



# APPENDIX A

Project approvals



A



# Project Approval

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

I approve the project applications referred to in Schedule 1, subject to the preamble in Schedule 1 and the conditions 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 projects.

The Hon Tony Kelly MLC  
**Minister for Planning MP**

Sydney

2010

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### SCHEDULE 1

<b>Application Numbers:</b>	08_0101 and 08_0102
<b>Proponent:</b>	Integra Coal Operations Pty Ltd
<b>Approval Authority:</b>	Minister for Planning
<b>Land:</b>	See Appendix 1
<b>Project 08_0101:</b>	Integra Underground Project
<b>Project 08_0102:</b>	Integra Open Cut Project

**Preamble:**

While a single document, this instrument contains two project approvals: one for the Integra underground project and the other for the Integra open cut project. For the purposes of project 08\_0101, this instrument applies only to the underground project area. For the purposes of project 08\_0102, this instrument applies only to the Integra open cut project area. Together these project areas are considered to comprise the Integra mine complex.

**Red type represents Modification 1, dated 18 March 2012**

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## DEFINITIONS

Annual review	The review required by Condition 3 of Schedule 5
Approved mine plans	The plans for underground mining depicted in the figures in Appendix 4
Adaptive management	Adaptive management includes monitoring subsidence effects and impacts and, based on the results, modifying the mine plan as mining proceeds to ensure that the effects, impacts and/or associated environmental consequences remain within predicted and/or designated ranges
ARTC	Australian Rail Track Corporation
BCA	Building Code of Australia
Blast misfire	The failure of one or more holes in a blast pattern to initiate
Built features	Includes any building or work erected or constructed on land, and includes dwellings and infrastructure such as any formed road, street, path, walk or driveway, any pipeline, water, sewer, telephone, gas or other service main
CCC	Community Consultative Committee
CHPP	Coal Handling and Preparation Plant
Conditions of this approval	Conditions contained in Schedules 2 to 5 inclusive
Council	Singleton 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 <b>and Infrastructure</b>
Director-General	Director-General of the Department, or delegate
<b>DRE</b>	<b>Division of Resources and Energy within the Department of Trade and Investment, Regional Infrastructure and Services</b>
<b>EA Mod 1</b>	<b><i>Integra Mine Complex Modification 1 Environmental Assessment, prepared by EMGA Mitchell McLennan, dated 2 December 2011</i></b>
EEC	Endangered Ecological Community as defined under the NSW <i>Threatened Species Conservation Act 1995</i>
Environmental consequences	The environmental consequences of subsidence impacts, including: damage to built features; loss of surface water flows to the subsurface; loss of standing pools; adverse water quality impacts; development of iron bacterial mats; rock falls; damage to Aboriginal heritage sites; impacts on aquatic ecology; and ponding
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 or carry out
First workings	Development of main headings and gateroads underground
Heritage Branch	Heritage Branch of the Department
Incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval
Integra mine complex	The open cut and underground project areas, considered collectively
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 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 approval
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning <b>and Infrastructure</b> , or delegate
Mitigation	Activities associated with reducing the impacts of the projects
MSB	NSW Mine Subsidence Board
NAG	Noise assessment group, see the figures in Appendix 5 for more detail
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
Northern mining area	The area outlined with a solid white line on the figure in Appendix 3 titled "open cut project area"
NOW	NSW Office of Water
OC statement of commitments	The Proponent's commitments for the open cut project in Appendix 10
<b>OEH</b>	<b>Office of Environment and Heritage</b>
Offset strategy	The biodiversity and enhancement program described in the EA, and depicted generally in the figure in Appendix 8

Open cut mining operations	Includes overburden removal and the extraction, processing, handling, storage and transportation of coal within the open cut project area
Open cut project	The development described in the open cut project EA
Open cut project area	All land to which project application 08_0102 applies, as listed in Appendix 1 and outlined with a solid black line on the figure in Appendix 3
Open cut project EA	Environmental assessment titled <i>Integra Open Cut Project</i> , dated June 2009, and the associated response to submissions titled <i>Submissions Report</i> , dated March 2010
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Previous open cut EAs	The documents listed in Appendix 2
Previous underground EAs	The documents listed in Appendix 2
Privately-owned land	Land that is not owned by a public agency, or a mining company (or its subsidiary)
Projects	The open cut project and underground project considered collectively, including the implementation of any development associated with the previous open cut and underground EAs
Proponent	Integra Coal Operations Pty Ltd, or its successors
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, gas supply, drainage, sewerage, telephony, telecommunications 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 projects for the purpose of establishing a safe, stable and non-polluting environment, and includes remediation
Remediation	Activities associated with partially or fully repairing the impacts and/or environmental consequences of the project
<b>RMS</b>	<b>Roads and Maritime Services</b>
ROM coal	Run-of-mine coal
Safe, serviceable and repairable	Safe means no danger to users, serviceable means available for its intended purpose, and repairable means damaged components can be repaired economically
Second workings	Extraction of coal from longwall panels, mini-wall panels or pillar extraction
Site	The land listed in Appendix 1, known collectively as the Integra mine complex
Subsidence	The totality of subsidence effects and impacts and their associated environmental consequences
Subsidence effects	Deformation of the ground mass due to mining, including all mining-induced ground movements, including both vertical and horizontal displacement, tilt, strain and curvature
Subsidence impacts	Physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs
UG statement of commitments	The Proponent's commitments for the underground project in Appendix 10
Underground mining operations	Includes first workings and the extraction, processing, handling, storage, and transportation of coal within the underground project area
Underground project	The development described in the underground project EA
Underground project area	All land to which project application 08_0101 applies, as listed in Appendix 1 and outlined with a dashed black line on the figure in Appendix 3
Underground project EA	Environmental assessment titled <i>Proposed Integra Underground Coal Project</i> , dated July 2009, and the associated response to submissions, titled <i>Integra Underground Project Collated Response to Submissions</i> , dated March 2010
Western mining area	The area outlined with a solid light blue line on the figure in Appendix 3 titled "open cut project area"

## 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 material harm to the environment that may result from the construction operation or rehabilitation of the projects.

### TERMS OF APPROVAL

2. The Proponent shall carry out the open cut project generally in accordance with the:
  - (a) previous open cut EAs;
  - (b) open cut project EA;
  - (c) OC statement of commitments;
  - (d) EA Mod 1; and
  - (e) conditions of this approval.
3. The Proponent shall carry out the underground project generally in accordance with the:
  - (a) previous underground EAs;
  - (b) underground project EA;
  - (c) UG statement of commitments; and
  - (d) conditions of this approval.

#### *Notes to Conditions 2 & 3:*

- *The general layout of the projects is shown in Appendix 4;*
- *This project approval is intended to regulate all existing and approved development on site; and*
- *The Proponent is to operate and manage both projects, to the greatest extent practicable, as an integrated mining complex.*

4. If there is any inconsistency between the documents listed in condition 2 above, or any inconsistency between the documents listed in condition 3 above, the most recent document in the relevant condition shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
5. The Proponent 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 in accordance with the conditions of this approval; and
  - (b) the implementation of any actions or measures contained in these documents.

### LIMITS ON APPROVAL

#### Mining Operations

6. The Proponent may carry out open cut mining operations on site until 31 December 2022.
7. The Proponent may carry out underground mining operations on site until 31 December 2035.

*Note to Conditions 6 & 7: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings to the satisfaction of both the Director-General and the Director-General of DRE. Consequently, this approval will continue to apply in all 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 Production

8. The Proponent shall not extract more than:
  - (a) 1.5 million tonnes of ROM coal from the open cut mining operations in the northern mining area in a calendar year;
  - (b) 4.5 million tonnes of ROM coal from the open cut mining operations in the western mining area in a calendar year; and
  - (c) 4.5 million tonnes of ROM coal from the underground mining operations on site in a calendar year.

#### Coal Transport

9. The Proponent shall not:
  - (a) export more than 7.3 million tonnes of coal from the site in a calendar year;
  - (b) dispatch more than 7 trains a day from the site; and

- (c) dispatch more than 3 trains a day from the site, when averaged over each calendar year.
10. The Proponent shall not transport coal from the site by road, except in an emergency situation and with the prior written approval of the Director-General.

#### **Hours of Operation**

11. The Proponent shall only carry out:
- (a) open cut mining operations in the northern mining area during the day and evening; and
  - (b) vegetation clearing and topsoil stripping on site between 7am and 6pm.

#### **SURRENDER OF CONSENTS AND APPROVALS**

12. By the end of June 2011, or as otherwise agreed by the Director-General, the Proponent shall surrender all existing development consents and project approvals for the site (other than this approval and the development consent for the Glennies Creek to Ashton Water Pipeline granted by Council on 13 February 2004) in accordance with Sections 75YA and 104A of the EP&A Act.

*Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of a consent or approval should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.*

13. Prior to the surrender of these consents and/or approvals, the conditions of this approval (including any notes) shall prevail to the extent of any inconsistency with the conditions of these consents and/or approvals.

#### **STRUCTURAL ADEQUACY**

14. 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 and MSB.

*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 projects; and*
- *The Integra mine complex is located in the Patrick Plains Mine Subsidence District. Under Section 15 of the Mine Subsidence Compensation Act 1961, the Proponent is required to obtain the MSB's approval before constructing or relocating any improvements on site.*

#### **DEMOLITION**

15. 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.

#### **OPERATION OF PLANT AND EQUIPMENT**

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

#### **STAGED SUBMISSION OF ANY STRATEGY, PLAN AND PROGRAM**

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

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

18. Until they are replaced by an equivalent strategy, plan or program approved under this approval, the Proponent shall continue to implement the existing strategies, plans or programs for development on site that have been approved under previous consents or approvals.

## SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

### ACQUISITION UPON REQUEST

- 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 Conditions 6-7 of Schedule 4.

Table 1: Land subject to acquisition upon request

Noise	Air Quality	Subsidence
9 – W & N Pendered	-	-
11 – F Ferraro	-	-
10 – E & B Kleinman	-	-
13 – P & K Russell	-	-
64 – W & A Gardner	-	-
-	-	47 B & R Cherry
80 – G Donnellan	-	-
87 – B & R Richards	87 – B & R Richards	-
106 – B & R Richards	-	-
110 – G J Hall	-	-
153 – R & D Hall	153 – R & D Hall	-
351 – Andrews	-	-
352 – Andrews	-	-

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

Once, in the opinion of the Director-General, the open cut mining operations have been substantially completed on site this condition shall be replaced with Condition 1 of Appendix 6.

### NOISE

#### Noise Criteria

- Except for the noise-affected land referred to in Table 1, the Proponent shall ensure that the noise generated by the projects does not exceed the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 2: Noise criteria dB(A)

Location		Day	Evening	Night	
		L <sub>Aeq</sub> (15min)	L <sub>Aeq</sub> (15min)	L <sub>Aeq</sub> (15min)	L <sub>A1</sub> (1min)
NAG 1	All privately-owned land	38	38	36	46
NAG 2	All privately-owned land	39	39	37	47
NAG 3	All privately-owned land	40	40	39	49
NAG 4	99, 100	39	39	39	47
	88, 91, 95	40	40	40	47
	105, 161	41	41	41	47
	All other privately-owned land	42	42	37	47
NAG 5	104	35	35	35	52
	139	36	36	36	52
	103	37	37	37	52
	121	40	40	40	52
	118, 154	43	43	43	52
	112	45	45	45	52
	111	47	47	47	52
	All other privately-owned land	50	46	42	52

NAG 6	137	35	35	35	48
	133	37	37	37	48
	132	38	38	38	48
	All other privately-owned land	41	41	38	48
NAG 7	All privately-owned land	45	42	39	49
NAG 8	142	35	35	35	45
	All other privately-owned land	42	42	35	45
NAG 9	146, 148, 149	35	35	35	48
	143, 144, 145, 147, 150, 151, 152	36	36	36	48
	2	37	37	37	48
	3, 4	39	39	39	48
	All other privately-owned land	40	40	38	48
NAG 10	5	40	40	40	47
	6, 11	41	41	41	47
	8	42	42	42	47
	All other privately-owned land	39	39	37	47
NAG 11	18	35	35	35	49
	20, 21	37	37	36	49
	19	37	37	37	49
	17	38	38	38	49
	7	39	39	39	49
	12, 15	40	40	40	49
	14, 16	42	42	42	49
	All other privately-owned land	41	41	39	49
NAG 12	52, 55	35	35	35	45
	51, 56	37	37	37	45
	53, 57	38	38	38	45
	50, 54	39	39	39	45
	62	40	40	40	45
	All other privately-owned land	38	38	35	45
NAG A	24, 25, 26, 27, 28, 29, 30, 36, 37, 38, 39, 40, 41	35	35	35	46
	31	36	36	35	46
	42, 43	36	36	36	46
	32	37	37	35	46
	22, 23	37	37	37	46
	34	39	39	36	46
	35	39	39	35	46
	All other privately-owned land	39	39	36	46
NAG B	All privately-owned land	37	37	35	45
NAG C	47	39	39	39	45
	63	40	40	40	45
	All other privately-owned land	37	37	35	45
NAG D	44, 48	36	36	36	48
	49	39	39	39	48
	All other privately-owned land	40	40	38	48
NAG F	65, 66	39	39	39	50
	67	40	40	40	50
	68	42	42	42	50
	All other privately-owned land	40	40	40	50
NAG G	All privately-owned land	41	41	39	50

All other privately-owned land	35	35	35	45
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Notes:

- To identify the locations referred to in Table 2, see the figures in Appendix 5; and
- Noise generated by the projects 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 Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.

Once, in the opinion of the Director-General, the open cut mining operations have been substantially completed on site this condition shall be replaced with Condition 2 of Appendix 6.

### Noise Acquisition Criteria

3. If noise generated by the projects exceeds the criteria in Table 3 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 Proponent shall acquire the land in accordance with the procedures in Conditions 6-7 of Schedule 4.

Table 3: Noise Acquisition Criteria dB(A)

Location	Day	Evening	Night
	<i>L<sub>Aeq(15min)</sub></i>	<i>L<sub>Aeq(15min)</sub></i>	<i>L<sub>Aeq(15min)</sub></i>
All privately-owned land in NAG 1	44	44	42
All privately-owned land in NAG 2	45	45	43
All privately-owned land in NAG 3	46	46	45
All privately-owned land in NAG 4	48	48	43
All privately-owned land in NAG 5	56	52	48
All privately-owned land in NAG 6	47	47	44
All privately-owned land in NAG 7	51	48	45
All privately-owned land in NAG 8	48	48	41
All privately-owned land in NAG 9	46	46	44
All privately-owned land in NAG 10	45	45	43
All privately-owned land in NAG 11	47	47	45
All privately-owned land in NAG 12	44	44	41
All privately-owned land in NAG A	45	45	42
All privately-owned land in NAG B	43	43	41
All privately-owned land in NAG C	43	43	41
All privately-owned land in NAG D	46	46	44
All privately-owned land in NAG F	46	46	46
All privately-owned land in NAG G	47	47	45
All other privately-owned land	41	41	41

Notes:

- To identify the locations referred to in Table 3, see the figures in Appendix 5;
- Noise generated by the projects 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 exceedances of the criteria must be systemic.

### Cumulative Noise Criteria

4. Except for the noise-affected land referred to in Table 1, the Proponent shall implement all reasonable and feasible measures to ensure that the noise generated by the projects combined with the noise generated by other mines in the area does not exceed the criteria in Table 4 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 4: Cumulative Noise Criteria dB(A)  $L_{Aeq}$  (period)

Location	Day	Evening	Night
NAGs 4, 5, 8 and 9	55	45	40
All other privately-owned land	50	45	40

Notes:

- To identify the locations referred to in Table 4, see the figures in Appendix 5; and
- Cumulative noise is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

### Cumulative Noise Acquisition Criteria

5. If the noise generated by the projects combined with the noise generated by other mines in the area exceeds the criteria in Table 5 at any residence on privately-owned land or on more than 25 percent of privately-owned land, then upon receiving a written request for acquisition from the landowner, the Proponent 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 5: Cumulative Noise Acquisition Criteria dB(A)  $L_{Aeq}$  (period)

Location	Day	Evening	Night
NAGs 4, 5, 8 and 9	60	50	45
All other privately-owned land	55	50	45

Notes:

- To identify the locations referred to in Table 5, see the applicable figures in Appendix 5;
- Cumulative noise is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy; and
- For these conditions to apply, the exceedances of the criteria must be systemic.

### Additional Noise Mitigation Measures

6. Upon receiving a written request from the owner of any residence:
  - (a) on the land listed in Table 1; or
  - (b) on land listed in Table 6; or
  - (c) on privately-owned land where subsequent noise monitoring shows the noise generated by the projects is greater than or equal to the criteria in Table 7,
 the Proponent shall implement additional noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. These measures must be reasonable and feasible.

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

Once, in the opinion of the Director-General, the open cut mining operations have been substantially completed on site Table 6 in this condition shall be replaced with the Table in Condition 3 of Appendix 6.

Table 6: Land where additional noise mitigation measures are available on request

5 – D P Cox	6 – W G Cox
8 – DK Geelan	
14 – M Hoggan	16 – A Lambkin
20 – Mr Garvie	31 – C Craven
32 – M Langdon	48 – G Cheetham
47 – B & R Cherry	50 – D & M Bridge
53 – K & J Badior	54 – G Holmes
62 – D Moran	63 – J & M Moore
91 – T & D Olofsson	95 – J & T Clarke
105 – J & G McInerney	161 – V Lopes
111 – T Burgess	112 – S & C Ernst

Note: To identify the locations referred to in Table 6, see the figures in Appendix 5.

Table 7: Additional noise mitigation criteria dB(A)

Location	Day	Evening	Night
	$L_{Aeq(15min)}$	$L_{Aeq(15min)}$	$L_{Aeq(15min)}$
All privately-owned land in NAG 1	41	41	39
All privately-owned land in NAG 2	42	42	40
All privately-owned land in NAG 3	43	43	42
All privately-owned land in NAG 4	45	45	40
All privately-owned land in NAG 5	53	49	45
All privately-owned land in NAG 6	44	44	41
All privately-owned land in NAG 7	48	45	42
All privately-owned land in NAG 8	45	45	38
All privately-owned land in NAG 9	43	43	41
All privately-owned land in NAG 10	42	42	40
All privately-owned land in NAG 11	44	44	42
All privately-owned land in NAG 12	41	41	38
All privately-owned land in NAG A	42	42	39
All privately-owned land in NAG B	40	40	38
All privately-owned land in NAG C	40	40	38
All privately-owned land in NAG D	43	43	41
All privately-owned land in NAG F	43	43	43
All privately-owned land in NAG G	44	44	42
All other privately-owned land	38	38	38

Notes:

- To identify the locations referred to in Table 7, see the figures in Appendix 5;
- Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy; and
- For these conditions to apply, the exceedances of the criteria must be systemic.

7. If the cumulative noise generated by the projects combined with the noise generated by other mines in the area exceeds the criteria at any residence on the land referred to in Table 8, then upon receiving a written request from the owner, the Proponent shall implement additional noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. These measures must be reasonable and feasible. The Proponent shall share the costs associated with implementing these measures on an equitable basis as possible with the relevant mines.

If within 3 months of receiving this request from the owner, the Proponent 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 8: Cumulative Noise Mitigation Criteria dB(A)  $L_{Aeq}$  (period)

Location	Day	Evening	Night
NAGs 4, 5, 8 and 9	57	47	42
All other privately owned land	52	47	42

Notes:

- To identify the locations referred to in Table 8, see the figures in Appendix 5;
- Cumulative noise is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy; and
- For these conditions to apply, the exceedances of the criteria must be systemic.

## Rail Noise

8. The Proponent shall seek to ensure that its 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 L6.4 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

9. The Proponent 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 projects;
  - 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 approval;
  - maintain or improve the effectiveness of noise suppression equipment on plant at all times and ensure defective plant is not used operationally until fully repaired;
  - ensure that noise attenuated plant is deployed preferentially in locations relevant to sensitive receivers;
  - minimise the noise impacts of the Integra mine complex during meteorological conditions when the noise limits in this approval do not apply; and
  - co-ordinate the noise management on site with the noise management at nearby mines (including the Ashton, Rix's Creek and Mt Owen mines) to minimise the cumulative noise impacts of these mines and the Integra mine complex to the satisfaction of the Director-General.

## Noise Management Plan

10. The Proponent shall prepare and implement a Noise Management Plan for the projects 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 May 2012;
  - describe the measures that would be implemented to ensure:
    - best management practice is being employed;
    - the noise impacts of the Integra mine complex are minimised during meteorological conditions when the noise limits in this approval do not apply; and
    - compliance with the relevant conditions of this approval;
  - describe the proposed management system in detail;
  - include a monitoring program that:
    - uses a combination of real-time and supplementary attended monitoring measures to evaluate the performance of the Integra mine complex;
    - adequately supports the proactive and reactive noise management system on site;
    - includes a protocol for determining exceedances of the relevant conditions in this approval;
    - evaluates and reports on the effectiveness of the noise management system on site;
    - provides for the annual validation of the noise model for the Integra mine complex; and
  - include a protocol that has been prepared in consultation with the owners of nearby mines (including the Ashton, Rix's Creek and Mt Owen mines) to minimise the cumulative noise impacts of these mines and the Integra mine complex.

## BLASTING

### Blasting Criteria

11. The Proponent shall ensure that the blasting on site does not cause exceedances of the criteria in Table 9.

Table 9: Blasting Criteria

Receiver	Airblast Overpressure (dB(Lin Peak))	Ground Vibration (ppv(mm/s))	Allowable Exceedance
Residence on privately-owned land	115	5	5% of the total number of blasts over a period of 12 months
	120	10	0%
Main Northern Railway culverts and bridges	-	25	0%
All public infrastructure	-	50	0%

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

### Blasting Hours

12. The Proponent shall only carry out blasting on site between 9am 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

13. The Proponent shall not carry out more than:
- 1 blast a day in the northern mining area unless an additional blast is required following a blast misfire;
  - 2 blasts a day in the existing Camberwell south pit, and then 1 blast a day when the mining moves from this pit into the western mining area unless an additional blast is required following a blast misfire; and
  - 10 blasts a week on site, averaged over any 12 month period.

### Property Inspections

14. If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of the approved open cut mining pits 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 Proponent shall:
- 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 projects on these buildings and/or structures; and
  - give the landowner a copy of the new or updated property inspection report.

### Property Investigations

15. If any landowner of privately-owned land within 2 kilometres of any approved open cut mining pit on site 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 request the Proponent shall:
- commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to investigate the claim; and
  - 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 Proponent shall repair the damages to the satisfaction of the Director-General.

If the Proponent 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

16. The Proponent shall:
- implement best blasting management practice on site to:
    - protect the safety of people and livestock in the surrounding area;
    - protect private or public property in the surrounding area;
    - minimise the dust and fume emissions of the blasting; and
  - co-ordinate the blasting on site with the blasting at nearby mines (including Ashton, Rix's Creek and Mt Owen mines) to minimise the cumulative blasting impacts of the mines;
  - 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.
17. The Proponent shall not undertake blasting within 500 metres of:
- Middle Falbrook Road or Stony Creek Road without the approval of Council;
  - the New England Highway without the approval of the RMS; and
  - the Main Northern Railway without the approval of the ARTC.
18. The Proponent shall not carry out blasting in the northern or western mining areas that is within 500 metres of any privately-owned land or land not owned by the Proponent unless:
- the Proponent has a written agreement with the relevant landowner to allow blasting to be carried out closer to the land, and the Proponent has advised the Department in writing of the terms of this agreement; or
  - the Proponent has:

- 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
- updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the land.

### Blast Management Plan

19. The Proponent shall prepare and implement a Blast Management Plan for the open cut mining operations on site 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 March 2011;
  - describe the blast mitigation measures that would be implemented to ensure compliance with the relevant condition of this approval;
  - describe the measures that would be implemented to ensure that the public can get up-to-date information on the proposed blasting schedule on site;
  - include a blast monitoring program to evaluate the performance of the project; and
  - include a protocol that has been prepared in consultation with the owners of the nearby mines for minimising and managing the cumulative blasting impacts of the mines.

### AIR QUALITY & GREENHOUSE GAS

#### Odour

20. The Proponent shall not ensure that no offensive odours are emitted from the site, as defined under the POEO Act.

#### Greenhouse Gas Emissions

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

#### Air Quality Criteria

22. Except for the air quality-affected land referred to in Table 1, the Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the projects do not exceed the criteria listed in Tables 10, 11 or 12 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 10: Long term criteria for particulate matter

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

Table 11: Short term criterion for particulate matter

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

Table 12: Long term criteria for deposited dust

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

Notes to Tables 10–12:

- <sup>a</sup> Total impact (i.e. incremental increase in concentrations due to the projects plus background concentrations due to all other sources);
- <sup>b</sup> Incremental impact (i.e. incremental increase in concentrations due to the projects on their own);

- <sup>c</sup> 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.
- <sup>d</sup> 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

23. If particulate matter emissions generated by the projects exceed the criteria in Tables 13, 14 or 15 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 Proponent shall acquire the land in accordance with the procedures in Conditions 6-7 of Schedule 4.

Table 13: Long term acquisition criteria for particulate matter

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

Table 14: Short term acquisition criteria for particulate matter

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

Table 15: Long term acquisition criteria for deposited dust

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

Notes to Tables 13–15:

- <sup>a</sup> Total impact (i.e. incremental increase in concentrations due to the projects plus background concentrations due to all other sources);
- <sup>b</sup> Incremental impact (i.e. incremental increase in concentrations due to the projects on their own);
- <sup>c</sup> 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.
- <sup>d</sup> 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**.

### Additional Dust Mitigation Measures

24. Upon receiving a written request from the owner of any residence:
- on the air quality-affected land listed in Table 1; or
  - on the land listed in Table 16; or
  - on privately-owned land where subsequent air quality monitoring shows the dust generated by the projects is greater than or equal to the applicable criteria in Tables 10, 11 or 12 on a systemic basis, the Proponent 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.

If within 3 months of receiving this request from the owner, the Proponent 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 16: Land subject to dust mitigation on request

88 – M & T De Jong	106 – B & R Richards
110 – G J Hall	111 – T Burgess
112 – S & C Ernst	

Note: To identify the locations referred to in Table 16, see the applicable figures in Appendix 5.

### Operating Conditions

25. The Proponent shall:
- implement best practice air quality management on site, including all reasonable and feasible measures to minimise the off-site odour, fume and dust emissions generated by the projects;
  - minimise any visible air pollution generated by the projects;
  - operate a comprehensive air quality management system on site that uses a combination of predictive meteorological forecasting and real-time air quality monitoring data to guide the day to day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this approval;
  - minimise the air quality impacts of the Integra mine complex during adverse meteorological conditions and extraordinary events (see note d in conditions 22 and 23);
  - minimise the surface disturbance of the site generated by the projects; and
  - co-ordinate the air quality management on site with the air quality management of nearby mines (including Ashton, Rix's Creek and Mt Owen mines) to minimise the cumulative air quality impacts of these mines and the Integra mine complex,
- to the satisfaction of the Director-General.

### Air Quality & Greenhouse Gas Management Plan

26. The Proponent shall prepare and implement a detailed Air Quality & Greenhouse Gas Management Plan for the Integra mine complex 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 May 2012;
  - describe the measures that would be implemented to ensure:
    - best management practice is being employed;
    - the air quality impacts of the Integra mine complex are minimised during adverse meteorological conditions and extraordinary events; and
    - compliance with the relevant conditions of this approval;
  - describe the proposed air quality management system in detail;
  - include a monitoring program that:
    - uses a combination of real-time monitors and supplementary monitors to evaluate the performance of the Integra mine complex;
    - adequately supports the proactive and reactive air quality management system;
    - includes PM<sub>2.5</sub> monitoring (although this obligation could be satisfied by the regional air quality monitoring network if sufficient justification is provided);
    - evaluates and reports on the effectiveness of the air quality management system;
    - includes a protocol for determining any exceedances of the relevant conditions of this approval; and
  - include a protocol that has been prepared in consultation with the owners of nearby mines (including the Ashton, Rix's Creek and Mt Owen mines) to minimise the cumulative air quality impacts of these mines and the Integra mine complex.

### METEOROLOGICAL MONITORING

27. During the life of the project, the Proponent shall ensure that there is a suitable meteorological station operating in the vicinity of the site that:
- complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
  - is capable of continuous real-time measurement of temperature lapse rate in accordance with the *NSW Industrial Noise Policy*.

## SUBSIDENCE

### Performance Measures

28. The Proponent shall ensure that the underground project does not cause any exceedance of the performance measures in Table 17.

Table 17: Subsidence Performance Measures

<b>Water</b>	
Glennies Creek alluvial aquifer	Negligible impact
Natural watercourses on site	No greater environmental consequences than predicted in the Underground Project EA
Xstrata Mt Owen Bettys Creek Diversions	No greater than the environmental consequences predicted in the Underground Project EA, unless the owner agrees otherwise in writing
Underground Project Creek Diversions	Remain hydraulically and geomorphologically stable
Other water storages and drainage lines	No greater than the environmental consequences predicted in the Underground Project EA
<b>Biodiversity</b>	
Threatened species, populations, habitat or ecological communities	Negligible impact
<b>Built Features</b>	
All built features, including the Main Northern Railway Line, Glennies Creek Power Station and Mt Owen Rail Spur	Safe, serviceable and repairable, unless the owner agrees otherwise in writing
<b>Public Safety</b>	
Public Safety	No additional risk due to mining

Note: These subsidence impact performance measures should be read in conjunction with the conditions relating to rehabilitation at the end of this Schedule.

### First Workings

29. The Proponent shall not carry out first workings on site that are inconsistent with the approved mine plans without the written approval of the Director-General.

### Extraction Plan

30. The Proponent shall prepare and implement an Extraction Plan for all second workings on site to the satisfaction of the Director-General. This plan must:
- be prepared a team of suitably qualified and experienced persons whose appointment has been endorsed by the Director-General;
  - be approved by the Director-General before the Proponent undertakes any second workings covered by the plan;
  - include detailed plans of the proposed second workings and any associated surface development;
  - include detailed performance indicators for each of the performance measures in Table 17;
  - describe the measures that would be implemented to ensure compliance with the performance measures in Table 17, and remediate any predicted subsidence impacts and/or environmental consequences;
  - provide revised predictions of the conventional and non-conventional subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this approval, that specifically addresses the incremental and cumulative subsidence effects and impacts of multi-seam mining;
  - include the following to the satisfaction of **DRE**:
    - a subsidence monitoring program to:
      - provide data to assist in the management of the risks associated with subsidence;
      - validate the subsidence predictions; and
      - analyse the relationship between the subsidence effects and impacts under the Extraction Plan and any ensuing environmental consequences;
    - a Built Features Management Plan, which has been prepared in consultation with the owners of such features, to manage the potential impacts and consequences of subsidence on any built features;
    - a Public Safety Management Plan to ensure public safety in the underground project area;
    - a revised Rehabilitation Management Plan;

(h) include:

- a revised Water Management Plan, which has been prepared in consultation with OEH and NOW, to manage the potential impacts and consequences of subsidence on surface water and groundwater resources, flooding and existing and proposed creek diversions;
- a revised Biodiversity Management Plan, which has been prepared in consultation with OEH, to manage the potential impacts and consequences of subsidence on biodiversity;
- a Land Management Plan, which has been prepared in consultation with relevant landowners, to manage the potential impacts and consequences of subsidence on land in general;
- a revised Heritage Management Plan to manage the potential impacts and consequences of subsidence on heritage sites or values; and
- a program to collect sufficient baseline data for future Extraction Plans.

This condition does not apply to any second workings that are covered by an existing Subsidence Management Plan approval at the date of this approval.

### **Payment of Reasonable Costs**

31. The Proponent shall pay all reasonable costs incurred by the Department to engage suitably qualified, experienced and independent persons (if required) to review the adequacy of any aspect of the Extraction Plan.

### **SOIL & WATER**

#### **Water Supply**

32. The Proponent shall ensure that it has sufficient water for all stages of the projects, and if necessary, adjust the scale of mining operations to match its water supply.

*Note: The Proponent is required to obtain the necessary water licences for the projects under the Water Act 1912 and/or Water Management Act 2000.*

#### **Baseflow Offsets**

33. The Proponent shall offset the loss of any baseflow to the surrounding watercourses and/or associated creeks caused by the projects to the satisfaction of the Director-General.

*Notes:*

- *This condition does not apply in the case of losses of baseflow which are negligible.*
- *Offsets should be provided via the retirement of adequate water entitlements to account for the loss attributable to the projects.*
- *The Proponent is not required to provide additional baseflow offsets where such offsets have already been provided under previous consents or approvals for the projects. These existing offsets are to be described and evaluated in the Surface and Ground Water Response Plan (see below).*

#### **Compensatory Water Supply**

34. The Proponent shall provide compensatory water supply to any landowner of privately-owned land whose water entitlements are impacted (other than an impact that is negligible) as a result of the projects, 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 project. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.

If 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.

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

#### **Surface Water Discharges**

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

### **Glennies Creek and Station Creek Alluvial Aquifers**

36. The Proponent shall not undertake any open cut mining operations within 150 metres of the Glennies Creek alluvial aquifer or Station Creek alluvial aquifer without the prior written approval of the Director-General. In seeking this approval, the Proponent must consult with NOW and demonstrate to the satisfaction of the Director-General that adequate safeguards have been incorporated into the Surface and Groundwater Response Plan (see below) to minimise, prevent and/or adequately offset groundwater leakage from the alluvial aquifers.

*Notes: The alluvial aquifers and 150 metre buffer zones are shown conceptually on the figure in Appendix 7. This condition does not restrict the Proponent's right to construct and use water management works, access tracks, environmental bunds, remediation works and other similar works.*

### **Creek Diversions for the Underground Project**

37. The Proponent shall carry out the proposed diversions of Bettys Creek and Main Creek in the underground project area to the satisfaction of the Director-General.
38. Within 6 months of completing the construction of the diversions, the Proponent shall submit an as-executed report, certified by a practising engineer, to the Director-General and NOW.

*Note: The objective of the report is to confirm that the diversions are sufficiently hydraulically and geomorphologically stable.*

### **Xstrata Mt Owen Bettys Creek Diversions**

39. The Proponent shall:
- (a) commission a suitably qualified and independent expert, whose appointment has been approved by the Director-General, to carry out a detailed survey of geotechnical, geomorphic and ecological baseline condition of the Xstrata Mt Owen Bettys Creek Diversions:
    - prior to carrying out any second workings under the creek diversions; and
    - within 6 months of completing the second workings under these creek diversions; and
  - (b) provide a copy of these surveys to the Department within a month of the completion of each survey.

### **Water Management Plan**

40. The Proponent shall prepare and implement a Water Management Plan for the projects to the satisfaction of the Director-General. This plan must be prepared in consultation with **OEH**, **NOW** and **DRE**, and submitted to the Director-General for approval by the end of June 2011.

In addition to the standard requirements for management plans (see Condition 2 of Schedule 5), this plan must include:

- (a) a Site Water Balance, which must:
  - include details of:
    - sources and security of water supply;
    - water use on site;
    - water management on site; and
    - any off-site water transfers, and
  - describe what measures would be implemented to minimise clean water use on site;
- (b) a Creek Diversion Management Plan for the proposed creek diversions in the underground project area, which must:
  - be consistent with any related requirements in future Extraction Plan(s); and
  - include:
    - a vision statement for the creek relocations;
    - an assessment of the water quality, ecological, hydrological and geomorphic baseline conditions within each creek;
    - the detailed design specifications for the creek relocations;
    - a construction program for the creek relocations, describing how the work would be staged, and integrated with mining operations;
    - a revegetation program for the relocated creeks using a range of suitable native species;
    - water quality, ecological, hydrological and geomorphic performance and completion criteria for the creek relocations based on the assessment of baseline conditions; and
    - a program to monitor and maintain the water quality, ecological, hydrological and geomorphic integrity of the creek diversions;
- (c) an Erosion and Sediment Control Plan, which must:
  - identify activities that could cause soil erosion and generate sediment;

- describe measures to minimise soil erosion and the potential transport of sediment to downstream waters;
  - describe the location, function and capacity of erosion and sediment control structures; and
  - describe what measures would be implemented to maintain these structures for the life of the projects;
- (d) a Surface Water Management Plan, which must include:
- detailed baseline data on surface water flows and quality in creeks and other waterbodies that could potentially be affected by the projects;
  - surface water impact assessment criteria including trigger levels for investigating any potentially adverse surface water impacts from the projects;
  - a program to monitor and assess surface water flows and quality, impacts on water users and stream health;
- (e) a Groundwater Management Plan, which must include:
- detailed baseline data of groundwater levels, yield and quality in the region, and privately-owned groundwater bores, which could be affected by the projects;
  - groundwater impact assessment criteria including trigger levels for investigating any potentially adverse groundwater water impacts from the projects; and
  - a program to monitor and assess:
    - groundwater inflows to the open cut mining operations; and
    - impacts of the projects on the region's aquifers, any groundwater bores and surrounding watercourses, in particular Glennies Creek and Station Creek and adjacent alluvium; and
- (f) a Surface and Groundwater Response Plan, which must include:
- a response protocol for any exceedances of the surface water and groundwater assessment criteria;
  - measures to offset the loss of any baseflow to watercourses caused by the projects;
  - measures to compensate landowners of privately-owned land whose water supply is adversely affected by the projects; and
  - measures to mitigate and/or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation.

## BIODIVERSITY

### Biodiversity Offset

41. The Proponent shall implement the offset strategy summarised in Table 18, described in the open cut and underground project EAs, and shown conceptually in the figure in Appendix 8 to the satisfaction of the Director-General.

Table 18: Biodiversity Offset Strategy for the Integra Mine Complex

Offset Areas	Minimum Size
Northern Offset Area	121 hectares
Southern Offset Area	39 hectares
Western Offset Area	94 hectares
Supplementary Offset Area	33 hectares
Bridgman Offset Area	86 hectares

42. By the end of **September 2012**, unless the Director-General agrees otherwise, the Proponent shall revise the offset strategy referred to above, in consultation with **OEH**, and to the satisfaction of the Director-General. The revised offset strategy must:
- (a) ensure provision of at least 140 hectares of Narrow-leafed Ironbark-Spotted Gum-Forest Red Gum Forest (or a suitable equivalent) to further offset the impact of the open cut project; and
  - (b) include an additional 6 hectares of Central Hunter Swamp Oak Forest (or a suitable equivalent) to offset the impact of the underground project on the Glendell Biodiversity Offset Area.

### Long Term Security of Offsets

43. By the end of **September 2012**, the Proponent shall make suitable arrangements to provide appropriate long term security for all the areas in the revised offset strategy to the satisfaction of the Director-General.

### Biodiversity Management Plan

44. The Proponent shall prepare and implement a Biodiversity Management Plan for the projects 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 2011;
- (b) describe how the implementation of the offset strategy would be integrated with the overall rehabilitation of the site (see below);
- (c) include:
  - a description of the short, medium, and long term measures that would be implemented to:
    - implement the offset strategy; and
    - manage the remnant vegetation and habitat, both on site and in the offset areas;
  - detailed performance and completion criteria for the implementation of the offset strategy;
  - a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:
    - implementing revegetation and regeneration within the offset areas, including establishment of canopy, sub-canopy (if relevant), understorey and ground strata;
    - maximising salvage and beneficial use of resources in areas that are to be impacted, including vegetative, soil and cultural heritage resources;
    - protecting vegetation and soil outside the areas to be impacted;
    - rehabilitating Bettys Creek and Main Creek;
    - managing salinity;
    - conserving and reusing topsoil;
    - undertaking pre-clearance surveys;
    - managing impacts on fauna;
    - landscaping the site to minimise visual impacts;
    - collecting and propagating seed;
    - salvaging and reusing material from the site for habitat enhancement;
    - controlling weeds and feral pests, including terrestrial and aquatic species;
    - managing grazing and agriculture on site and in the biodiversity offset areas;
    - controlling access;
    - bushfire management; and
    - managing potential conflicts between the offset areas and Aboriginal cultural heritage values;
  - a description of the potential risks to the successful implementation of the biodiversity offset strategy, and a description of the contingency measures that would be implemented to mitigate these risks;
  - a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria; and
  - details of who would be responsible for monitoring, reviewing, and implementing the plan.

44A The Proponent shall commission a suitably qualified, experienced and independent person approved by the Director-General to conduct an audit of all biodiversity offset areas referred to in conditions 41 and 42 above. The audit report is to be submitted to the Director-General by the end of July 2012 for approval and must:

- (a) report on current baseline data on flora and fauna within each biodiversity offset area, including the condition of all key vegetation communities;
- (b) compare the current condition of each vegetation community within each biodiversity offset area to that surveyed in 2007, including a report on any works and/or other disturbance that has taken place since those surveys;
- (c) evaluate the effectiveness of management measures undertaken to date in improving the biodiversity value of each biodiversity offset area; and
- (d) recommend any additional improvement works for each biodiversity offset area and provide a schedule for their implementation.

### Conservation Bond

45. Within 6 months of the approval of the Biodiversity Management Plan (see above), the Proponent shall lodge a conservation bond with the Department to ensure that the offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan.

The sum of the bond shall be determined by:

- (a) calculating the full cost of implementing the offset strategy; and
- (b) employing a suitably qualified quantity surveyor to verify the calculated costs.

If the offset strategy is implemented to the satisfaction of the Director-General, the Director-General will release the bond. If the offset strategy is not implemented to the satisfaction of the Director-General, the Director-General will call in all or part of the conservation bond, and arrange for the satisfactory implementation of the strategy.

With the agreement of the Director-General, this bond may be combined with the rehabilitation securities administered by the Minister for Mineral Resources.

## HERITAGE

### Further Archaeological Investigation

46. Prior to carrying out any development in the parts of the site outlined in purple on the figure in Appendix 8, unless the Director-General agrees otherwise, the Proponent shall carry out further archaeological testing and investigation within the broader area outlined in purple on the figure in Appendix 8 to the satisfaction of the Director-General.

### Heritage Management Plan

47. The Proponent shall prepare and implement a Heritage Management Plan for the projects to the satisfaction of the Director-General. This plan must:
- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Director-General;
  - (b) be prepared in consultation with OEH, the Aboriginal community, the Heritage Branch, Council, local historical organisations and any relevant landowners;
  - (c) be submitted to the Director-General for approval by the end of March 2011;
  - (d) include programs/procedures for the following in relation to Aboriginal heritage management on site:
    - recording, salvaging and/or managing all Aboriginal sites, objects and deposits that are to be destroyed within the open cut project area;
    - conserving, managing and monitoring all Aboriginal sites, objects and deposits that are to be protected within the open cut project area, including the 3 scarred trees identified within the western mining area;
    - maintaining and managing access to Aboriginal sites, objects and deposits by the Aboriginal community, including provision of an appropriate Keeping Place;
    - managing the discovery of any new Aboriginal objects or skeletal remains identified during the projects; and
    - ongoing consultation and involvement of the Aboriginal community in the conservation and management of Aboriginal cultural heritage values on the site.
  - (e) include programs/ procedures for the following, in accordance with the applicable guidelines of the Heritage Branch:
    - further historical investigation of the area outlined in purple on the figure in Appendix 8 to identify the potential archaeological resources within the area,;
    - archaeological testing of the potential archaeological resources within the area outlined in purple on the figure in Appendix 8;
    - further archaeological investigation of any areas where the archaeological testing (referred to above) identifies significant archaeological deposits;
    - archaeological excavation of the known grave on site, identified as the James Halliday Glennie grave site;
    - detailed archival recording of the Dulwich property if it is to be mined, or the preparation of a detailed conservation management plan for the Dulwich property if it is not to be mined (subject to the agreement of the landowner);
    - archival recording of any other heritage items to be destroyed by the project;
    - conserving, managing, monitoring, and where appropriate, relocating any non-Aboriginal sites, objects and deposits on the site;
    - interpreting the findings of the additional heritage or archaeological investigations carried out on the site; and
    - managing the discovery of any new non-Aboriginal objects or skeletal remains identified during the projects.

## TRANSPORT

### Coal Transport

48. By the end of September 2012, the Proponent shall cease truck haulage of ROM coal from the underground surface facilities to the CHPP, and transport such coal only via overland conveyor, except in an emergency situation and with the prior written approval of the Director-General.

### Monitoring of Coal Transport

49. The Proponent shall:

- (a) keep accurate records of:
  - amount of coal transported from the site (on a monthly basis);
  - the date and time of each train movement from the site; and
- (b) make these records publicly available on its website at the end of each calendar year.

### **Road and Intersection Upgrade Works**

50. The Proponent shall design and construct the Middle Falbrook Road intersection to the reasonable satisfaction of Council prior to commencing construction activities that require access from Middle Falbrook Road to the site.

## **VISUAL**

### **Visual Amenity and Lighting**

51. The Proponent shall:
- (a) minimise the visual impacts, and particularly the off-site lighting impacts, of the projects;
  - (b) take all practicable measures to further mitigate off-site lighting impacts from the projects; and
  - (c) ensure that all external lighting associated with the Integra mine complex complies with *Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting*, or its latest version, to the satisfaction of the Director-General.

### **Additional Visual Mitigation Measures**

52. Upon receiving a written request from the owner of any residence on privately-owned land which has significant direct views of the mining operations on site, the Proponent shall implement additional visual mitigation measures (such as landscaping treatments or vegetation screens) on the land in consultation with the landowner. These measures must be reasonable and feasible, and directed towards minimising the visibility of the mining operations from the residence.

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

## **WASTE**

53. The Proponent shall:
- (a) minimise the waste generated by the projects; and
  - (b) ensure that the waste generated by the projects is appropriately stored, handled, and disposed of, to the satisfaction of the Director-General.
54. The Proponent shall prepare and implement a Waste Management Plan for the projects to the satisfaction of the Director-General. This plan must:
- (a) be prepared in consultation with **DRE**, and submitted the Director-General for approval by the end of March 2011;
  - (b) identify the various waste streams of the projects;
  - (c) estimate the volumes of tailings and reject material that would be generated by the projects;
  - (d) describe and justify the proposed strategy for disposing of this waste material;
  - (e) describe what measures would be implemented to meet the requirements set out above; and
  - (f) include a program to monitor the effectiveness of these measures.

## **BUSHFIRE MANAGEMENT**

55. The Proponent shall:
- (a) ensure that the Integra mine complex is suitably equipped to respond to 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.

## **REHABILITATION**

### **Rehabilitation Objectives**

56. The Proponent shall rehabilitate the site to the satisfaction of the Director-General of **DRE**. This rehabilitation must be generally consistent with both the rehabilitation strategy described in the open cut and underground project EAs – and depicted conceptually in the figure in Appendix 9 – and the objectives in Table 19.

Table 19: Rehabilitation Objectives

Area/Domain	Rehabilitation Objectives
Site (as a whole)	Safe, stable & non-polluting
Surface infrastructure	To be decommissioned and removed, unless the Director-General agrees otherwise
Other land affected by the projects	Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of: <ul style="list-style-type: none"> <li>• local native plant species (unless the Director-General agrees otherwise); and</li> <li>• a landform consistent with the surrounding environment</li> </ul>
Xstrata Mt Owen Bettys Creek Diversions	Rehabilitate to the same or better geotechnical, geomorphic and ecological condition as prior to mining, unless the owner agrees otherwise
Sections of Bettys Creek and Main Creek to be undermined	Hydraulically and geomorphologically stable, with diverse habitats and ecology
Underground Project Creek Diversions	Hydraulically and geomorphologically stable, with diverse habitats and ecology
Built features	Repair to pre-mining condition or equivalent unless: <ul style="list-style-type: none"> <li>• the owner agrees otherwise; or</li> <li>• the damage is fully restored, repaired or compensated for under the <i>Mine Subsidence Compensation Act 1961</i></li> </ul>
Community	Minimise the adverse socio-economic effects associated with mine closure

### Progressive Rehabilitation

57. The Proponent shall carry out rehabilitation of the site progressively, that is, as soon as reasonably practicable following the disturbance.

### Rehabilitation Management Plan

58. The Proponent shall prepare and implement a Rehabilitation Management Plan for the Integra mine complex to the satisfaction of the Director-General of DRE. This plan must:
- be prepared in consultation with the Department, DEECW, NOW, Council and the CCC;
  - be prepared in accordance with any relevant DRE guideline;
  - build, to the maximum extent practicable, on the other management plans required under this approval; and
  - be submitted to the Director-General of DRE for approval by the end of June 2011.

## **SCHEDULE 4 ADDITIONAL PROCEDURES**

### **NOTIFICATION OF LANDOWNERS**

1. By the end of December 2010, the Proponent shall:
  - (a) notify in writing the owners of:
    - the land listed in Table 1 of Schedule 3 that they have the right to require the Proponent to acquire their land at certain stages during the projects;
    - any residence on the land listed in Table 1 (noise-affected) or Table 6 of Schedule 3 that they are entitled to ask for additional noise mitigation to be installed at their residence at certain stages during the projects;
    - any residence on the land listed in Table 1 (air quality-affected) or Table 16 of Schedule 3 that they are entitled to ask for additional air quality mitigation measures to be installed at their residence at certain stages of the projects; and
    - any privately-owned land within 2 kilometres of any approved open cut mining pit on site that they are entitled to ask for an inspection to establish the baseline condition of any buildings 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 open cut or underground project EAs identify that the dust emissions from the projects are likely to be greater than the relevant air quality criteria in Schedule 3 at some stage during the projects.
  
2. Within 2 weeks of obtaining monitoring results showing:
  - (a) an exceedance of the relevant criteria in Schedule 3, the Proponent shall notify the affected landowner and/or tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the projects are complying with the relevant criteria again;
  - (b) an exceedance of the relevant criteria in Conditions 6(c) or 7 of Schedule 3, the Proponent shall notify the applicable owner in writing that they are entitled to ask for additional noise mitigation to be installed at their residence;
  - (c) an exceedance of the relevant criteria in Conditions 22, 23 of Schedule 3, the Proponent shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land); and
  - (d) an exceedance of the relevant criteria in Condition 24(c) of Schedule 3, the Proponent shall notify the applicable owner of any residences on the land that they are entitled to ask for additional air quality mitigation measures to be installed at their residence.

### **INDEPENDENT REVIEW**

3. If an owner of privately-owned land considers the projects to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Director-General in writing for an independent review of the impact of the projects 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 Proponent shall:

  - (a) commission a suitably qualified, experienced and independent person, 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 projects are complying with the relevant criteria in Schedule 3; and
    - if the projects are not complying with these criteria then:
      - determine if more than one mine is responsible for the exceedance, and if so the relative share of each mine towards the impact on the land;
      - 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 projects are complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General.

If the independent review determines that the projects are not complying with the relevant criteria in Schedule 3, and that the projects are primarily responsible for this non-compliance, then the Proponent shall:

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

If the independent review determines that the projects are not complying with the relevant acquisition criteria in Schedule 3, and that the projects are primarily responsible for this non-compliance, then upon receiving a written request from the landowner, the Proponent 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 in Schedule 3 are being exceeded, but that more than one mine is responsible for this exceedance, then together with the relevant mine/s the Proponent shall:
  - (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until there is compliance 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 relevant acquisition criteria in Schedule 3 are being exceeded, but that more than one mine is responsible for the exceedance, then upon receiving a written request from the landowner, the Proponent 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 Proponent 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 projects, 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 required under Conditions 6,7 or 24 of Schedule 3;
  - (b) the reasonable costs associated with:
    - relocating within the Singleton or Muswellbrook 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 Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.

Upon receiving such a request, the Director-General will request the President of the NSW Division of the Australian Property Institute (the API) 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 Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.

However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Director-General for review. Any request

for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Director-General 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 disputing the independent valuer's determination, and any other relevant submissions.

Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Director-General's determination.

If the landowner refuses to accept the Proponent's binding written offer under this condition within 6 months of the offer being made, then the Proponent's obligations to acquire the land shall cease, unless the Director-General determines otherwise.

7. The Proponent 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 Proponent shall prepare and implement an Environmental Management Strategy for the projects to the satisfaction of the Director-General. This strategy must:
  - (a) be submitted to the Director-General for approval by the end of March 2011;
  - (b) provide the strategic framework for the environmental management of the projects;
  - (c) identify the statutory approvals that apply to the projects;
  - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the projects;
  - (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 projects;
    - receive, handle, respond to, and record complaints;
    - resolve any disputes that may arise during the course of the projects;
    - respond to any non-compliance; and
    - respond to emergencies; and
  - (f) include:
    - copies of any strategies, plans and programs approved under the conditions of this approval; and
    - a clear plan depicting all the monitoring required to be carried out under the conditions of this approval.

#### Management Plan Requirements

2. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
  - (a) detailed baseline data;
  - (b) a description of:
    - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - any relevant limits or performance measures/criteria; and
    - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the projects 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 projects; and
    - 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 projects over time;
  - (g) a protocol for managing and reporting any:
    - incidents;
    - complaints;
    - non-compliances with the conditions of this approval and 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 for particular management plans.*

#### Annual Review

3. By the end of March 2012, and annually thereafter, the Proponent shall review the environmental performance of the projects 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 projects over the past year, which includes a comparison of these results against the:
    - relevant statutory requirements, limits or performance measures/criteria;
    - monitoring results of previous years; and

- relevant predictions in the documents referred to in Conditions 2 or 3 of Schedule 2;
- (c) identify any non-compliance over the past 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 projects;
- (e) identify any discrepancies between the predicted and actual impacts of the projects, and analyse the potential cause of any significant discrepancies; and
- (f) describe what measure will be implemented over the next year to improve the environmental performance of the projects.

#### **Revision of Strategies, Plans & Programs**

4. Within 3 months of:
  - (a) the submission of an annual review under Condition 3 above;
  - (b) the submission of an incident report under Condition 6 below;
  - (c) the submission of an audit report under Condition 8 below, or
  - (d) any modification of the conditions of this approval (unless the conditions require otherwise),
 the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval 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 projects.*

#### **Community Consultative Committee**

5. The Proponent shall establish and operate a new Community Consultative Committee (CCC) for the projects in general accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version), and to the satisfaction of the Director-General. This CCC must be operating by the end of March 2011.

##### *Notes:*

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval;*
- *In accordance with the guideline, the Committee should be comprised of an independent chair and appropriate representation from the Proponent, Council, recognised environmental groups and the local community;*
- *The new CCC may be comprised of members of the existing CCCs for the Integra mine complex at the date of this approval; and*
- *Prior to March 2011, the responsibilities of the CCC under this approval may be exercised by the existing CCCs for the Integra mine complex.*

### **REPORTING**

#### **Incident Reporting**

6. The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the projects 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.

#### **Regular Reporting**

7. The Proponent shall provide regular reporting on the environmental performance of the projects on its website, in accordance with the reporting arrangements in any approved plans or programs of the conditions of this approval.

### **INDEPENDENT ENVIRONMENTAL AUDIT**

8. By the end of December 2011, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the projects. This audit must:
  - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
  - (b) include consultation with the relevant agencies;
  - (c) assess the environmental performance of the projects and whether they are complying with the relevant requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);
  - (d) review the adequacy of any approved strategies, plans or programs required under these approvals; and, if appropriate

- (e) recommend measures or actions to improve the environmental performance of the projects, and/or any strategy, plan or program required under these approvals.

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

9. Within 6 weeks of the completing of this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, together with its response to any recommendations contained in the audit report.

#### **ACCESS TO INFORMATION**

10. From the end of December 2010, the Proponent shall:
- (a) make copies of the following publicly available on its website:
- the documents referred to in Conditions 2 and 3 of Schedule 2;
  - all current statutory approvals for the projects;
  - all approved strategies, plans and programs required under the conditions of this approval;
  - the monitoring results of the projects, reported in accordance with the specifications in any conditions of this approval, or any approved plans or programs;
  - a complaints register, updated on a monthly basis;
  - minutes of CCC meetings;
  - the annual reviews of the projects;
  - any independent environmental audit of the projects, and the Proponent's response to the recommendations in any audit; and
  - any other matter required by the Director-General;
- (b) keep this information up-to-date, to the satisfaction of the Director-General.
-

**APPENDIX 1  
SCHEDULE OF LAND**

**Underground Project Area**

<b>Lot Number</b>	<b>Deposited Plan Number</b>
8	6830
10	6830
11	6830
12	6830
13	6830
17	6830
21	6830
791	580967
792	586255
1	600327
2	600327
3	600327
4	600327
1	606344
2	606344
3	606344
4	606344
1	608457
2	622070
710	624852
71	625171
1	626854
100	633743
1	655758
1	701939
2	701939
3	701939
1	745211
1	741653
PT79	752442
93	752442
2	752450
10	752450
64	752499
65	752499
66	752499
622	1097524
1	770733
2	770733
1	780607
2	780607
1	781057
1	783398
532	788015
1	799154
332	832646
12	835203
921	844642
922	844642
923	844642
111	850054
112	850054
1	851867
2	851867
3	851867
4	851867
5	851867
6	851867
7	851867
8	851867
2	859544
3	859544
5	859544
6	859544
7	859544

Lot Number	Deposited Plan Number
8	859544
924	862883
925	862883
1	865784
Pt1	940619
1	998045
1	1009231
123	1067863
1	1083482
560	1104561
G	37613
1	113540
2	113540
1	246434
2	246434
4	246434
5	246434
6	246434
5	264089
1	597205
2	597205
1	628652
2	628652
1	725247
174	729917
22	752442
91	752442
92	752442
2	752450
6	752450
10	752450
120	752450
43	752455
75	752455
77	752455
78	752455
98	752455
70	777661
1	802596
2	802596
1	810309
233	829334
235	829334
237	829334
239	829334
240	829334
12	855251
1	873260
2	873260
7	1075078
1	1083482
2	1083482
1	1111102
2	1111102
3	1111102
4	1111102
6	1111104
Access Road	
5	113540
32	752455
44	752455
45	752455
73	752455
74	752455
75	752455
76	752455
78	752455
86	752455
95	752455

## Open Cut Project Area

Lot Number	Deposited Plan Number
1	264434
2	752450
44	752455
1/95	752455
G	37613
76	752455
98	752455
710	624852
2	1083482
6	246434
70	777661
3	752455
4	246434
1/100	633743
1	810309
1	212284
1	725247
233	829334
1/6	752450
2	246434
1/77	752455
2	873260
1/45	752455
1	628652
2	113540
235	829334
1	802596
240	829334
2	597205
2	810309
2	810309
1/792	586255
1/32	752455
91	752442
92	752442
5	264089
1/73	752455
12	855251
237	829334
2	212284
1	752450
2	628652
1/239	829334
1/136	752455
1/791	580967
174	729917
51	551899
22	752442
5	246434
8	246434
1/4	113540
1/4	606344
231	829334
1	597205
1/213	106786
1/74	752455
2	802596
8	251618
1/93	752422
1/10	752450
75	752455
1/43	752455
7	113538
1/86	752455
1/1	783398
78	752455
1/120	752450
71	777661

Lot Number	Deposited Plan Number
1	113540
1	873260
1	1075078
1	1083482

## APPENDIX 2 PREVIOUS EAS

### **Glennies Creek Colliery (105/90)**

- Environmental Impact Statement (EIS) dated 20 August 1990 prepared by Dames & Moore in accordance with Section 77(3) of the Environmental Planning and Assessment Act, and certified by Warren Atkinson and supplementary information supplied by the Applicant to the Singleton Shire Council ("the Council") by letters dated 20 November 1990, 19 February 1991, submissions to Commission of Inquiry;
- The Statement of Environmental Effects in support of a Section 96(2) Application for the Glennies Creek Coal Mine, dated July 1998, prepared by R.W. Corkery and Co Pty Ltd;
- Statement of Environmental Effects in support of a Section 96(2) application for the Glennies Creek Coal Mine, dated June 2001, prepared by R.W. Corkery and Co Pty Ltd;
- The Statement of Environmental Effects in support of an application to Modify the Development Consent for the Glennies Creek Coal Mine, dated December 2001, prepared by Mr Bob Corbett, Manager – Environmental Services with AMCI Australia Pty Ltd; Letter from Bob Corbett to NPWS/PlanningNSW dated the 23 April 2002 regarding flora and fauna issues; Air Quality Impact Assessment: Glennies Creek Ventilation Shaft dated the 19 April 2002, prepared by Holmes Air Science; Letter from Bob Corbett to EPA/PlanningNSW dated the 15 May 2002 regarding additional information requested on air quality; and Archaeological Assessment prepared by John Appleton dated April 2002;
- The information provided in support of a Section 96(1A) application, dated January 2005, prepared by Glennies Creek Coal Management Pty Ltd; and the Statement of Environmental Effects in support on an application to modify the Development Consent for the Glennies Creek Colliery, dated November 2005, prepared by Glennies Creek Coal Management Pty Ltd; and
- The Statement of Environmental Effects prepared by Environmental Resources Management Pty Ltd dated May 2008 to support the Section 96(1A) application by Integra Coal Operations dated May 2008.

### **Camberwell Coal Project (86/2889)**

- Camberwell Coal Project, Glennies Creek - Environmental Impact Statement, dated October, 1989, as modified by the works set out in figures 1 and 2 attached to the April 1992 Notice of Amendment;
- Camberwell Coal Pty Limited to the Singleton Shire Council letter dated 21 December, 1989 advising on rail facilities;
- Letter from Camberwell Coal Pty Limited to the Singleton Shire Council, dated 29 January, 5 February, 6 February, 1990;
- Responses to letters of objection submitted to Council by Camberwell Coal Pty Limited dated 25 January, 1990;
- Responses by Camberwell Coal Pty Limited to comments submitted by government bodies, dated 5 February, 1990;
- Statement of Environmental Effects in support of a Section 96(2) application for the Camberwell Coal Mine, dated 2 July 2001, prepared by HLA-Envirosciences Pty Ltd;
- Additional information provided by PJ Murray in response to submissions received on the proposal in a letter dated 29 August 2001;
- Information provided by Camberwell coal Pty Limited accompanying the application to modify development consent received 20 November 2003;
- Statement of Environmental Effects in support of a Section 96(2) application for the Camberwell Coal Mine, dated July 2004, prepared by David Lane Associates;
- Statement of Environmental Effects Coal Handling and Preparation Plant Upgrade Camberwell Coal Mine, dated 31 March 2005, prepared by HLA Envirosciences Pty Limited;
- Statement of Environmental Effects Coal Handling and Preparation Plant Workshop, dated 31 July 2006, prepared by Camberwell Coal Pty Limited;
- Environmental Assessment for the Proposed Modification of Development Consent DA 86/2889 Integra Open Cut Increase in Annual ROM (ROM) Coal Production from 3.8Mt to 4.5Mt, dated 29 February 2008, prepared by Integra Coal Operations Pty Ltd; and
- Statement of Environmental Effects titled Relocation of Explosives Magazine Compound and Reload Facilities, dated 22 March 2010, prepared by Integra Coal Operations Pty Limited.

### **Glennies Creek Colliery Surface Facilities (06\_0057)**

- Environmental Assessment titled Glennies Creek Colliery Environmental Assessment of Surface Facilities and Activities dated July 2006, and the associated response to submissions, titled Responses to Issues Raised in Submissions (Project Application 06\_0057) dated 23 October 2006 prepared by Glennies Creek Coal Management Pty Ltd;
- Letter from the Proponent to the Department amending the project application, dated 3 October 2006;
- Modification application and supporting information titled Proposed Modifications to Forest Road Ventilation Shaft Area, dated October 2008; and
- Modification application and supporting information titled Supporting Information for a s75W Application to Modify Condition 16 of Schedule 3, Project Approval (PA) 06\_0057 – Integra Coal Operations Pty Ltd, dated June 2009.

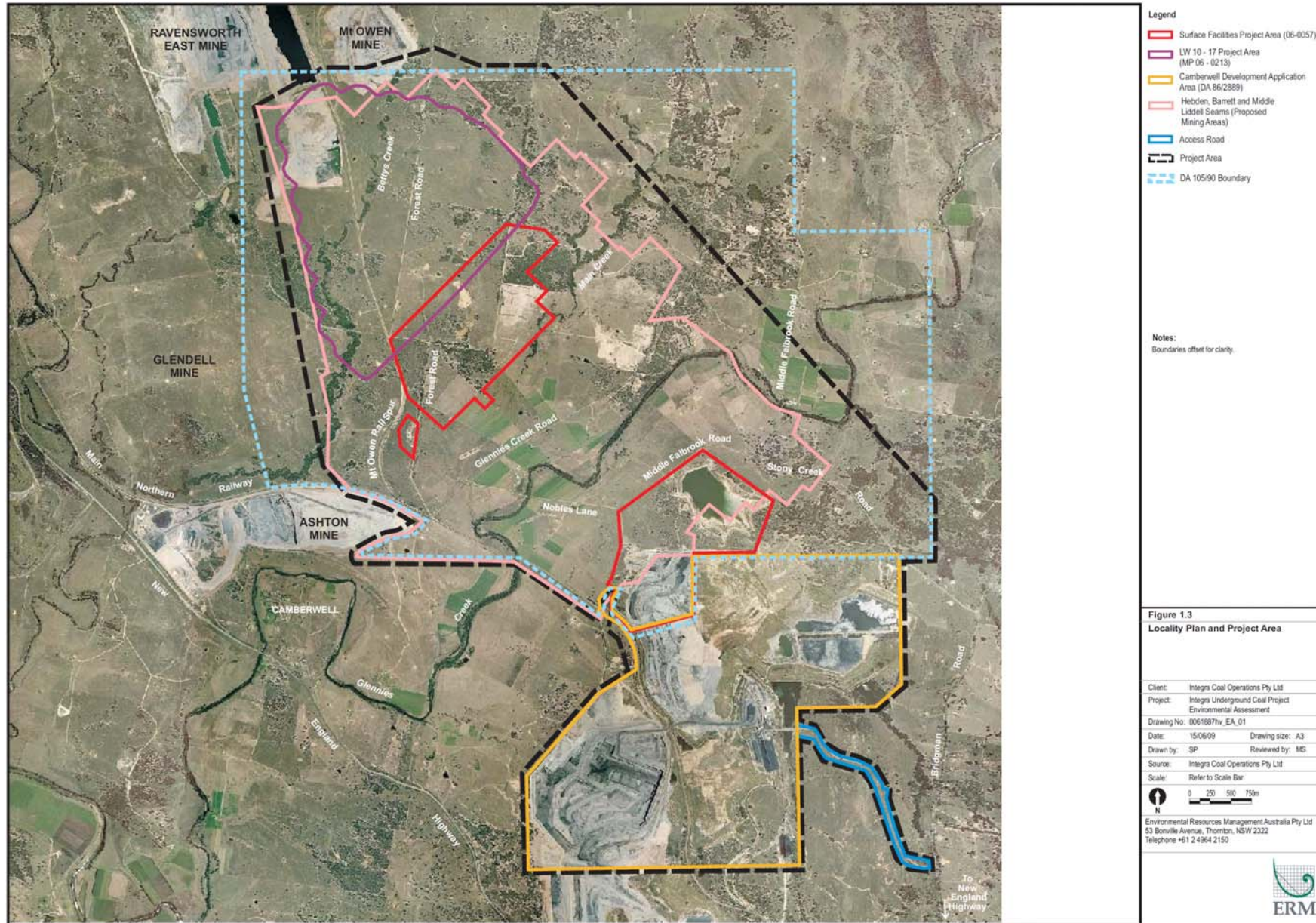
### **Glennies Creek Underground Coal Project (06\_0213)**

- Environmental Assessment titled Glennies Creek Colliery Longwalls 10 to 17 Part 3A Environmental Assessment for Integra Coal Operations Pty Limited dated 19 September 2007, and the associated response to submissions, titled Glennies Creek Part 3A Application – Longwall Panels 10-17 Middle Liddell Seam Response to Submissions, dated February 2008 prepared by Environmental Resources Management Australia Pty Ltd.

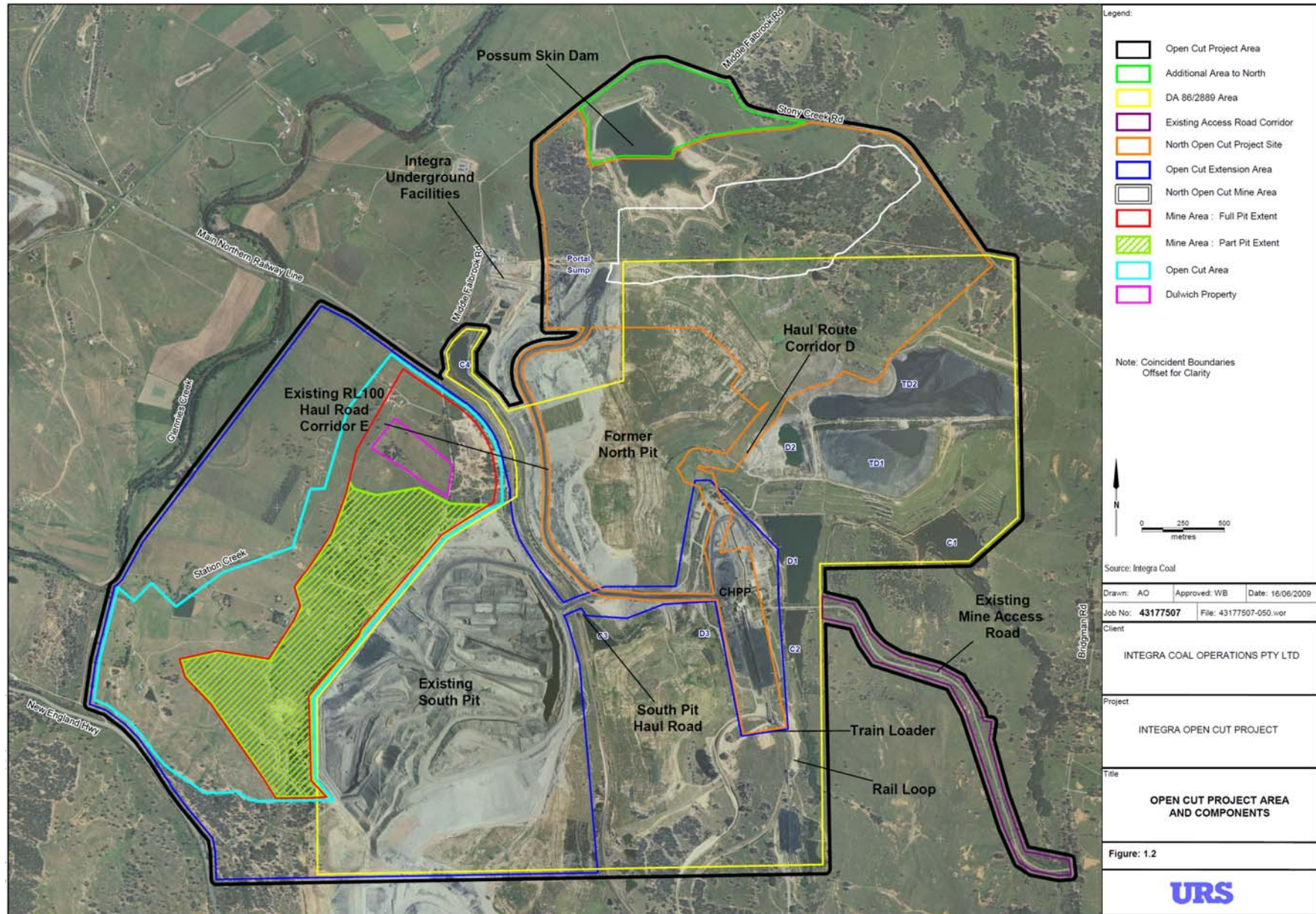
### **Glennies Creek Open Cut Coal Project (06\_0073)**

- Environmental Assessment titled Environmental Assessment Glennies Creek Open Cut Coal Mine, Volumes 1-3, dated October 2007, and the associated responses to submissions, titled Response to Government Agency Submissions Glennies Creek Open Cut Coal Mine, dated February 2008 and Supplementary Response to Government Agency Submissions Glennies Creek Open Cut Coal Mine, dated June 2008 prepared by RW Corkery & Co Pty Ltd.

### APPENDIX 3 PROJECT AREAS

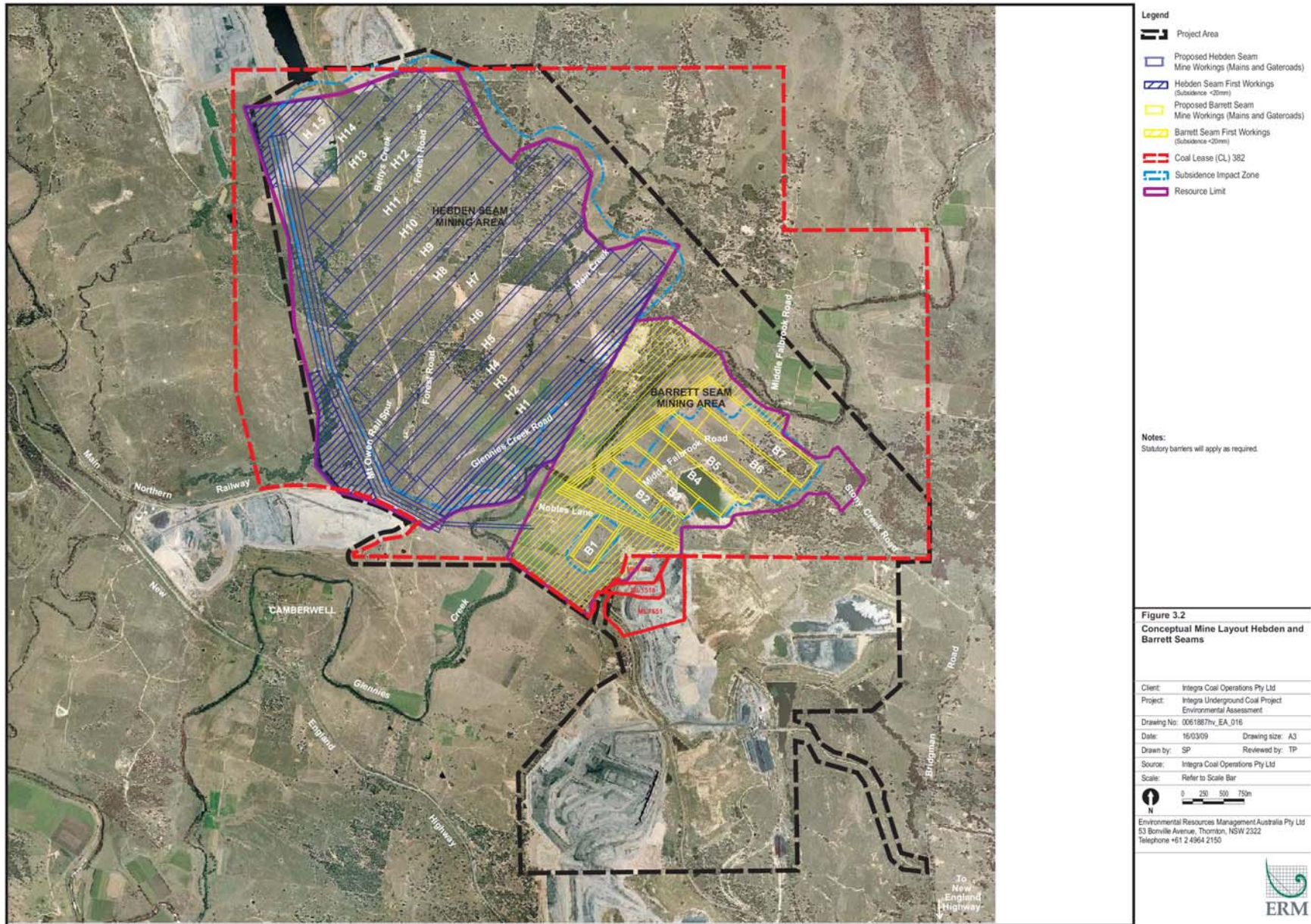


Underground Project Area

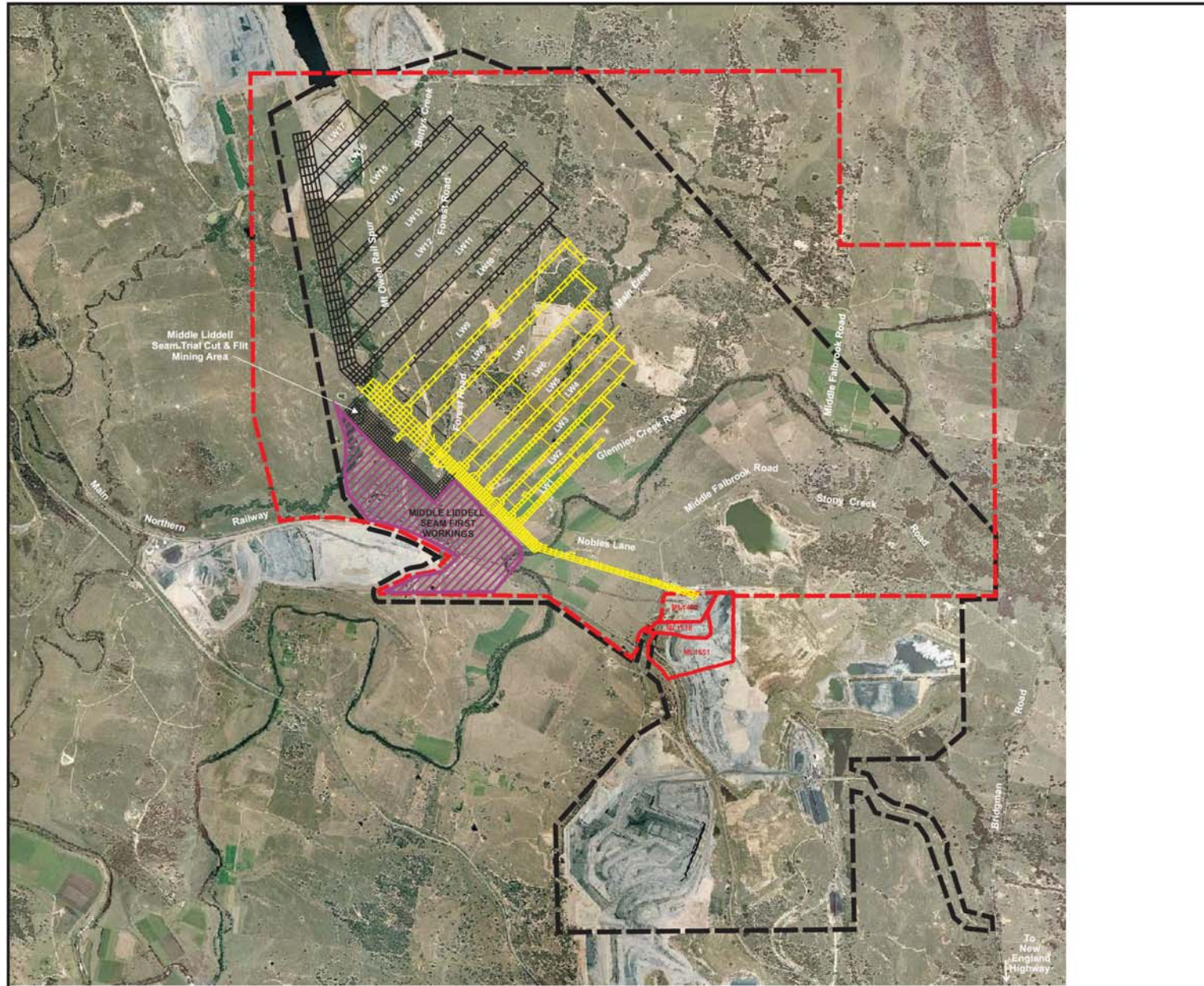


Open Cut Project Area

## APPENDIX 4 PROJECT LAYOUT PLANS



**Hebden and Barrett Mining Areas**



- Legend**
- Project Area
  - Coal Lease (CL) 382
  - Middle Liddell Seam First Workings Mining Area (Subsidence <20mm)
  - Future Approved Middle Liddell Seam Mine Workings
  - Existing Middle Liddell Seam Mine Workings

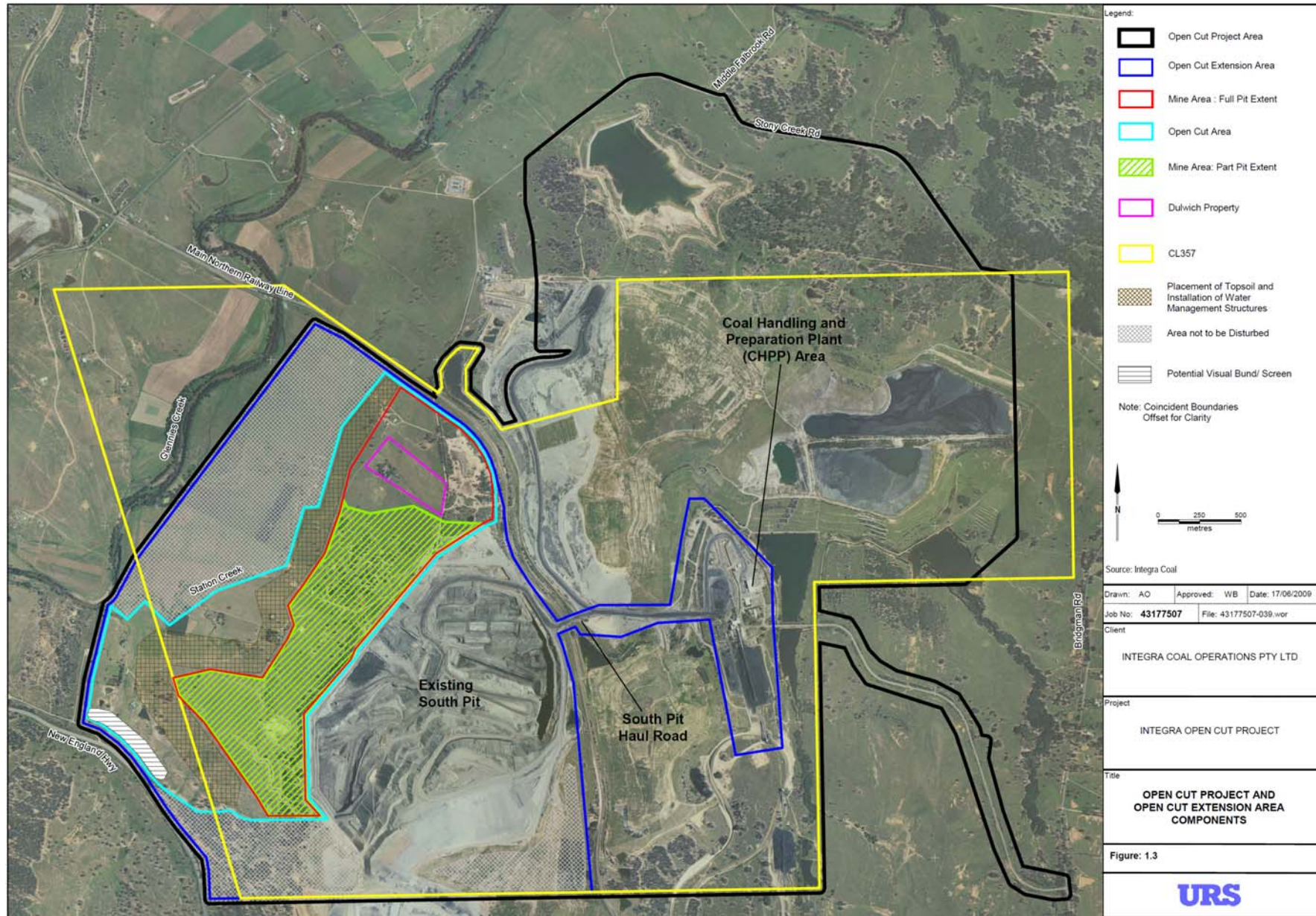
**Notes:**  
Statutory barriers will apply as required.

**Figure 3.3**  
**Conceptual Mine Layout Middle Liddell Seam First Workings Mining Area**

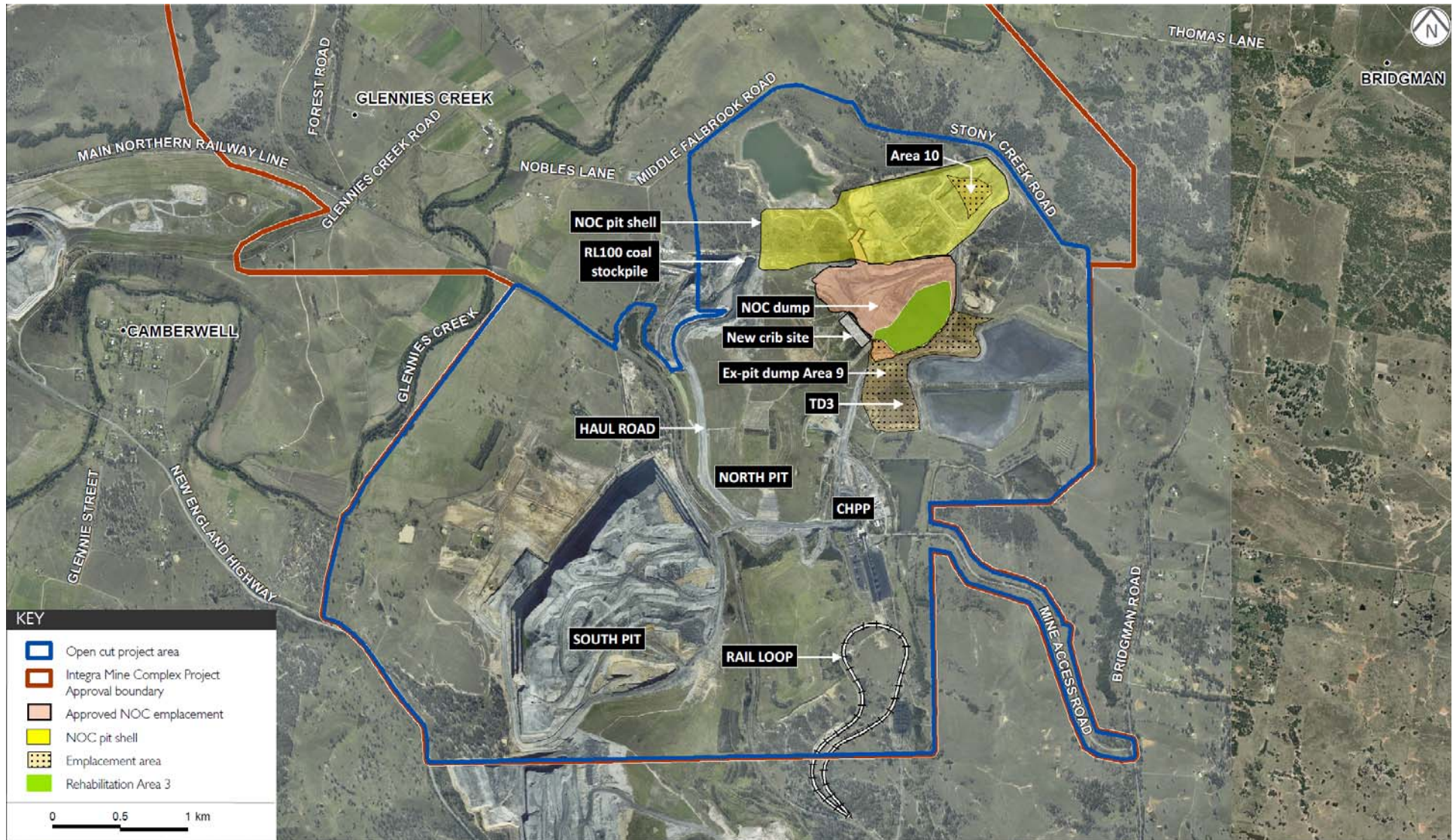
Client:	Integra Coal Operations Pty Ltd		
Project:	Integra Underground Coal Project Environmental Assessment		
Drawing No:	0061887hv_EA_017		
Date:	03/06/09	Drawing size:	A3
Drawn by:	SP	Reviewed by:	MS
Source:	Integra Coal Operations Pty Ltd		
Scale:	Refer to Scale Bar		
Environmental Resources Management Australia Pty Ltd 53 Bonville Avenue, Thornston, NSW 2322 Telephone +61 2 4964 2150			



**Middle Liddell Mining Areas**

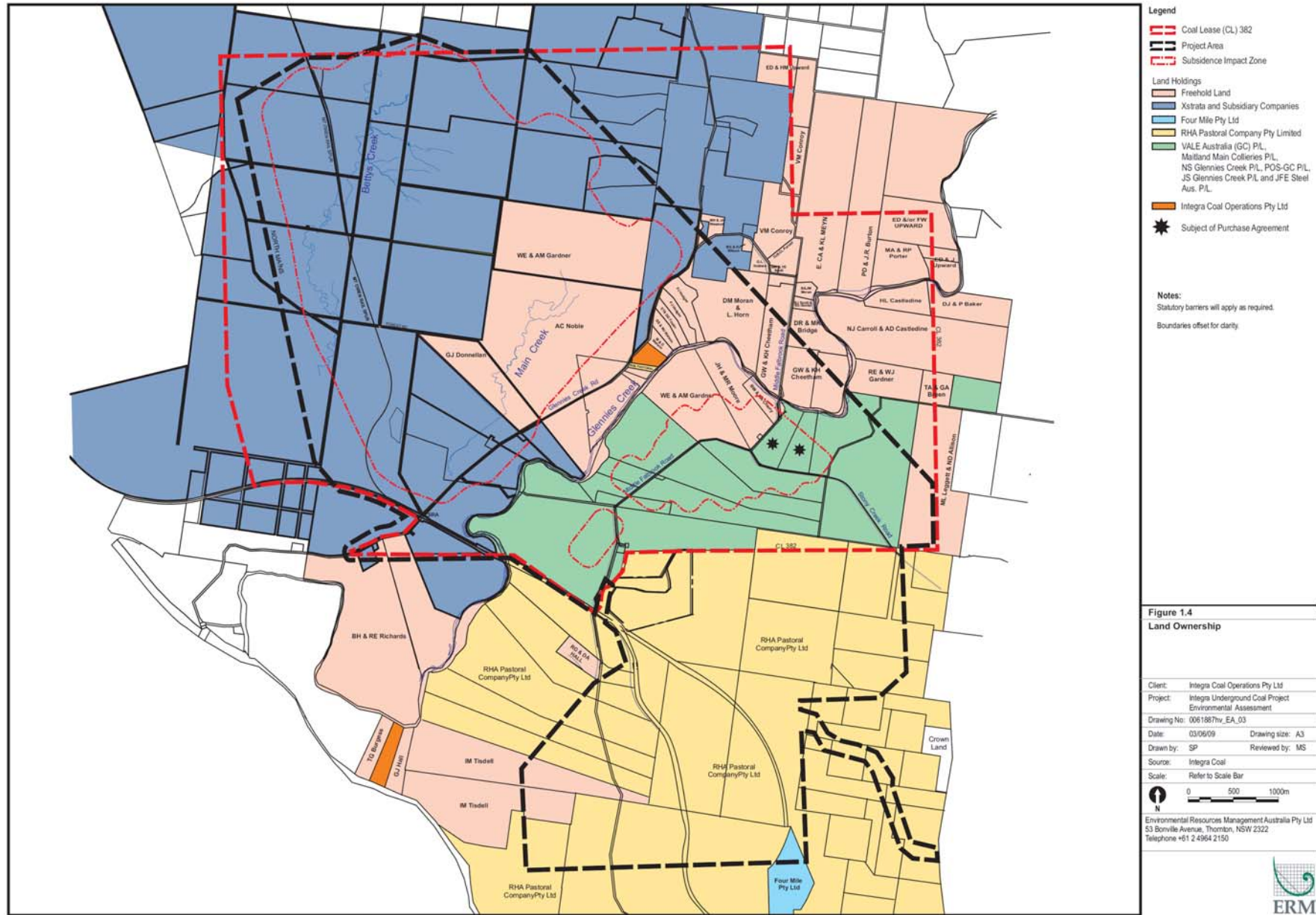


Western Mining Area and Surface Infrastructure

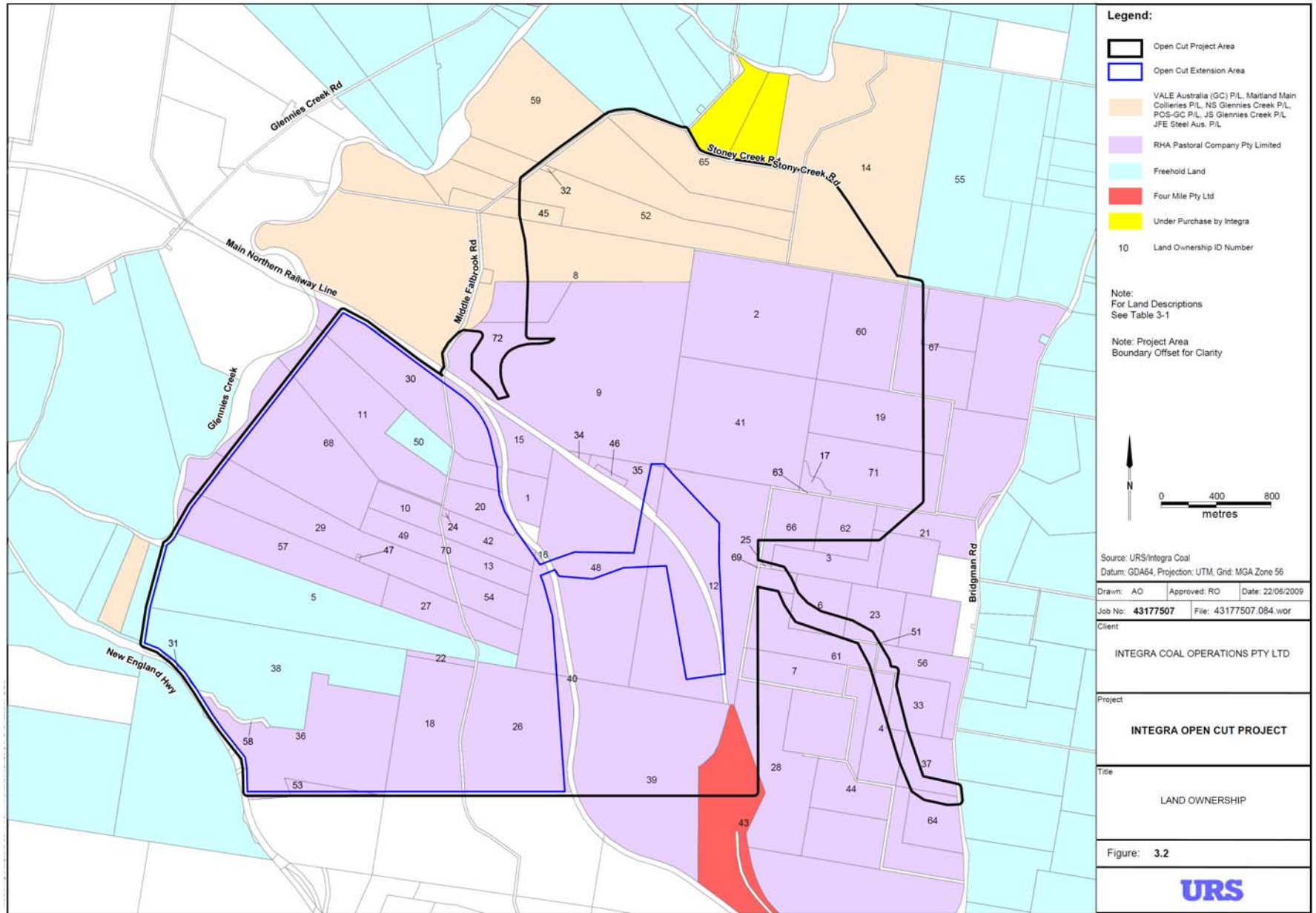


**Modification 1 – Overburden Emplacement Area 9 and Crib Site Relocation**

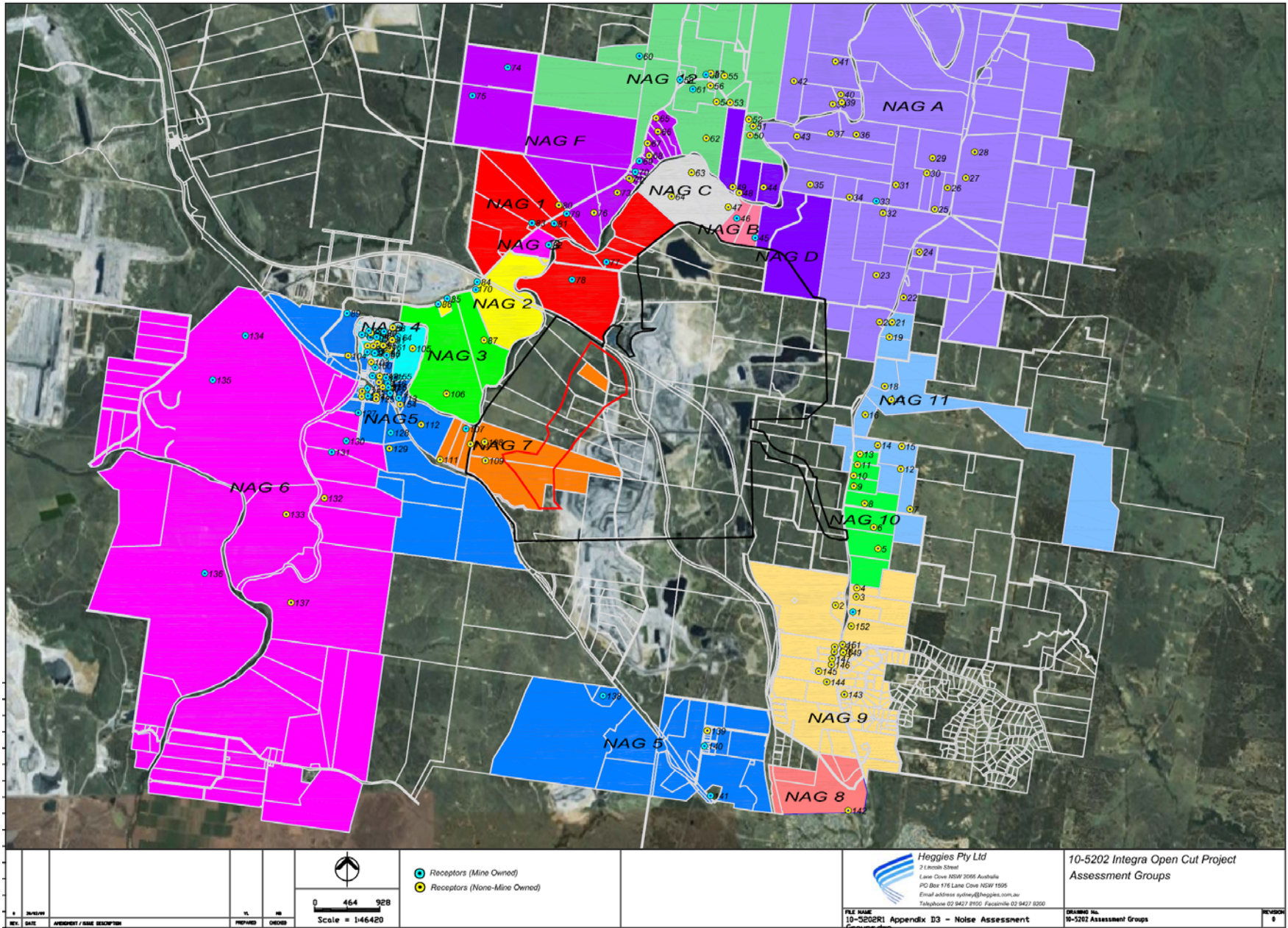
## APPENDIX 5 LAND OWNERSHIP PLANS & RESIDENTIAL RECEIVERS



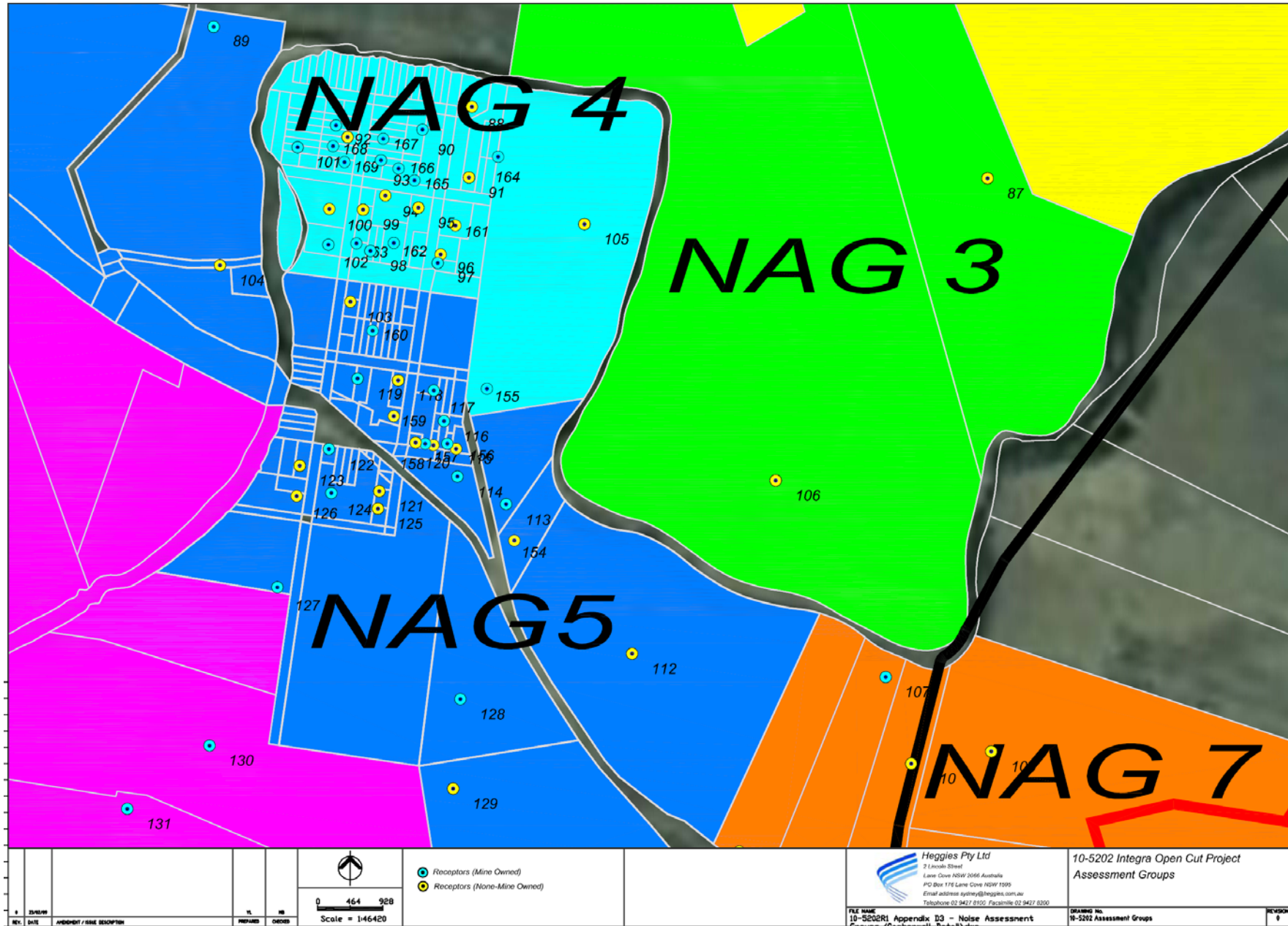
**Underground Project Land Ownership (at time of EA production)**



Open Cut Project Land Ownership (at time of EA production)



Residential Receivers



Residential Receivers in Camberwell Village

## APPENDIX 6 ALTERNATE NOISE CONDITIONS

### Acquisition on Request following Cessation of Open Cut Mining Operations

- 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 Conditions 6-7 of Schedule 4.

Table 1: Land subject to acquisition upon request

Noise	Subsidence
80 – G Donnellan	47 – B & R Cherry
153 – R & D Hall	

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

### NOISE

#### Noise Criteria

- Except for the noise-affected land referred to in Table 1, the Proponent shall ensure that the noise generated by the projects does not exceed the criteria in Table 2 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 2: Noise criteria dB(A)

		Day	Evening	Night	Night
		<i>L</i> <sub>Aeq(15min)</sub>	<i>L</i> <sub>Aeq(15min)</sub>	<i>L</i> <sub>Aeq(15min)</sub>	<i>L</i> <sub>A1(1min)</sub>
NAG 1	All privately-owned land	38	38	36	46
NAG 2	All privately-owned land	39	39	37	47
NAG 3	87	42	42	42	49
	106	39	39	39	49
	All other privately-owned land	40	40	39	49
NAG 4	88, 91, 95, 99, 100, 105, 161	35	35	35	47
	All other privately-owned land	42	42	37	47
NAG 5	111	37	37	37	52
	112	36	36	36	52
	118	39	39	39	52
	154	36	36	36	52
	103, 104, 121, 139	35	35	35	52
	All other privately-owned land	50	46	42	52
NAG 6	132, 133, 137	35	35	35	48
	All other privately-owned land	41	41	38	48
NAG 7	110	38	38	38	49
	All other privately-owned land	45	42	39	49
NAG 8	142	35	35	35	45
	All other privately-owned land	42	42	35	45
NAG 9	2, 3, 4, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152	35	35	35	48
	All other privately-owned land	40	40	38	48
NAG 10	10	42	42	42	47
	9	41	41	41	47
	11, 13	40	40	40	47
	8	38	38	38	47
	6	36	36	36	47
	5	35	35	35	47

	All other privately-owned land	39	39	37	47
NAG 11	7, 12, 14, 15, 16, 17, 18	35	35	35	49
	All other privately-owned land	41	41	39	49
NAG 12	62	37	37	37	45
	50	36	36	36	45
	51, 52, 53, 54, 55, 56, 57	35	35	35	45
	All other privately-owned land	38	38	35	45
NAG A	22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43	35	35	35	46
	All other privately-owned land	39	39	36	46
NAG B	All privately-owned land	37	37	35	45
NAG C	47	36	36	36	45
	63	37	37	37	45
	64	38	38	38	45
	All other privately-owned land	37	37	35	45
NAG D	49	36	36	36	48
	44, 48	35	35	35	48
	All other privately-owned land	40	40	38	48
NAG F	67, 68	39	39	39	50
	65, 66	37	37	37	50
	All other privately-owned land	40	40	40	50
NAG G	All privately-owned land	41	41	39	50
	All other privately-owned land	35	35	35	45

*Notes:*

- To identify the locations referred to in Table 2, see the applicable figures in Appendix 5; and
- Noise generated by the projects 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 Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.

### Additional Noise Mitigation Measures

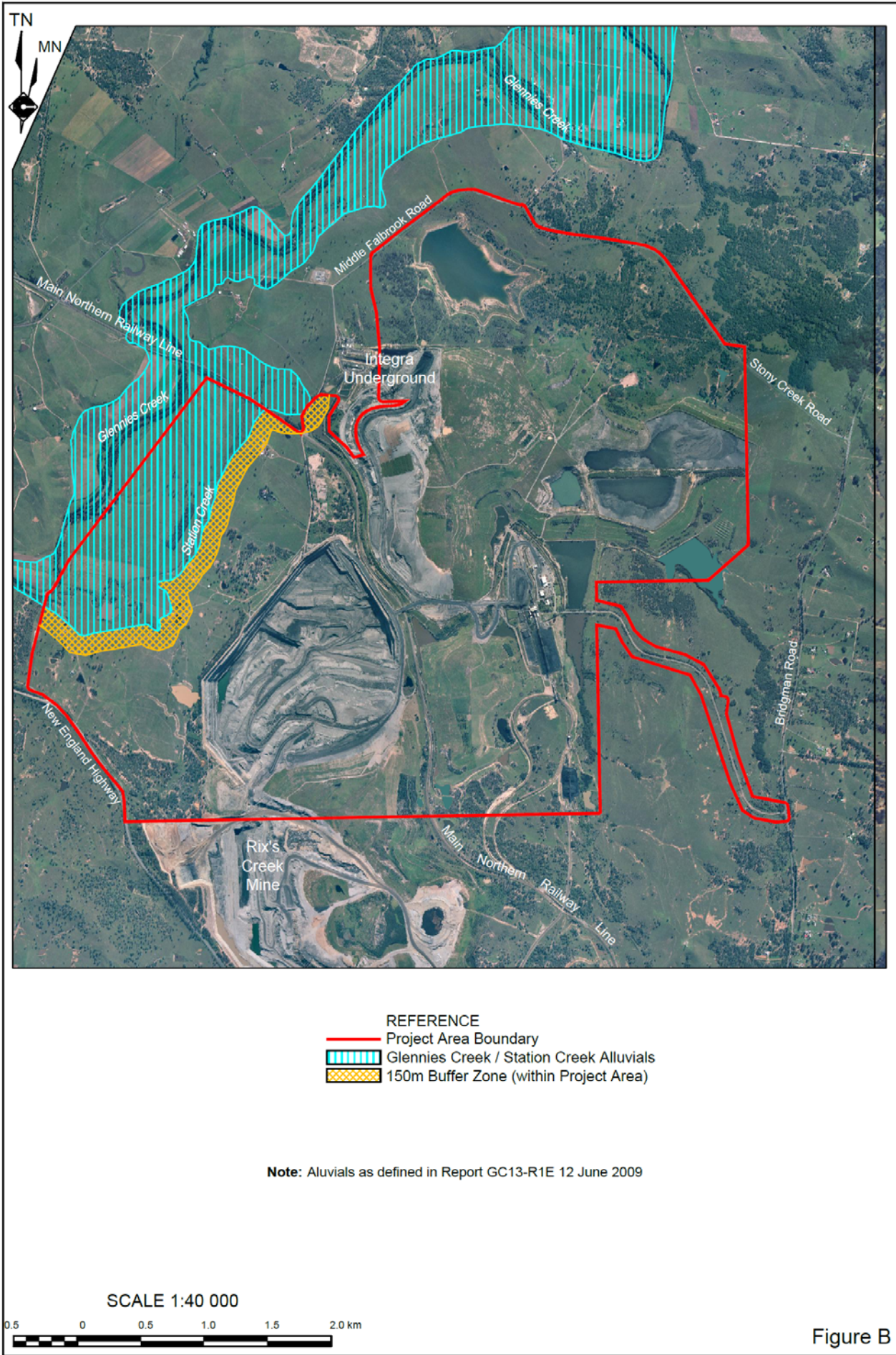
3.

*Table 6: Land subject to noise mitigation measures on request*

9 – W & N Pendered	10 – E & B Kleinman
11 – F Ferraro	13 – P & K Russell
64 – W & A Gardner	87 – B & R Richards

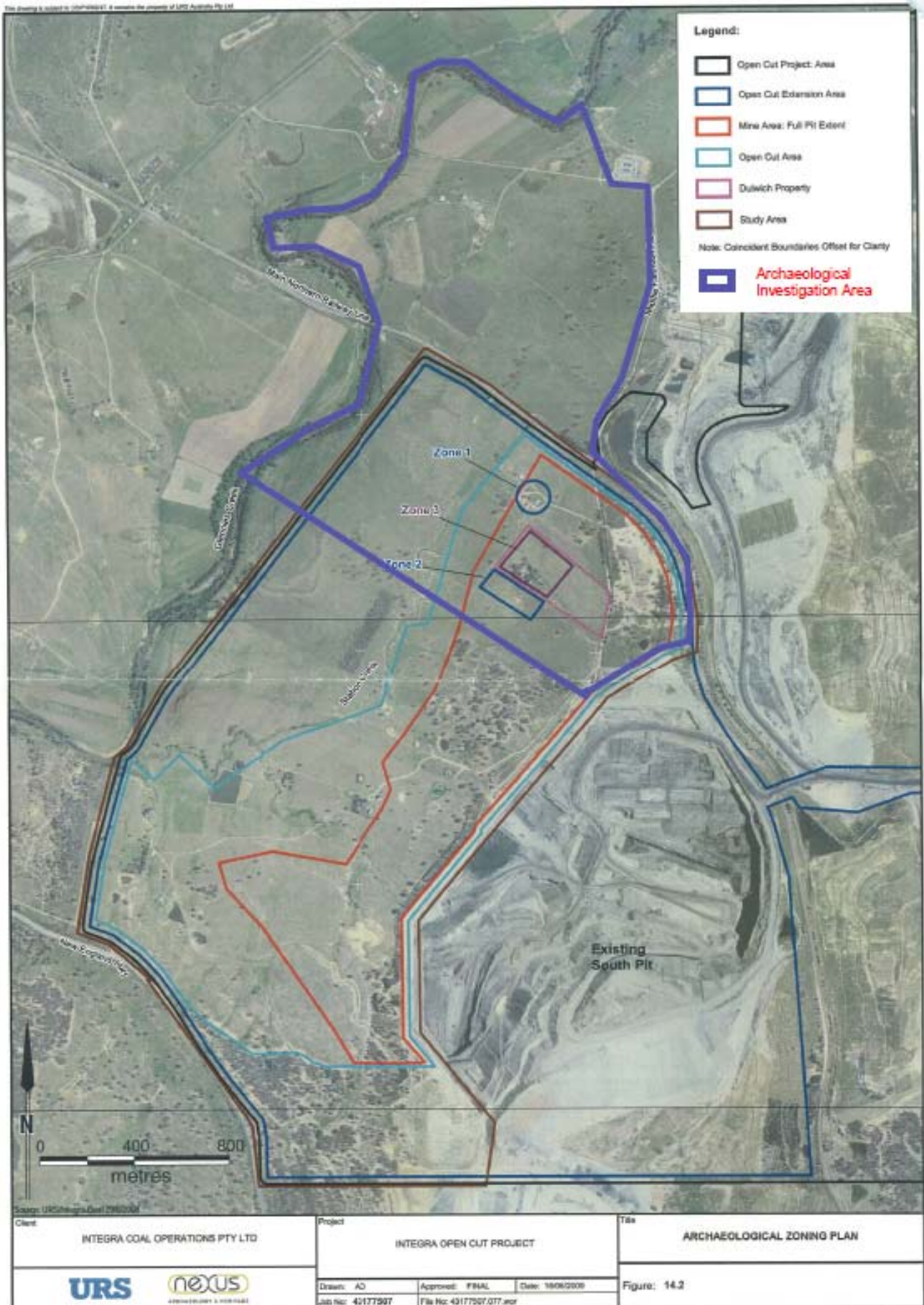
*Note: To identify the locations referred to in Table 6, see the applicable figures in Appendix 5.*

**APPENDIX 7  
GLENNIES CREEK AND STATION CREEK ALLUVIAL AQUIFERS**

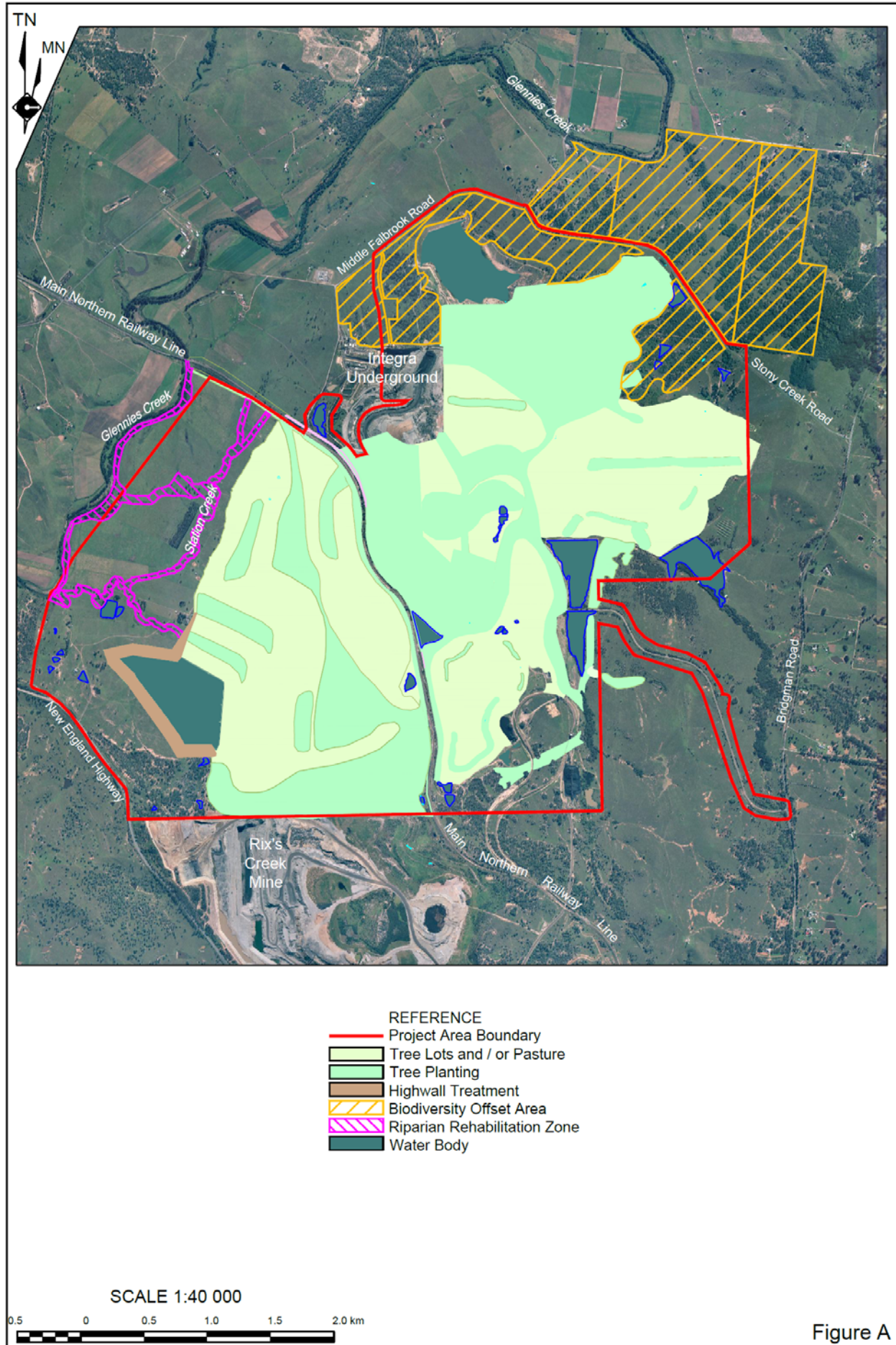


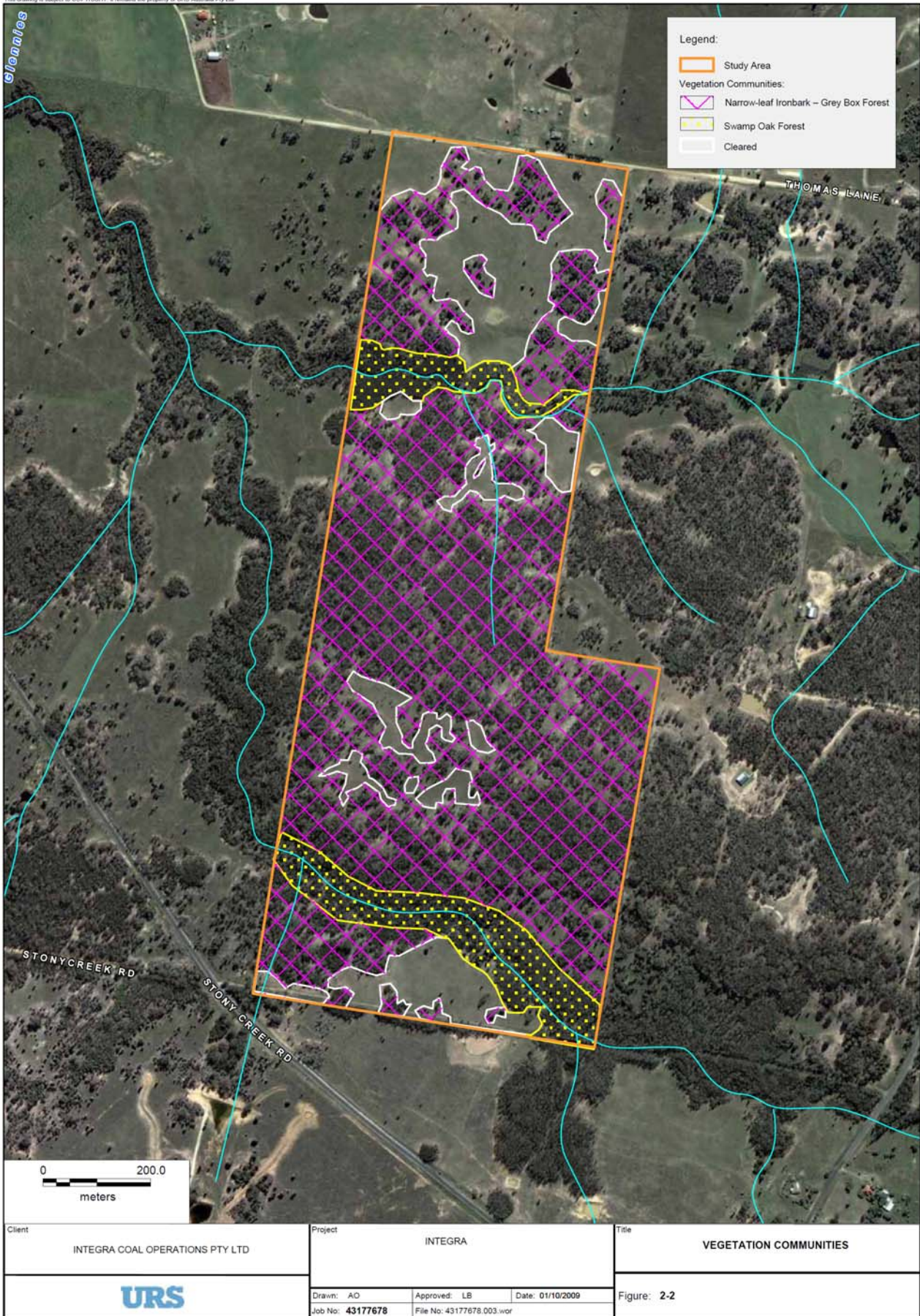
**Figure B**

## APPENDIX 8 AREA FOR FURTHER ARCHAEOLOGICAL INVESTIGATION



APPENDIX 9  
CONCEPTUAL FINAL LANDFORM AND OFFSETS







This drawing is subject to CDDP/RIGHT. It remains the property of URS Australia Pty Ltd.

**APPENDIX 10  
STATEMENT OF COMMITMENTS**

**Underground Project Statement of Commitments**

Desired Outcome	Existing or Proposed Actions	Timing
<b>STATUTORY REQUIREMENTS</b>		
Compliance with all conditional requirements in all approvals, licences and leases.	<ul style="list-style-type: none"> <li>The development will be carried out as outlined in the following:               <ul style="list-style-type: none"> <li>this Environmental Assessment Report (EA);</li> <li>Project Approval;</li> <li>Environment Protection Licence;</li> <li>Subsidence Management Plans (SMPs);</li> <li>Mining Lease(s); and</li> <li>any other approvals, licences or leases.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Continuous and as required.</li> </ul>
All operations conducted in accordance with all relevant documentation.	<ul style="list-style-type: none"> <li>Undertake all activities in accordance with the accepted Mining Operations Plan; environmental procedures; safety management plan and/or site-specific documentation in force at that time.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous and as required.</li> </ul>
<b>STAKEHOLDER CONSULTATION</b>		
That effective communication/consultation is undertaken throughout the life of the Project.	<ul style="list-style-type: none"> <li>Preparation of a community newsletter following Project Approval.</li> </ul>	<ul style="list-style-type: none"> <li>Within three months from the date of Project Approval.</li> </ul>
	<ul style="list-style-type: none"> <li>Biannual meetings of the Community Consultative Committee.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous and as required.</li> </ul>
	<ul style="list-style-type: none"> <li>Ongoing communication with the management of Xstrata and provision of subsidence monitoring data.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous and as required.</li> </ul>
	<ul style="list-style-type: none"> <li>Conduct a more detailed assessment of the potential impacts of subsidence on items of Xstrata infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to longwall mining under areas containing Xstrata owned infrastructure.</li> </ul>
<b>SUBSIDENCE</b>		
Potential adverse impacts from subsidence are managed, monitored and remediated where necessary.		
<b>Subsidence management</b>	<ul style="list-style-type: none"> <li>Subsidence Management Plan applications will be submitted to the DPI detailing strategies to manage subsidence impacts, inclusive of measures referenced in this EA.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>The mine plan for the Barrett seam longwall blocks will be developed and operated to provide a minimum 40 metre separation between the boundary to the connected alluvium and the 20mm subsidence line.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of longwall mining in the affected area and ongoing.</li> </ul>
	<ul style="list-style-type: none"> <li>In addition to the overarching SMPs, specific management plans will be developed which will address potential subsidence impacts on specific items or areas of sensitivity, roads and associated infrastructure, transmission lines, communication infrastructure, Bettys Creek, farm fences, farm buildings and farm dams.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>Subsidence monitoring involving cross lines, longitudinal lines and three dimensional surveying will be undertaken to confirm the levels of subsidence occurring and enable refinements to subsidence predictions.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to, during and after mining in the Barrett and Hebden Seams.</li> </ul>
	<ul style="list-style-type: none"> <li>Temporary remediation works will progress during mining, with permanent remediation works completed following full subsidence</li> </ul>	<ul style="list-style-type: none"> <li>Continuous and as required.</li> </ul>

Desired Outcome	Existing or Proposed Actions	Timing
<b>Management of subsidence impacts on surface infrastructure.</b>	impacts in an area.	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• The new Forest Road Subsidence Management Plan to be built upon the existing management plan to reflect the expected subsidence and associated impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• As part of Hebden SMP development, a management plan for Glennies Creek Road and associated infrastructure will be prepared.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• As part of Barrett SMP development, a management plan for Middle Falbrook Road and associated infrastructure will be prepared.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of longwall mining which would potentially affect the stability or integrity of the dam wall.</li> </ul>
	<ul style="list-style-type: none"> <li>• Possum Skin Dam will be decommissioned.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• The current Electricity Transmission Lines Subsidence Management Plan will be revised for inclusion in the new SMPs and will detail management of subsidence effects on powerlines.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• The existing management plan for the Forest Road communications/Telstra line will be reviewed and updated in consultation with Telstra to reflect changes resulting from this proposal.</li> </ul>	<ul style="list-style-type: none"> <li>• As required.</li> </ul>
	<ul style="list-style-type: none"> <li>• Stakeholder consultation and monitoring of the existing communication cable adjacent to the Mt Owen Rail Spur will be carried out to ensure the cable remains serviceable during subsidence.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• Should XMO's mine plan change, any potential subsidence effects on its tailings dams or highwalls will be addressed in the relevant SMPs at that time.</li> </ul>	<ul style="list-style-type: none"> <li>• Following finalisation of the surface mine layout and prior to mining within these areas.</li> </ul>
	<ul style="list-style-type: none"> <li>• ICO will undertake a more detailed assessment of potential impacts on the Ravensworth East / XMO and Glendell Open Cuts.</li> </ul>	<ul style="list-style-type: none"> <li>• Monthly.</li> </ul>
	<ul style="list-style-type: none"> <li>• ICO will provide stakeholders such as Singleton Shire Council and landowners who border roads with a monthly update of the location of the longwall face relative to the road, and the estimated progress of the longwall during the following month.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• Signs will be erected by ICO at points on the road at the edge of the longwall subsidence impact zone.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to mining within the protection zone.</li> </ul>
	<ul style="list-style-type: none"> <li>• Approval will be sought from DPI and ARTC prior to any mining within the Main Northern Railway protection zone.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Any proposed workings in the Main Northern Railway protection zone will be designed to be long term stable – taking site conditions into consideration</li> </ul>	
	<ul style="list-style-type: none"> <li>• A subsidence management plan will be devised in consultation with the MSB and the owners of houses above Barrett Seam Longwall 7.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• Surveys will be conducted prior to, during and after mining, to confirm the levels of subsidence movements and impacts, and identify if triggers for implementation of management measures have been reached.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>• ICO and the MSB will undertake rebuilding, rectification of structural work, re-levelling and remedial work to surface water drainage and sewerage systems at the existing Glennies Creek Community Hall as required to remediate anticipated subsidence damage.</li> </ul>	<ul style="list-style-type: none"> <li>• As required.</li> </ul>

Desired Outcome	Existing or Proposed Actions	Timing
<b>Ensure minimal subsidence impacts on natural features.</b>	<ul style="list-style-type: none"> <li>The Hebden SMPs to be developed will incorporate and build upon the existing Surface Drainage Management Plan.</li> <li>A Bettys Creek Diversion Management Plan will be prepared as part of the Hebden SMPs.</li> </ul> <p>ICO will prepare:</p> <ul style="list-style-type: none"> <li>a response strategy to address any destabilisation of Main Creek;</li> <li>a works programming for any necessary remedial works in Main Creek should subsidence expression initiate incision and headward erosion;</li> <li>an outline of expansion of piezometric monitoring; and</li> <li>a TARP as part of a surface water and groundwater monitoring and management program.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> </ul> <p>Prior to Hebden Seam longwall mining undermining Man Creek.</p>
<b>Ensure minimal subsidence impacts on farm infrastructure.</b>	<ul style="list-style-type: none"> <li>The Hebden SMPs and Barrett SMPs to be developed will incorporate and build upon the existing Farm Fences, Farm Buildings and Farm Dams Subsidence Management Plans, as appropriate.</li> <li>In consultation with the relevant landowner, ICO will remediate any dam that is damaged by subsidence (or has its storage capacity reduced by more than 10 percent) to a condition similar to that prior to subsidence.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> <li>As required.</li> </ul>
<b>ECOLOGY</b>		
Operations are managed such that adverse impacts to native flora and fauna are prevented, minimised and/or offset.	<ul style="list-style-type: none"> <li>ICO will implement the following flora and fauna management procedures. <ul style="list-style-type: none"> <li>Revegetate the planned Bettys Creek diversion channel and adjacent areas;</li> <li>Undertake surveys along the creek diversion and revegetated areas to record any significant loss of planted seedlings and monitor the use of revegetated areas by native fauna.</li> <li>Revegetation design, weed management, exclusion of cattle and ongoing monitoring in the area of the Bettys Creek diversion will be coordinated in consultation with Glendell.</li> <li>The abandoned Bettys Creek channel will be managed (ie weed control and exclusion of cattle) in conjunction with the ongoing management and monitoring of the proposed diversion.</li> <li>Based on the ephemeral nature of the existing channel, consideration will be given to blocking off the abandoned channel at the downstream end to act as a billabong to retain any surface flows.</li> <li>Undertake pre-clearance inspections of borehole sites. Where possible, the inspections will be undertaken during the summer flowering period to optimise detection of <i>Bothriochloa biloba</i> and to avoid impacting directly on any individual plants.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Continuous, as required.</li> </ul>
<b>HERITAGE</b>		
Operations are managed such that adverse impacts to significant Aboriginal and Historical heritage items are	<ul style="list-style-type: none"> <li>Artefact scatters (sites 37-3-0597, 37-3-0595 and 37-3-0027) that will be destroyed by the proposed Bettys Creek diversion will be salvaged and</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the diversion of Bettys Creek.</li> </ul>

Desired Outcome	Existing or Proposed Actions	Timing
avoided, minimised and/or offset.	involve the following. <ul style="list-style-type: none"> <li>• During clearing works in the areas where surface earthworks will occur, a qualified archaeologist will undertake field work with assistance from the Aboriginal community.</li> <li>• Artefacts will be recorded individually and, once any site is salvaged, all materials and list of details collected for each artefact will be provided to the Local Aboriginal Land Council.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Monitoring of excavation works along the banks of Bettys Creek will be undertaken by a representative of the Aboriginal community.</li> </ul>	<ul style="list-style-type: none"> <li>• During excavations works undertaken for the diversion of Bettys Creek.</li> </ul>
	<ul style="list-style-type: none"> <li>• The area to be impacted by the realignment of Main Creek will be re-surveyed with the assistance of the local Aboriginal community and any sites fully recorded and logged prior to the confirmation of the channels' locations and designs.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the diversion of Main Creek.</li> </ul>
	<ul style="list-style-type: none"> <li>• Should the additional survey works in the area to be impacted by the realignment of Main Creek highlight any areas of high cultural or scientific significance, the alignment of the proposed works will be altered and / or subsurface investigations will be undertaken in consultation with DECC and DoP.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the diversion of Main Creek.</li> </ul>
	<ul style="list-style-type: none"> <li>• Sites 37-3-0682, 37-3-0683 and any additional sites recorded during the survey will be salvaged prior to construction commencing and all activities requiring soil removal associated with the realignment of Main Creek will be monitored by representatives of the Aboriginal community. The salvage will:               <ul style="list-style-type: none"> <li>• be undertaken by a qualified archaeologist during clearing works in the areas where surface earthworks will occur with assistance from the Aboriginal community; and</li> <li>• include recording of individual artefacts. Once any site is salvaged, all materials and list of details collected for each artefact will be provided to the Local Aboriginal Land Council.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the diversion of Main Creek</li> </ul>
	<ul style="list-style-type: none"> <li>• Monitoring of excavation works along the banks of Main Creek will be undertaken by a representative of the Aboriginal community.</li> </ul>	<ul style="list-style-type: none"> <li>• During excavations works undertaken for the diversion of Main Creek.</li> </ul>
	<ul style="list-style-type: none"> <li>• Infrastructure will be sited to avoid impacts to known heritage sites. Should impacts be unavoidable, DECC and the local Aboriginal community representatives will be consulted.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous, as required.</li> </ul>
	<ul style="list-style-type: none"> <li>• The Aboriginal community will be given the opportunity to collect any surface artefacts from the planned surface (remediation) activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to ground disturbing works in an area.</li> </ul>
	<ul style="list-style-type: none"> <li>• In consultation with the local Aboriginal community, the existing Aboriginal Cultural Heritage Management Plan (ACHMP) will be revised and built upon to detail management of project induced effects.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of ground disturbing works.</li> </ul>
Ensure minimal subsidence impacts on archaeology.	<ul style="list-style-type: none"> <li>• DECC and the Local Aboriginal Community Representatives will be consulted should there be impacts to potential Aboriginal deposits as a result of remediation works along creeks and works to rehabilitate cracks.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to any remediation that may be required.</li> </ul>
	<ul style="list-style-type: none"> <li>• A qualified archaeologist will assess the potential impact of the planned works.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to any subsidence remediation works.</li> </ul>
	<ul style="list-style-type: none"> <li>• Should subsidence levels be greater than predicted, archaeological sub -</li> </ul>	<ul style="list-style-type: none"> <li>• As required.</li> </ul>

Desired Outcome	Existing or Proposed Actions	Timing
	<p>surface testing may be undertaken in affected areas with the involvement of the Aboriginal stakeholders and DECC.</p>	
	<ul style="list-style-type: none"> <li>The Hebden SMPs to be developed will incorporate and build upon the existing Archaeology Subsidence Management Plan.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
<b>SURFACE WATER</b>		
<p>Operations are managed such that adverse impacts to surface water are prevented, minimised and/or offset.</p>	<ul style="list-style-type: none"> <li>ICO will maintain the existing surface water monitoring program, and undertake additional monitoring including collection of grab samples during or immediately after surface runoff events along ephemeral watercourses; monthly water quality sampling of major water storages on the site; collection of data on water quantity and at least weekly collection of underground mine dewatering and raw water supply volume data.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous, as required.</li> </ul>
	<ul style="list-style-type: none"> <li>ICO will maintain a photographic record of the creeks and dam walls to determine historical (baseline) rates of erosion.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous, as required.</li> </ul>
	<ul style="list-style-type: none"> <li>As part of the erosion and flood studies, ICO will assess whether rapid changes in channel or floodplain form occur in the aftermath of runoff events.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous, as required.</li> </ul>
	<ul style="list-style-type: none"> <li>Monitoring results will be reported in the AEMR and distributed to the relevant Government agencies, CCC members and other relevant stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>Annually.</li> </ul>
	<p>ICO will prepare:</p> <ul style="list-style-type: none"> <li>a response strategy to address any destabilisation of Main Creek;</li> <li>a works programming for any necessary remedial works in Main Creek should subsidence expression initiate incision and headward erosion;</li> <li>an outline of expansion of piezometric monitoring; and</li> <li>a TARP as part of a surface water and groundwater monitoring and management program.</li> </ul>	<p>Prior to Hebden Seam longwall mining undermining Man Creek.</p>
	<ul style="list-style-type: none"> <li>No impacts will occur to licensed water users, basic landholder rights or minimum baseflows in Glennies Creek regulated river or environmental water requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous.</li> </ul>
	<ul style="list-style-type: none"> <li>A Site Water Management Plan will be prepared outlining management measures associated with potential erosivity of the Bettys Creek diversion or degradation of Glennies Creek and any subsidence effects that may occur on the diversion or Glennies Creek and its associated alluvium.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>The mine plan will be developed and operated such that no detectable or measureable ingress of surface water into the mine workings will be generated that can't be reversed.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>Integra Coal will not restrict Xstrata Coal's ability to stabilise and reconfigure the diversion to Bettys Creek, and will develop an updated Site Water Management Plan to manage any adverse impacts from extraction of the Hebden Seam panels, including the collection of monitoring data by an independent consultant agreed to by ICO and Xstrata prior to the diversion being undermined.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
	<ul style="list-style-type: none"> <li>Integra Coal will provide evidence that their water accounting procedure</li> </ul>	<ul style="list-style-type: none"> <li>Continuous, as required.</li> </ul>

Desired Outcome	Existing or Proposed Actions	Timing
	<p>complies with dealings rules as prescribed under the Hunter Regulated River Water Sharing Plan (HRRWSP) and/or Hunter Unregulated River and Alluvium Water Sharing Plan (HURAWSP).</p> <ul style="list-style-type: none"> <li>• Integra Coal will ensure it has sufficient water to meet mine operational demands in accordance with the statutory rules of the Hunter Regulated River Water Sharing Plan (HRRWSP) and/or Hunter Unregulated River and Alluvium Water Sharing Plan (HURAWSP), and any other statutory instruments in force under the Water Act 1912, and Water Management Act 2000. Should insufficient water be available to continue mining operations, mining operations will be scaled back to meet water supply requirements.</li> <li>• any proposed workings under Glennies Creek and its associated alluvium will be designed to be stable in the long term, taking site conditions into consideration</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous, as required.</li> </ul>
<b>GROUNDWATER</b>		
Operations are managed such that adverse impacts to local and regional groundwater resources are prevented, minimised and/or offset.	<ul style="list-style-type: none"> <li>• The current groundwater monitoring program will continue with ongoing review and possible modification of the program as further data is obtained and interpreted. Annual reports documenting and interpreting the collected data will be prepared.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous, as required.</li> </ul>
	<ul style="list-style-type: none"> <li>• Groundwater samples will be collected annually from selected piezometers and analysed at a NATA registered laboratory for major ions and selected metals. The groundwater program will be maintained in its current form, with a review of the program after interpretation of the first 12 months' data.</li> </ul>	<ul style="list-style-type: none"> <li>• Annually, as required.</li> </ul>
	<ul style="list-style-type: none"> <li>• A private well monitoring program will be initiated to determine its pre mining yield if requested by a private bore owner.</li> <li>• Should a reduction in groundwater availability be detected, remedial action will be undertaken by Integra to offset the measured losses. Such actions may include digging the well deeper, installing a new well or installing a replacement bore.</li> </ul>	<ul style="list-style-type: none"> <li>• 12 months prior to extraction of the Barrett Seam (subject to the timing of any request).</li> <li>• Subsequent to detecting a loss of groundwater availability due to mining.</li> </ul>
	<ul style="list-style-type: none"> <li>• Performance indicators will be identified and a statistical assessment will be undertaken to detect when, or if, a significant change has occurred in the groundwater system and to benchmark the natural variation in groundwater quality and standing water levels.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to longwall mining in the Hebden Seam.</li> </ul>
	<ul style="list-style-type: none"> <li>• Contingency procedures will be developed. Activation of contingency procedures will be linked to the assessment of monitoring results.</li> </ul>	<ul style="list-style-type: none"> <li>• As required.</li> </ul>
	<ul style="list-style-type: none"> <li>• Following the completion of extraction of each longwall panel, a report will be prepared that summarises relevant monitoring data. Relevant monitoring and management activities for each year will also be reported in the AEMR.</li> </ul>	<ul style="list-style-type: none"> <li>• Following the completion of extraction of each longwall panel and in the AEMR.</li> </ul>

Desired Outcome	Existing or Proposed Actions	Timing
<b>AIR QUALITY</b>		
Operations are managed to minimise potential adverse impacts to the environment, residences and the community.	<ul style="list-style-type: none"> <li>• Implement the following air quality control procedures.</li> <li>• Coal handling areas, stockpiles, roads and trafficked areas will be maintained in a moist condition using water carts and / or water sprays to minimise wind-blown and traffic-generated dust.</li> <li>• Water sprays will be used at the longwall and development face to control particulates.</li> <li>• All haul roads will have edges clearly defined with marker posts or equivalent to control their locations, especially when crossing large overburden emplacement areas.</li> <li>• Obsolete roads will be ripped and re-vegetated;</li> <li>• Development of minor roads will be limited and the locations of these will be clearly defined.</li> <li>• Minor roads used regularly for access etc will be watered/treated to control dust.</li> <li>• Due to OHS regulations regarding underground air quality, dust generated underground will be minimised. Currently this includes the application of water and/or use of dust suppressants.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous, as required.</li> </ul>
	<ul style="list-style-type: none"> <li>• ICO will continue air monitoring in accordance with the Integra Underground EMS Procedure 002-2, Air Quality Monitoring Program, including monitoring weather conditions, TSP, PM<sub>10</sub> (using HVAS), real time PM<sub>10</sub> (using TEOM) and dust fallout.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous.</li> </ul>
	<ul style="list-style-type: none"> <li>• The results of the ongoing air quality monitoring program will be communicated to residents in the Local Community.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous, as required.</li> </ul>
<b>GREENHOUSE GASES</b>		
Manage operations such that greenhouse gas emissions on the environment are minimised and beneficial use of methane is maximised.	<ul style="list-style-type: none"> <li>• Fugitive methane emissions will be captured for energy generation where possible. If not feasible, flaring will be adopted, where practicable.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous.</li> </ul>
	<ul style="list-style-type: none"> <li>• Greenhouse gas emissions will be estimated and reported annually.</li> </ul>	<ul style="list-style-type: none"> <li>• Following commencement of proposed mining.</li> </ul>
	<ul style="list-style-type: none"> <li>• Energy and greenhouse gas emission reduction initiatives will be implemented throughout the life of the development, including the following. <ul style="list-style-type: none"> <li>• The efficiency of all new and upgraded mobile and fixed equipment will be considered during procurement for fuel powered equipment.</li> <li>• Ensuring equipment will be maintained to retain high levels of energy efficiency.</li> <li>• The inventory of emissions developed for this environmental assessment will be maintained.</li> <li>• Emissions and abatement strategies will be reported annually as part of the internal environmental reporting and National Greenhouse and Energy Reporting obligations and in the AEMR.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Continuous, as required.</li> </ul>
<b>NOISE AND VIBRATION</b>		
Operations are managed to minimise potential adverse impacts on the environment, residences and the community.	<ul style="list-style-type: none"> <li>• ICO will implement the following noise management procedures and monitoring programs.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous, as required.</li> </ul>

Desired Outcome	Existing or Proposed Actions	Timing
	<ul style="list-style-type: none"> <li>• Use of conveyors instead of haul roads where approved.</li> <li>• Construction of acoustic bunds adjacent to haul roads where recommended by an acoustic consultant.</li> <li>• Use of routine monitoring results to refine on-site noise mitigation measures and operating procedures.</li> <li>• Undertake noise audits at boundary positions to static sources to verify potential change in overall sound emissions.</li> <li>• Undertake regular discussions with potentially affected residents to proactively identify noise related issues of concern.</li> <li>• Undertake quarterly monitoring at identified representative receivers.</li> <li>• Implement acoustic mitigation at residences where exceedances of the project specific criteria are demonstrated via the monitoring program and requested by the landowner.</li> <li>• Consideration of negotiated agreements with landowners where exceedances of the project specific criteria are substantiated by monitoring.</li> <li>• Informing residents that the existing community information line for Integra Underground would apply to this proposal.</li> <li>• Existing and / or additional real time noise monitoring will be utilised to manage, assess and control potential emissions from the Integra Open Cut and Underground operations.</li> </ul>	
	<ul style="list-style-type: none"> <li>• A blast management protocol will be developed in conjunction with XMO to manage potential impacts from other mine's blasting on the underground mining activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed mining in the vicinity of open cut mining operations.</li> </ul>
	<ul style="list-style-type: none"> <li>• Integra will investigate the feasibility of installing an overland conveyor to transport coal from the Integra Underground to the Integra CHPP and provide the outcomes of that investigation to the Director-General.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to 30 June 2010</li> </ul>
<b>TRANSPORT</b>		
Management of rail infrastructure.	<ul style="list-style-type: none"> <li>• A new Mt Owen Rail Spur Management Plan will be prepared in consultation with XMO, and will include monitoring, stakeholder consultation and mitigation measures.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of proposed longwall mining in the affected area.</li> </ul>
Management of roads.	<ul style="list-style-type: none"> <li>• Current traffic and transport management measures will continue. In addition, linemarking of Stony Creek Road and Middle Falbrook Road will be undertaken if requested by Council.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous.</li> </ul>
<b>WASTE</b>		
Avoidance of unnecessary resource consumption; reuse, reprocessing, recycling and energy recovery wherever possible and, where this is not possible, disposal of wastes in an environmentally responsible manner.	<ul style="list-style-type: none"> <li>• Wastes will continue to be managed in accordance with the Integra Underground Procedure PRO_0381 - Waste Management, including the following. <ul style="list-style-type: none"> <li>• Reuse of mine water for dust suppression at the Integra Underground and Open Cut, in the CHPP and at neighbouring mines.</li> <li>• All waste oils will be pumped into on site storage tanks for subsequent transfer to a registered waste disposal company.</li> <li>• Old batteries will be stored in a designated bin prior to collection by a licensed contractor.</li> <li>• All scrap steel will be stored in dedicated skips and sold to scrap steel</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Continuous, as required.</li> </ul>

Desired Outcome	Existing or Proposed Actions	Timing
	<ul style="list-style-type: none"> <li>merchants for recycling.</li> <li>Bulk chemical containers will be returned to suppliers for reuse as part of the supply agreement.</li> <li>Pallets will be collected by a recycling contractor.</li> <li>Colour-coded recycling containers will be placed in identified areas for collection of cardboard and paper products and collected regularly by licensed contractors / recyclers.</li> <li>Sewerage waste from site offices, administration building, maintenance areas and bath houses will be treated using an aerated wastewater treatment system before being discharged to an anaerobic and aerobic dam system. The water will then be irrigated onto adjacent land.</li> <li>Sludge from the aerated wastewater systems will be pumped out as required by contractors and disposed of to a licensed facility.</li> <li>Hazardous materials will be stored in accordance with Australian Standards.</li> <li>Old paints /preservatives, disused chemicals, solvents and coolants will be stored in allocated areas prior to being removed by a licensed hazardous water contractor.</li> <li>Liquid waste from parts washers will be stored in 200L containers for removal by licensed waste contractors.</li> <li>Waste oil filters will be taken to a recycling facility by a registered waste disposal contractor.</li> <li>Materials containing liquids will be removed by a licensed contractor for recycling or disposal at a licensed waste management facility.</li> <li>Domestic wastes and maintenance consumables will be separated and collected by waste contractors.</li> </ul>	
<b>REHABILITATION</b>		
That effective rehabilitation is undertaken at the completion of mining.	<ul style="list-style-type: none"> <li>Rehabilitation associated with proposed mining will be undertaken in accordance with the relevant MOP, REMP, Extraction Plans and SMPs.</li> </ul>	<ul style="list-style-type: none"> <li>Following the completion of mining in the affected area.</li> </ul>
<b>SOCIO-ECONOMIC</b>		
Net benefits of the proposal sufficiently outweigh potential adverse impacts.	<ul style="list-style-type: none"> <li>A social impact monitoring strategy will be developed that quantifies the impacts on the local community and the effectiveness of strategies implemented in minimising these impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Following commencement of proposed longwall mining in the affected area.</li> </ul>

### Open Cut Project Statement of Commitments

Item	Mitigation Measure and Commitment	Implementation
<b>General</b>		
A1	Integra will comply with all conditional requirements in all approvals, licences and leases.	Throughout the life of the Project.
A2	Integra will conduct all operations in accordance with all relevant documentation including: <ul style="list-style-type: none"> <li>Mining Operations Plan;</li> <li>environmental procedures; and</li> <li>safety management plans and/or site specific documentation.</li> </ul>	Continuous as required
<b>Soils and Land Capability</b>		
B1	Strip material to the depths stated in <b>Table 6-3</b> .	Continuous during operations
B2	Material will not be stripped in either extremely wet or dry conditions.	Continuous during operations

Item	Mitigation Measure and Commitment	Implementation
B3	Stripped material will be used immediately (where practicable) to avoid the requirement for stockpiling.	Continuous during operations
B4	Tracking over previously laid soil will be avoided to minimise compression effects.	Continuous during operations
B5	The surface of soil stockpiles will be left in as a coarsely textured a condition as possible to promote rainfall infiltration and minimise erosion.	Continuous during operations
B6	A maximum stockpile height of 3m will be maintained where practicable.	Continuous during operations
B7	Stockpiles will be positioned away from drainage lines and/or upslope water diversion banks or similar controls will be installed.	Continuous during operations
B8	Downslope sedimentation controls will be installed until the soil stockpiles are appropriately stabilised.	Continuous during operations
B9	If long-term stockpiling is planned (i.e. greater than 3 months), stockpiles will be seeded and fertilised as soon as possible.	Continuous during operations
B10	Prior to re-spreading stockpiled topsoil onto reshaped overburden, it will be decided if individual stockpiles require herbicide application and / or 'scalping' of weed species prior to topsoil spreading.	As required
B11	An inventory of available soil will be maintained to ensure adequate topsoil materials are available for planned rehabilitation activities.	Continuous during operations
B12	Topsoil will be spread to a nominal depth of 0.10m.	Continuous during operations
<b>Groundwater</b>		
C1	Standing water levels and groundwater quality will be assessed in accordance with <b>Table 7.3, Table 7.4</b> and <b>Table 7.5</b> .	Continuous during and after operations
C2	All results will be reviewed and updated monitoring and remediation plans will be developed as required in consultation with DWE, DPI-MR and DECC.	Continuous during and after operations
C3	If required, contingency measures will be developed to manage any adverse impacts identified by monitoring that may indicate unanticipated effects in the groundwater system's response to mining in the proposed Pit.	Continuous during and after operations
C4	If the impacts of mining on the alluvium and Foybrook Formation groundwater systems are demonstrated to be greater than anticipated, Integra will: <ul style="list-style-type: none"> <li>• assess the significance of these impacts;</li> <li>• investigate measures to minimise these impacts; and</li> <li>• describe what measures will be implemented to reduce, minimise, mitigate or remediate these impacts in the future to the satisfaction of the Director-General.</li> </ul>	Continuous during and after operations
C5	Rehabilitation of groundwater dependent ecosystems will be incorporated as part of the Offset Strategy (refer Commitment E10). Trigger thresholds for the groundwater management response will be identified and included in the Rehabilitation Strategy.	Continuous during and after operations
C6	The amount of water pumped into or out of the proposed Pit will be monitored to assess the actual volume of water stored within the pit as well as to assess the groundwater inflows and evaporation effects.	Continuous during operations
C7	All new bores will be installed by suitably licensed drillers after obtaining the relevant license from DWE.	Continuous during and after operations
C8	If monitoring results indicate the agreed standard or performance indicators are not being achieved, remedial actions will be implemented as appropriate.	Continuous during and after operations
C9	An annual report will be prepared by a qualified hydrogeologist and include a statistical analysis of the results of the parameters measured, an interpretation of water quality and standing water level changes.	Annually during and after operations
C10	All relevant monitoring and management activities for each year will be reported in the AEMR.	Annually
C11	ICO will adhere to the operating rules of the Hunter Regulated River Water Sharing Plan (HRRWSP) and the Hunter Unregulated River Water Sharing Plan (HURRWSP), thereby ensuring that the operation of the proposed extended Pit will protect Glennies Creek and its associated well connected alluvial water sources.	Continuous during and after operations
C12	Ongoing verification of the EA predictions and contingency measures will be attained by development and adherence to a surface water and groundwater monitoring and management plan (SW&GWMP) that will be prepared, in consultation with NOW. Cut off thresholds that relate to potential mining induced depressurisation impacts in the connected Glennies Creek Alluvium will be established and documented in the SW&GWMP.	Continuous during and after operations

Item	Mitigation Measure and Commitment	Implementation
C13	During excavation of the western periphery of the pit, geological mapping will be used to assess the potential southerly extension of a fault identified in the drift to the Integra Underground and, if identified, its significance. If the fault is present in the pit, it will be investigated to assess whether it can provide a connective hydrological pathway between the pit and the Glennies Creek alluvium through re-activation of the fault. If appropriate, the hydrological significance of the fault will be assessed through incorporating its hydrological properties into the existing FEFLOW groundwater model.	Continuous during operations
<b>Surface Water</b>		
D1	Construct diversions to direct clean water away from areas of disturbance, to a standard suitable to contain an ARI 50 year rainfall event.	Prior to and progressively during operations.
D2	Construct dirty water diversions to collect stormwater runoff from disturbed areas and deliver this water to sedimentation basins.	Prior to and progressively during operations.
D3	Construct sedimentation basins to treat disturbed area runoff prior to discharge.	Prior to and progressively during operations.
D4	Continue and extend existing Water Management System.	Continuous during operations
D5	Continue the existing Surface Water Monitoring Program and extend to include: <ul style="list-style-type: none"> <li>• collection of grab samples along ephemeral watercourses such as Station Creek, during or immediately after surface runoff events;</li> <li>• monthly water quality sampling of water storages on the site; and</li> <li>• regular collection of data on water quality, storage water levels (including the Portal Sump) and pumping volumes between storages.</li> </ul>	Continuous during operations
D6	All pumped inflows to dirty water storages will cease when the storage water level reaches a defined Maximum Operating Level.	Continuous during operations
D7	If the weather outlook indicates future significant rainfall, water will be pumped out of any dirty water storage (with the potential to discharge offsite) that is within 100 mm of spilling, provided that a suitable alternative storage location is available elsewhere on the site.	Continuous during operations
D8	In the event of a dirty water discharge offsite, water samples will be collected at the overflow from the spilling storage and at the surface water sampling locations along Station Creek (for spills within the Station Creek catchment). For a spill from Possum Skin Dam, a sample will be collected at the discharge point and at the point of inflow to Glennies Creek.	Continuous during operations
D9	If a spill occurs, an incident report will be prepared which documents the circumstances leading to the spill, the measures taken to prevent the spill, the estimated spill volume and duration, and the measured water quality results. Any spillage will be reported to DECC in accordance with the requirements of the site's Environment Protection Licence.	Continuous during operations
D10	After construction of drainage works is complete, disturbed areas will be topsoiled and revegetated using a combination of pasture grasses and cover crops to stabilise the ground surface.	During and following operations as appropriate.
D11	As part of the rehabilitation activities, above ground landforms will feature drainage provisions designed to effectively capture and divert surface water run-off to stable disposal areas prior to being discharged into surrounding watercourses.	During and following operations as appropriate.
<b>Biodiversity</b>		
E1	A Flora and Fauna Management Plan will be developed and include measurements for the minimisation or avoidance of impacts on native flora and fauna. This will include: <ul style="list-style-type: none"> <li>• pre-clearance surveys;</li> <li>• groundcover clearance protocol;</li> <li>• site management measures such a temporary exclusion fencing, maximum vehicle speeds and reducing the use of lighting to decrease impacts on nocturnal fauna; and</li> <li>• limiting vehicular and personnel entry into retained vegetation through temporary exclusion fencing, locating access roads and tracks to avoid habitat and use of signage where necessary.</li> </ul>	Prior to commencement of operations.
E2	Fauna management procedures will include: <ul style="list-style-type: none"> <li>• monitoring of trees for fauna before and during clearing operations;</li> <li>• avoiding trees with resident fauna as much as practicable;</li> </ul>	Prior to and during operations.

Item	Mitigation Measure and Commitment	Implementation
	<ul style="list-style-type: none"> <li>• demarcation and avoidance of identified hollow bearing trees wherever possible;</li> <li>• carefully sawing and placing intact hollow-bearing trunks and branches into adjacent areas of native vegetation;</li> <li>• replacing habitat, such as nest boxes, where habitat trees are to be removed;</li> <li>• maintaining existing maximum vehicle speed limits within the Open Cut Project Area to reduce fauna road fatalities;</li> <li>• limiting vehicular and personnel entry into retained vegetation through temporary exclusion fencing; and</li> <li>• directing lighting at operating equipment to reduce light spill onto nocturnal fauna species in adjacent vegetation.</li> </ul>	
E3	<p>Pre-clearance surveys will involve:</p> <ul style="list-style-type: none"> <li>• diurnal searches for birds, nests and roosts including targeted searches for communal nests of the Grey-crowned Babbler;</li> <li>• active searches for microbats, including checking under exfoliating bark; and</li> <li>• nocturnal surveys, including stag watching of identified habitat trees, specifically focusing on observing use of trees by microbats.</li> </ul>	Prior to clearing activities.
E4	<p>If threatened species nests or nestlings are observed within or close to the Open Cut Area then clearing will be postponed until the nestlings have hatched and fully-fledged. If operational constraints mean that this delay is not practicable then DECC will be consulted to determine if relocating the species is acceptable.</p>	Prior to and during clearing operations.
E5	<p>A groundcover clearance protocol will be implemented and involve:</p> <ul style="list-style-type: none"> <li>• removal of large woody debris using excavator grabs or raking if practicable;</li> <li>• placing of intact large woody debris within adjacent areas of intact vegetation;</li> <li>• stripping and stockpiling leaf litter and topsoil separately from deeper fill material; and</li> <li>• reusing leaf litter and topsoil in rehabilitation works.</li> </ul>	During clearing and soil stripping activities.
E6	<p>Fencing will be implemented to exclude grazing by cattle within retained patches of remnant vegetation to improve habitat value and floral diversity.</p>	Prior to, continuous, during and following operations.
E7	<p>A weed and pest management plan will be prepared and implemented as part of management procedures in order to control feral animals and to limit the spread of weeds.</p>	Prior to commencement of and during operations.
E8	<p>Revegetation of suitable components of the Open Cut Area will be undertaken using species representative of the Ironbark Woodland.</p>	During rehabilitation and revegetation programs.
E9	<p>Subject to the receipt of all necessary approvals/permits, a creek rehabilitation program will be undertaken along Station and Glennies Creeks and will include:</p> <ul style="list-style-type: none"> <li>• erosion control, rubbish removal, complementary planting, weed control, habitat enhancement and exclusion of grazing stock from riparian zones; and</li> <li>• a monitoring and management program to identify and manage noxious weed infestations.</li> </ul>	Prior to, continuous during and following mining operations.
E10	<p>Integra will implement a biodiversity offset package in consultation with DECC to compensate for the potential clearing of 19ha of remnant native vegetation and will include:</p> <ol style="list-style-type: none"> <li>1. Revegetation of suitable components of the Open Cut Area;</li> <li>2. Conservation and rehabilitation of the degraded riparian and forest habitat along Glennies and Station Creeks; and</li> <li>3. Identification and permanent conservation of a suitable woodland offset in the locality, a minimum of 30ha in size, in consultation with DECC.</li> </ol> <ul style="list-style-type: none"> <li>• Pending the satisfaction of the 3 components above, Integra will provide a bond or security to DECC which could be used in the event that Integra does not identify a suitable offset in the specified timeframe.</li> </ul>	In accordance with Project Approval requirements.
<b>Traffic and Transportation</b>		
F1	<p>Adhere to RTA and Council restrictions on transport hours and safety/warning requirements for transportation of oversize loads on local roads.</p>	Continuous during operations.
F2	<p>Minimise the duration of road closures on the southern end of Middle Falbrook Road during blasting.</p>	When blasting within 500m of the open sections of Middle Falbrook Road.
F3	<p>Blasting within 500m of the Main Northern Railway line will be controlled under the existing procedure (PRO_2029 Blasting Adjacent to the Main Northern Railway Line) that has been developed in consultation with ARTC.</p>	When blasting within 500m of the Main Northern Railway Line.

Item	Mitigation Measure and Commitment	Implementation
F4	Provide notification on the morning prior to a blast of blast times to residents and others who request to be included on the blast notification list.	Prior to all blasts.
<b>Noise and Blasting</b>		
G1	Use noise mitigated mobile equipment to achieve the predicted noise emission levels at the identified receptors.	Continuous during operations
G2	Restrict evening and night-time mining operations, where practicable, to areas that minimise emission levels outside of the Project boundary.	Continuous during operations
G3	Undertake development activities such as tree clearing and soil stripping during day time operations only, where practicable.	Continuous during operations
G4	Refine on-site noise mitigation measures and operating procedures, i.e. based upon monitoring results.	Continuous during operations
G5	Initiate regular discussions with potentially affected residents to proactively identify noise-related issues of concern.	Continuous during operations
G6	Consider acoustic mitigation at residences where exceedances of the project specific criteria are substantiated by monitoring.	Continuous during operations
G7	Consider negotiated agreements with landowners where exceedances of the project specific criteria are substantiated by monitoring.	Continuous during operations
G8	Continued implementation of the existing Explosive Hazard Management Plan to ensure the safety of employees and the public during explosives handling and blasting operations.	Continuous during operations
G9	Restrict blasting to between the hours of 9.00am and 5.00pm Monday to Saturday, unless blasts outside this time are required for misfire re-blast, emergency or safety reasons.	Continuous during operations
G10	Blast design and implementation to be undertaken by a suitably qualified blasting engineer and/or experienced shot-firer to ensure ANZEC Guidelines are met at all non-project related residences surrounding the Open Cut Project Area.	Continuous during operations
G11	Refine blast mitigation measures and operating procedures as required, based on monitoring results.	Continuous during operations
G12	Provide notification on the morning prior to a blast of blast times to local residents and others who request to be included on the notification list.	Continuous during operations
G13	Use aggregate as the stemming material (not drill dust) in order to fully contain the explosives within the blasthole.	Continuous during operations
G14	In the case of the Part Pit Extent (i.e. Integra is unable to acquire Residence 153 or negotiate an agreement with the owner), blasting will not be undertaken within a 500m Exclusion Zone surrounding the 'Dulwich' residence and 200m from the property boundary until such time that it can demonstrate to the Director-General that blasting can be undertaken without an unacceptable risk to the resident, residents, their stock or residence.	Continuous during operations
<b>Air Quality</b>		
H1	Only the minimum area required for the operation of the Open Cut Project will be disturbed. Reshaping, topsoil emplacement and rehabilitation of overburden emplacement areas will occur as soon as practicable after the completion of overburden emplacement.	Continuous during operations.
H2	Coal handling areas/stockpiles will be kept in a moist condition using water carts to minimise wind-blown and traffic-generated dust.	Continuous during operations.
H3	Water sprays will be available for use on ROM coal stockpiles as required to reduce airborne dust.	Continuous during operations.
H4	All roads and trafficked areas will be watered when required using water trucks.	Continuous during operations.
H5	All haul roads would be clearly defined, especially where they cross overburden emplacement areas.	Continuous during operations.
H6	Development of minor roads will be limited and the locations of these will be clearly defined.	Continuous during operations.
H7	Minor roads used regularly for access etc will be watered.	Continuous during operations.
H8	Obsolete roads will be ripped and re-vegetated.	Continuous during operations.
H9	Access tracks used by topsoil stripping equipment during their loading and unloading cycle will be watered.	Continuous during operations.
H10	Long term soil stockpiles (not used for over 3 months) will be revegetated.	Continuous during operations.
H11	Dust aprons, dust extraction systems or water injection will be used during drilling operations.	Continuous during operations.
H12	Adequate stemming will be used during blasting.	Continuous during operations.
H13	A real-time PM <sub>10</sub> monitor (TEOM) will be implemented at the location agreed with the DECC in accordance Conditions of Consent for North Open Cut (PA 06_0073). This will be located in the vicinity of Residence 48. Should the 24-hour average concentrations of PM <sub>10</sub> approach the cumulative assessment criteria 150 µg/m <sup>3</sup> , the Operations Manager (Open Cut) of the	Continuous during operations.

Item	Mitigation Measure and Commitment	Implementation
	mine would review the current Open Cut operations and take remedial action to ensure the impact on the property is kept below the criteria. Should the criteria be reached, then all Open Cut operations will cease.	
H14	A real-time PM <sub>10</sub> (TEOM) will be located in the vicinity of Residences 108 to 112. Should the 24-hour average concentrations of PM <sub>10</sub> approach the cumulative assessment criteria 150 µg/m <sup>3</sup> , the Operations Manager (Open Cut) will review the current Open Cut operations and take remedial action to ensure the impact on the property is kept below the criteria. Should the criteria be reached, then all Open Cut operations will cease.	Continuous during operations.
H15	Rather than establish an additional monitor at Residence 87, Integra will negotiate with Ashton mine the joint use of data from the existing real-time PM <sub>10</sub> (TEOM) monitor at this location (see TEOM No. 3 on <b>Figure 12-3</b> for location).	Continuous during operations.
H16	Integra will negotiate with Ashton Coal for the joint use of data from the other sites in the Ashton mine monitoring network (see <b>Figure 12-3</b> for locations). This will enable real-time monitoring of the impacts of the operations to the west of the Open Cut Project Area.	Continuous during operations.
H17	The results from the dust monitoring program will be regularly reviewed to ensure the data being collected is meaningful. Where warranted, the program will be adjusted in consultation with DECC, with operating/management measures modified accordingly.	Continuous during operations.
H18	During Years 1 -3 of the Part Pit Extent (i.e. in the case that Integra is unable to acquire Residence 153 or negotiate an agreement with the owner), additional controls will be implemented and will include: <ul style="list-style-type: none"> <li>• re-positioning of the main waste and coal haul routes to reduce impacts on Dulwich;</li> <li>• treatment of the main haul routes to achieve a level of dust control greater than 75%;</li> <li>• development of an Environmental Management Plan that will address environmental controls to be implemented as part of pre-operational phase soil removal activities;</li> <li>• control of emissions from drilling operations through the application of water; and</li> <li>• increasing the moisture content of the ROM coal in-pit.</li> </ul>	Prior to the commencement of operations and continuous during operations.
<b>Aboriginal Archaeology</b>		
I1	All actions and strategies for the management of cultural heritage values will be defined in an Aboriginal Cultural Heritage Management Plan developed in consultation with participating Aboriginal groups.	Prior to the commencement of operations.
I2	Prior to any soil disturbing activities, archaeological surveys will be conducted in those areas within the Open Cut Area to be impacted but which have not been surveyed to date. These areas include the Dulwich Property.	Prior to commencement of operations within potentially affected area not previously surveyed.
I3	Sites which will not be impacted by open cut mining will be identified on mine plans with the requirement not to disturb the ground in these areas. If there is risk of impact, temporary fencing will be erected and restrictions placed on access.	Prior to commencement of operations.
I4	Sites which may be directly or indirectly impacted by activities associated with mining will be identified on mine plans with development avoiding impact to these sites. Where development associated activities occur in close proximity to sites, temporary fencing will be constructed. Where direct impact is unavoidable the strategies outlined in I5 will be followed.	Prior to commencement of operations.
I5	Sites which will be directly impacted by open cut mining will be subject to: <ul style="list-style-type: none"> <li>• collection and recording of surface artefacts and storage in accordance with the requirements of Aboriginal Groups; and</li> <li>• targeted subsurface salvage excavation programs as determined in consultation with the Aboriginal stakeholders.</li> </ul>	Prior to disturbance.
I6	A 'Keeping Place' will be provided for the secure storage of cultural material collected. The Keeping Place will be determined and agreed in consultation with the Aboriginal Groups during the formulation of the Aboriginal Cultural Heritage Management Plan. The Keeping Place will be retained in perpetuity subject to the recommendations of the Aboriginal Groups with regard to the long-term positioning of the sites.	Prior to commencement of operations.
<b>European Heritage</b>		
J1	Work Method Statements for archaeological investigation will be prepared for Zone 1 and, dependant on the acquisition of Dulwich, for Zone 2 as identified in <b>Figure 14-2</b> .	Prior to commencement of operations within Zone 1 and/or 2.
J2	Project planning and timing will take into consideration any heritage management requirements.	Continuous during operations.
J3	If Dulwich is acquired, a WMS for heritage management and archaeological investigation will be prepared specifically for Zone 3 ( <b>Figure 14-2</b> );	Prior to commencement of mine operations in Zone 3.

Item	Mitigation Measure and Commitment	Implementation
	or If Dulwich is not acquired, a Conservation Management Plan will be prepared to minimise and monitor project impacts on Dulwich.	Prior to commencement of activities which may impact on Zone 3.
J4	A forensic anthropologist will be engaged to prepare a detailed management plan for the excavation of the grave of James Glennie.	Prior to commencement of mine operations within 200m of European Heritage Zone 2.
J5	Should any other burial sites be exposed during surface scraping operations within the Mine Area, work will cease and appropriate personnel and authorities informed. If the remains are identified as historical in nature, management for skeletal remains will be undertaken by appropriate personnel and a report issued to the Coroner.	Continuous during operations.
J6	In the case of an intersection between European and Indigenous management strategies, or any other environmental management strategy, Integra will co-ordinate appropriate consultation between the parties in order to develop and agreement on how to proceed.	Continuous during operations
J7	Copies of final excavation reports will be issued to local libraries, historical societies, the NSW Heritage Branch Library and State Library of NSW.	On completion of excavation reports.
<b>Visual</b>		
K1	To the extent practicable, reduce the potential visual impact through the construction of visual amenity bunds/screens or soil stockpiles to temporarily screen views towards the proposed Open Cut Area.	Continuous during operations
K2	To reduce lighting impacts to sensitive receptors, work programs will be arranged, where possible, so that some activities that may be visible from surrounding view locations, occur within daylight hours of operation.	Continuous during operations
K3	Floodlights within the Open Cut Extension Area will be positioned to minimise the potential for lighting to impact sensitive receptors.	Continuous during operations
K4	Where possible, haulage roads and overburden tipping areas will be configured to minimise the potential impact associated with headlights and flashing lights associated with vehicles travelling across the Open Cut Project Area.	Continuous during operations
K5	Integra will consider any reasonable request by a residential receptor for assistance to establish a visual screen within their property through planting and/or landscape works, where such works would effectively reduce the visual impact of activities associated with the proposed Open Cut Extension.	Continuous during operations
<b>Rehabilitation</b>		
L1	Suitable species of vegetation will be planted and established to achieve the nominated post-mine land uses. The rehabilitation plan will clarify the projects rehabilitation goals and outcomes and will confirm the monitoring and management proposals.	Continuous during operations
L2	The majority of the post-mine landform will be revegetated with a combination of native and improved pasture species with scattered tree lots and tree corridors linking the surrounding rehabilitated areas, proposed tree planting corridors and surrounding existing native vegetation.	Progressively during operations
L3	The final landform will be stable and not subject to slumping or excessive erosion which would result in the agreed post mining landform not being achieved.	Prior to completion of Project activities and lease relinquishment
L4	The outside facing slopes of the post-mine landform will generally be a maximum of 10° where they are above the natural land surface. The internal facing slopes and those below natural surface reporting to the final void (including the low wall areas) will generally be a maximum of 18°.	Progressively during operations

