is primarily responsible for this non-compliance, then upon receiving a written request from the landowner, the Applicant shall acquire all or part of the landowner's land in accordance with the procedures in conditions 6-7 below.
5. If the independent review determines that the relevant criteria are being exceeded, but that more than one mine is responsible for this exceedance, then together with the relevant mine/s the Applicant shall:
 - (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring until there is compliance with the relevant criteria; or

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

If the independent review determines that the development is not complying with the relevant acquisition criteria in schedule 3, but that more than one mine is responsible for this non-compliance, then upon receiving a written request from the landowner, the Applicant shall acquire all or part of the landowner's land on as equitable a basis as possible with the relevant mine/s, in accordance with the procedures in conditions 6-7 below.

LAND ACQUISITION

6. Within 3 months of receiving a written request from a landowner with acquisition rights, the Applicant shall make a binding written offer to the landowner based on:
- (a) the current market value of the landowner's interest in the land at the date of this written request, as if the land was unaffected by the development, 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 land and/or any approved building or structure which has been physically commenced on the land at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of any additional mitigation measures under condition 5 and/or condition 20 of schedule 3;
 - (b) the reasonable costs associated with:
 - relocating within the Muswellbrook, Singleton or Scone local government areas, or to any other local government area determined by the Director-General; and
 - 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 at the end of this period, the Applicant and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.

Upon receiving such a request, the Director-General will request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:

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

Within 14 days of receiving the independent valuer's report, the Applicant 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 will determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above, the independent valuer's report, the detailed report of the party that disputes the independent valuer's determination and any other relevant submissions.

Within 14 days of this determination, the Applicant 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 Applicant's binding written offer under this condition within 6 months of the offer being made, then the Applicant's obligations to acquire the land shall cease, unless the Director-General determines otherwise.

7. The Applicant shall pay all reasonable costs associated with the land acquisition process described in Condition 6 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.

SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Applicant shall prepare and implement an Environmental Management Strategy for the development to the satisfaction of the Director-General. The strategy must:
 - (a) be submitted to the Director-General for approval before the end of December 2012;
 - (b) provide the strategic context for environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority, and accountability of all key personnel involved in environmental management of the development;
 - (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 development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - manage cumulative impacts; and
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs that are approved under the conditions of this consent once they have been approved; and
 - a clear plan depicting all the monitoring, required to be carried in relation to the development.

Management Plan Requirements

2. The Applicant shall ensure that the management plans required under this consent 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 consent, 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 development 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 development;
 - 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 improve the environmental performance of the development 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.

Note: The Director-General may waive some of these requirements if they are unnecessary or unwarranted.

Annual Review

3. By the end of March each year (or other such timing as agreed by the Director-General), the Applicant shall review the environmental performance of the development to the satisfaction of the Director-General. This review must:
 - (a) describe the development (including any rehabilitation) that was carried out in the past year, and the development that is proposed to be carried out over the next year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development 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 EIS and EA;
- (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 development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the next year to improve the environmental performance of the development.

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 7 below;
 - (c) the submission of an audit under condition 9 below; and
 - (d) any modification to the conditions of this consent,
 the Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Director-General.

Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.

Management of Cumulative Impacts

5. In conjunction with the owners of the nearby mines (including the Mount Pleasant Mine), the Applicant shall use its best endeavours to minimise the cumulative impacts of the development on the surrounding area to the satisfaction of the Director-General.

Note: Nothing in this consent is to be construed as requiring the Applicant to act in a manner which is contrary to the Trade Practices Act 1974.

Community Consultative Committee

6. The Applicant shall operate a Community Consultative Committee (CCC) for the development 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 Applicant complies with this consent.

REPORTING

Incident Reporting

7. The Proponent shall notify the Director-General and any other relevant agencies of any incident that has caused, or has the potential to cause, significant risk of material harm to either human health or the environment, at the earliest opportunity. For any other incident associated with the project, the Proponent shall notify the Director-General and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

8. The Applicant shall provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

INDEPENDENT ENVIRONMENTAL AUDIT

9. By the end of July 2013, and every 3 years thereafter, unless the Director-General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
 - (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
 - (b) include consultation with the relevant agencies;

- (c) assess the environmental performance of the development and whether it is complying with the requirements in this consent and any relevant EPL or Mining Lease (including any assessment, plan or program required under these instruments);
- (d) review the adequacy of strategies, plans or programs required under the abovementioned instruments; and
- (e) if necessary, recommend appropriate measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under the abovementioned instruments.

Notes:

- *This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Director-General.*
- *The audits can be coordinated with similar auditing requirements for the Mt Pleasant mine.*

10. Within 3 months of commissioning this audit, or as otherwise agreed by the Director-General, the Applicant 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

11. The Applicant shall:
- (a) make the following information publicly available on its website:
 - the EIS and EA;
 - all current statutory approvals for the development;
 - approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent;
 - a complaints register, which is to be updated on a monthly basis;
 - minutes of CCC meetings;
 - the annual reviews (over the last 5 years);
 - any independent environmental audit, and the Applicant's response to the recommendations in any audit;
 - any other matter required by the Director-General; and
 - (b) keep this information up to date, to the satisfaction of the Director-General.

**APPENDIX 1
SCHEDULE OF LAND**

Bengalla Coal Mine Development – Land Particulars (as at December 2010)

Lot	DP
1	998477
2	998477
111	556761
110	556761
9	39345
72	626353
71	626353
1	570070
2	570070
2	735667
1	735667
7	236668
6	236668
21	776758
22	776758
1	236668
101	1148907
22	1072668
24	1072668
25	1072668
20	706045
26	1072668
27	102668
18	1072668
3	236668
1	189134

APPENDIX 2: DEVELOPMENT LAYOUT PLANS

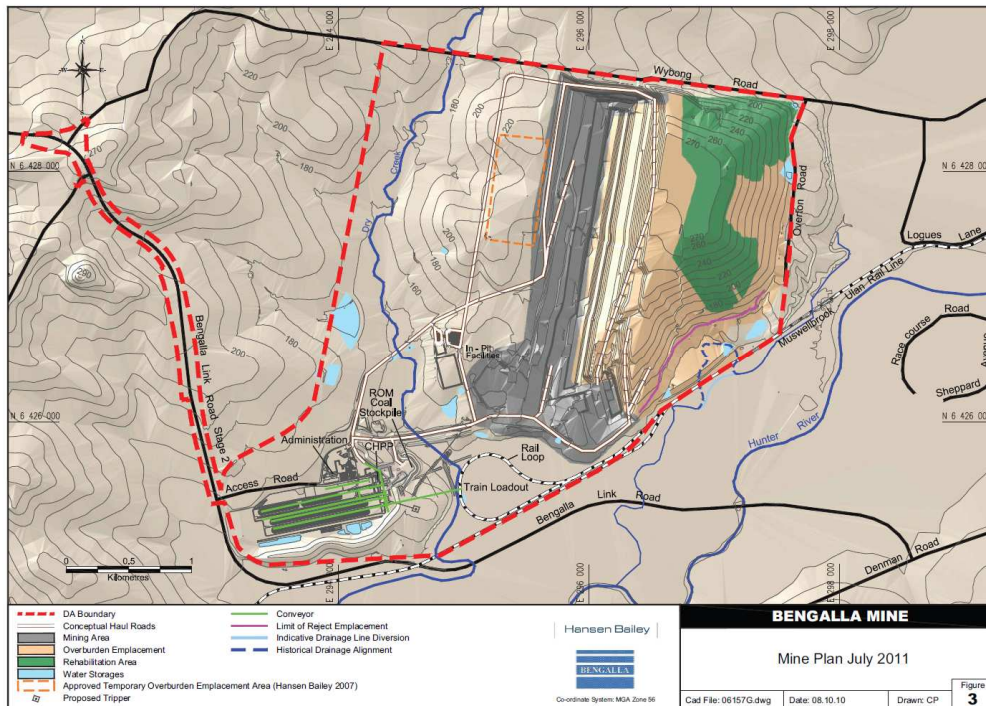


Figure 1: Mine Plan July 2011

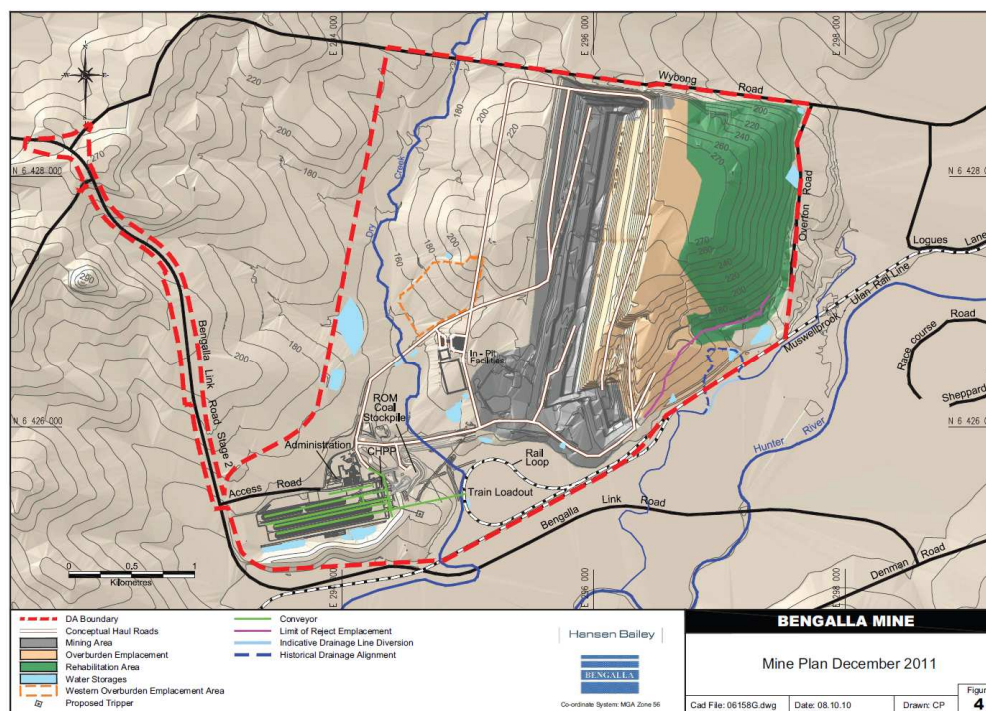


Figure 2: Mine Plan December 2011

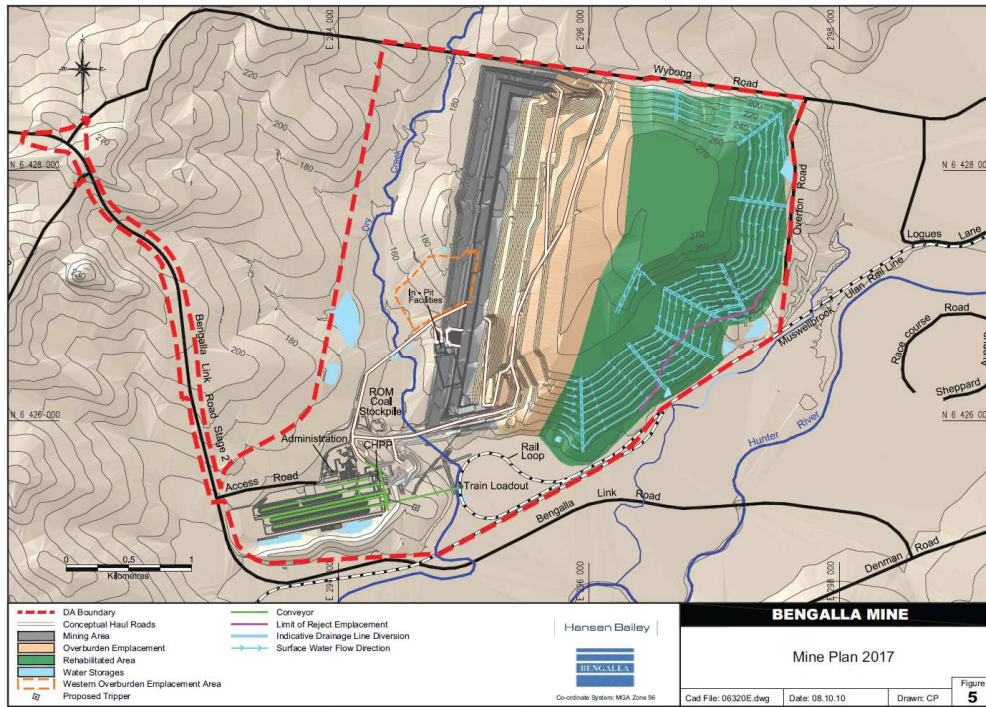


Figure 3: Mine Plan 2017

APPENDIX 3 – LAND OWNERSHIP PLANS

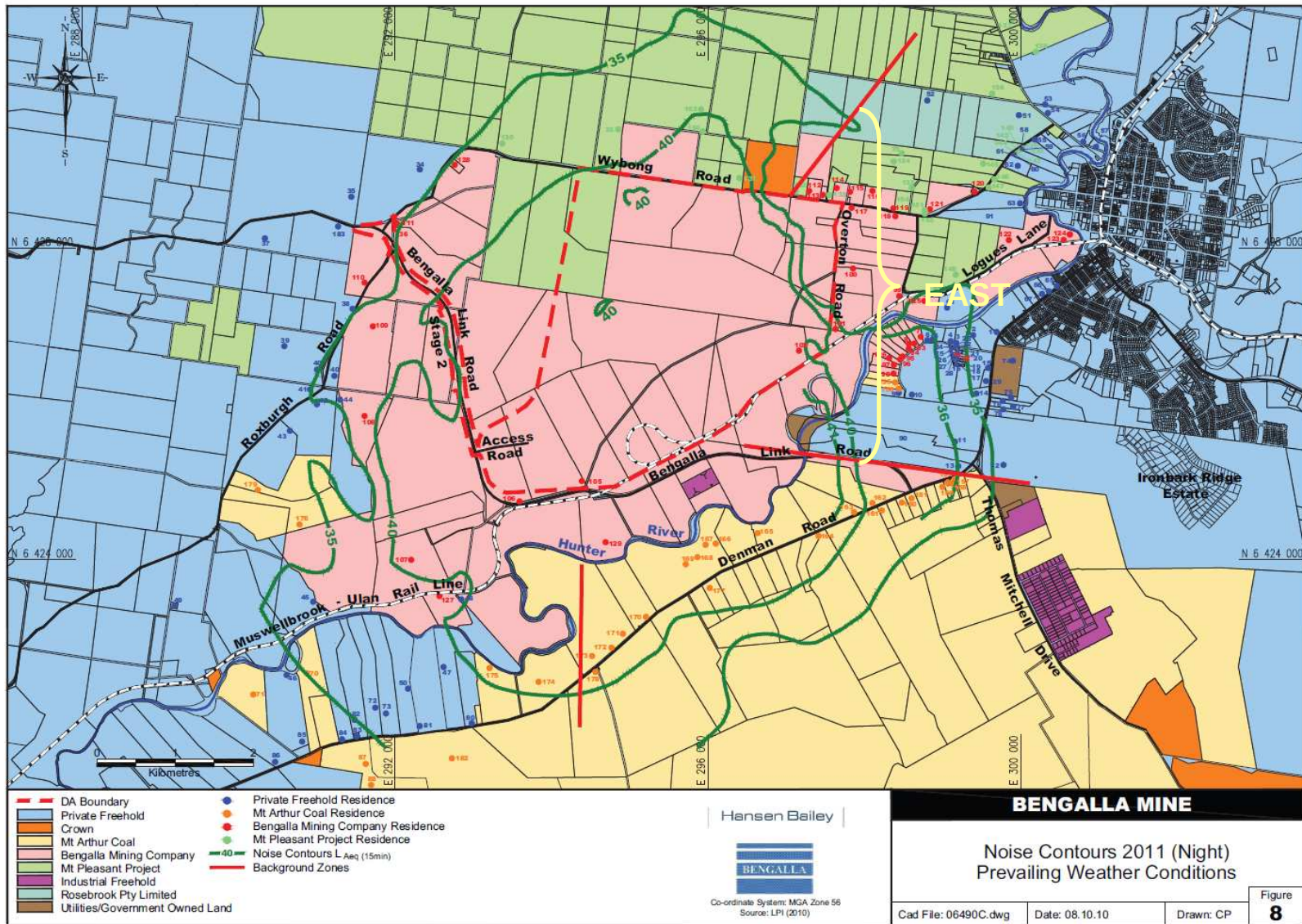


Figure 1: Location of Noise assessed properties

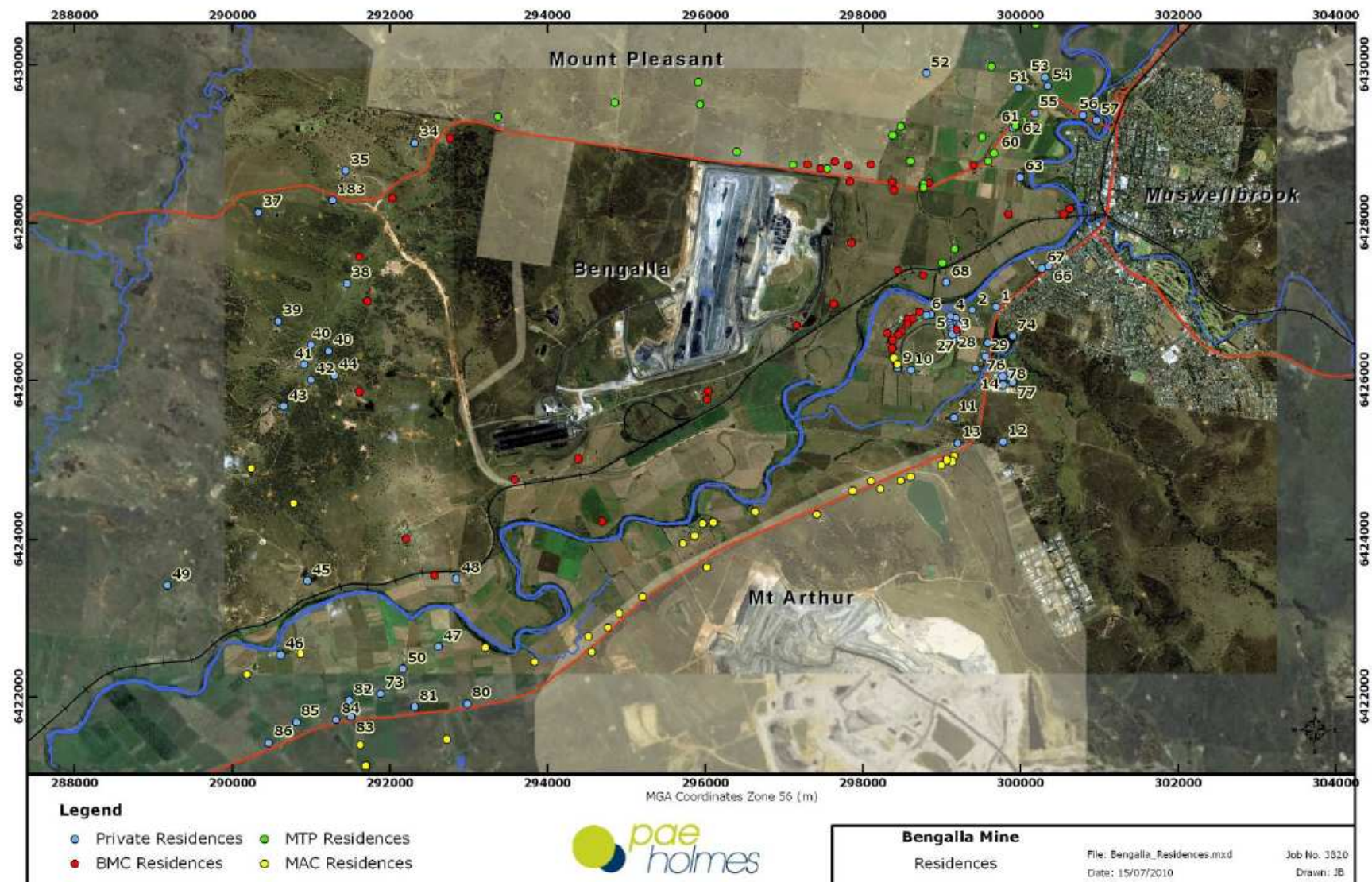


Figure 2: Location of Air Quality assessed properties

APPENDIX 4: GENERAL TERMS FOR THE PLANNING AGREEMENT

Offer to Enter into a Voluntary Planning Agreement

Bengalla Mining Company Pty Limited offers to enter into a voluntary planning agreement with Muswellbrook Shire Council which addresses the mandatory items in s93F of the *Environmental Planning and Assessment Act 1979* and under which the following monetary contributions will be made to Muswellbrook Shire Council for use by the Council for public purposes:

Item	Development Contribution
Proposed Bengalla Community Contribution	\$400,000 per annum (indexed annually according to Consumer Price Index). A community representative committee will be established, including Bengalla representatives, to give direction to the Council about the public purposes these community contributions must be applied to.
Council Roads Maintenance Costs	\$125,000 per annum (indexed annually according to Consumer Price Index) to be used for maintenance of roads in the Muswellbrook Shire.
Environmental Officer	\$15,000 per annum (indexed annually according to Consumer Price Index) to be used to employ an Environmental Officer who will monitor the planning impacts of development.

This offer is made on the basis that no further financial contributions of any description will be sought by Council in connection with the Bengalla mine under the existing planning approvals and that these contributions consolidate any past s.94 obligations.

APPENDIX 5: PROPOSED RESEARCH PROGRAM



Bengalla Mining Company Pty Limited

A.B.N. 32 053 909 470

Bengalla Road, Muswellbrook
Locked Mail Bag 5, Muswellbrook NSW 2333 Australia



RESEARCH PROPOSAL

Introduction

GSS Environmental's (GSSE) partner company, HHM Projects (HHM) undertakes research and development projects including that for mining companies with two primary objectives:

1. Improving the relationship between agriculture and mining sectors;
2. Reducing environmental liabilities associated with the coal mines and where possible, creating post-closure "assets" for communities.

GSSE have developed expertise in accounting for mine environmental liabilities in the form of closure estimations and related activities.

There are numerous projects currently being undertaken with the University of Newcastle (Professor Behdad Moghtaderi) in reducing mine environmental and closure liabilities and improving relationships between the mining and agricultural sectors. These include use of thermal energy, desalination of mine water for use in agriculture, conversion of waste coal to a valuable soil ameliorant, destruction of Ventilation Air Methane (VAM) and work on improving soil carbon through enhanced sequestration and biochar production.

HHM and partners are currently working with the Carbon Farmers of Australia (CFA), Catchment Management Authorities (CMA's) and fertiliser and coal companies to improve agricultural outcomes on mining lands and in neighbouring agricultural lands.

The objectives of this proposal are to:

1. Develop a rigorous and transparent system for sequestering and accounting for carbon in soil at Bengalla Mining Company and neighbouring agricultural lands;
2. Provide trial results using chars derived from various residues and wastes from the local areas;
3. Provide research on the improved efficiency of application of nitrogenous fertilisers on local agricultural lands under various treatments of char and soil carbon;
4. Undertake research to estimate reductions in N losses under various treatments;
5. Generate a set of protocols for the development of income generating opportunities surrounding soil carbon for local landholders.

Related Research Projects

- HHM and partners have been working on further development of chars for improved soil properties.
- Research at the University of Newcastle has focused on developing varying chars using high and low temperature regimes. The varying temperature regimes provide chars with varying characteristics.

- Technology partners have been found to further develop projects and create char on a large-scale.
- This work is currently extending to “functionalisation” of chars to improve fertiliser efficiency and reduce emissions of dinitrous oxide (N_2O). This work is continuing with involvement of specialists such as Professor George Franks from University of Melbourne.
- In addition to reducing the application rate of nitrogenous fertilisers, it has been proven in other studies that biochar applications reduce nitrate leaching and runoff from intensive animal and irrigation enterprises.
- Accompanying research on char, GSSE have a long history of work on soil carbon with extensive studies across mining and agricultural lands. This work is expanding with GSSE staff playing a pivotal role in the formation of CFA and in the ongoing development of methodologies for carbon farming and trading.
- The methodologies for carbon accounting and trading are developed with reference to existing United Nations (Kyoto Protocol) arrangements. HHM has working knowledge of methodologies, frameworks and accounting rules due to our concurrent work on Ventilation Air Methane (VAM) abatement.

Research Proposal

It is proposed that HHM, GSSE and our partners in agriculture work together to develop an accepted system for the development of carbon credits, abatements and offsets from irrigators and intensive farmers in the alluvial lands area of the Hunter Valley adjacent to Bengalla Mining Company. This will require Bengalla Mining Company to provide assistance to the local farming community through:

1. Developing or modifying a standard acceptable to certifying authorities for soil C sequestration and biochar application and accounting;
2. Understanding the potential usefulness of biochar created from Bengalla Mining Company or from local farmers and communities; and
3. Evaluating the role of biochar and soil C in further reducing the emissions of N_2O from Hunter Valley irrigated agriculture.

The research will occur on Bengalla Mining Company and on neighbouring agricultural lands. It is anticipated that research on nitrogenous fertilisers will occur on farms adjacent to Bengalla Mining Company who use nitrogenous fertilisers. In addition to field trials, a considerable amount of work will occur in glass houses and laboratories at the University of Newcastle.

The outcomes of the research are planned to:

1. Provide local farmers with additional income through trading of credits from sequestration and abatement;
2. Reduce input costs for local farmers through improved efficiencies in use of nitrogenous fertilisers; and
3. Most importantly, improved environmental outcomes through reductions in runoff and leaching of nitrogenous fertilisers into local rivers.

Research Timing

The research will occur over the next four years.

Research Funding

Year	Objectives	Funding
1	Review approved methodology for the soil C accounting. Undertake soil sampling of local/Bengalla agricultural lands. Create biochar in sufficient quantities for use in plant trials. Start plot trials concurrently with HHM/GSSE existing plot trials. Focus on alluvial soils.	\$300k
2	Undertake changes in practice and monitor changes in soil C levels. Undertake further glasshouse trials with chars concurrently with existing GSSE/HHM trials.	\$250k
3	Continue to monitor changes in agricultural practice and soil C levels. Start development of model to integrate with C trading as Emissions Trading Scheme (ETS) is implemented in Australia.	\$250k
4	Finalise development of a model to allow trade of C credits between local landholders and C emitters through stakeholder engagement.	\$200k

Stakeholders

All results will be released in consultation with Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS) and will involve engagement with the following stakeholders:

- Catchment Management Authorities;
- Carbon Farmers of Australia ;
- Conservation Farmers of Australia;
- Biochar technology providers;
- University of Newcastle;
- University of Melbourne;
- Incitec Pivot and other fertiliser companies.

APPENDIX 6 – STATEMENT OF COMMITMENTS

Ref	Description	Section
Construction and Operation		
1	A procedure detailing specific topsoil stripping methods will be developed in consultation with I&I NSW to ensure topsoil stripped from the Southern OEA Extension is utilised beneficially within the rehabilitation activities of the existing OEA.	6.3.4
2	No reject material or Wynn interburden (Archerfield Sandstone) will be placed within the Southern OEA Extension beyond the Limit of Reject Emplacement indicated on Figure 3.	6.6.3
Environmental Management and Monitoring		
3	The CAN EMA will continue to be relied upon for environmental management, mitigation and monitoring at Bengalla, including for this Modification. The relevant plans will be updated as required.	6
4	BMC will implement the management and mitigation measures as described in Sections 6.1.4, 6.2.4, 6.3.4, 6.4.4, 6.5.4, 6.6.4, 6.7.4, 6.8.4, 6.9.4, 6.10.4, and 6.11.2 to ensure that potential environmental issues are appropriately managed.	6
5	BMC will continue to implement the noise management and mitigation measures listed in Section 6.2.4 as required to ensure noise levels described within this EA remain within the predictions presented in Table 7.	6.2.4
6	Two additional groundwater monitoring bores (SMB1 and SMB2) will be incorporated into the existing Bengalla Environmental Monitoring Program to monitor potential impacts of this Modification	6.4.4
7	BMC will revise and consolidate its Rehabilitation and Landscape Management Plan and the Landscape Management Plan to incorporate details of this modification in consultation with MSC, I&I NSW and to the satisfaction of DoP.	6.11
8	BMC will revise its existing Land Management Plan to incorporate details of this Modification, including the implementation of management measures required to compensate on impacts on Class II agricultural lands. This review will be undertaken in consultation with MSC, I&I NSW and to the satisfaction of the DoP	6.11
9	BMC will prepare a new Mining Operations Plan in accordance with I&I NSW Mining Rehabilitation Environmental Planning (MREP) Guidelines or relevant guidelines.	6.11
Apprentices		
10	BMC will, wherever possible and feasible, employ four (4) apprentices per year from the local area for the life of the mine.	

