# 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**

| | |
|---|---|
| **Application Numbers:** | 08_0101 |
| **Proponent:** | HV Coking Coal Pty Limited |
| **Approval Authority:** | Minister for Planning |
| **Land:** | See Appendix 1 |
| **Project 08_0101:** | Integra Underground Project |

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(Schedules 1 – 5 updated in entirety during Modification 5, dated 23 August 2016)
Green type represents December 2016 modification
Blue type represents August 2017 modification

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## DEFINITIONS

| | |
|---|---|
| Annual review | The review required by condition 11 of Schedule 5 |
| 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 |
| Ashton | Ashton coal mine |
| BCA | Building Code of Australia |
| 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 and Environment |
| DRG | Division of Resources and Geoscience within the Department |
| DPI Water | Department of Primary Industries - Water |
| EA Mod 1 | *Integra Mine Complex Modification 1 Environmental Assessment,* prepared by EMGA Mitchell McLennan, dated 2 December 2011 |
| EA Mod 2 | *Integra Mine Complex Modification 2 Environmental Assessment,* prepared by EMGA Mitchell McLennan, dated September 2012 |
| EA Mod 4 | *Integra Mine Complex Modification 4 Environmental Assessment*, prepared by EMGA Mitchell McLennan and dated 16 May 2014; and associated response to submissions titled *Integra Mine Complex Modification 4 Response to Submissions,* dated 9 July 2014 |
| EA Mod 5 | *Application to Modify Project Approval for Integra Underground Project (MP 08_0101) and Integra Open Cut Project (MP 08_0102),* prepared by HV Coking Coal Pty Limited and Bloomfield Collieries Pty Limited, dated February 2016; and associated additional information provided by the Proponent in a letter titled *PA 08_0101 and PA 08_0102 – Modifications to Integra Underground and Integra Open Cut Coal Projects*, dated 4 July 2016 |
| EA Mod 6 | *Integra Coal Project, Section 75W Modification Application,* prepared by Glencore, dated 11 November 2016 |
| EA Mod 7 | *Integra to Mount Owen Complex Water Pipeline Modification Environmental Assessment*, prepared by Hansen Bailey, dated June 2017; and associated Response to Submissions titled *Integra to Mount Owen Complex Water Pipeline Modification EA Response to Submissions*, dated 11 July 2017 |
| EEC | Endangered Ecological Community as defined under the NSW *Threatened Species Conservation Act 1995* |
| 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 | *Environmental Planning and Assessment Act 1979* |
| EP&A Regulation | *Environmental Planning and Assessment Regulation 2000* |
| EPA | Environment Protection Authority |
| 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, gate roads, related cut throughs and other workings for mine access and ventilation |
| Greater Ravensworth Water Sharing Scheme | The integrated water management system operated across the Mount Owen Complex, Ravensworth Complex, Liddell Coal Mine and Integra Underground coal mines |
| Heritage Division | Heritage Division of OEH |
| IEA | Independent environmental audit required by condition 12 of Schedule 5 |
| 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 |
| INP | *NSW Industrial Noise Policy*, or its latest version or replacement |
| 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, or delegate |
| Mitigation | Activities associated with reducing the impacts of the project |
| Mount Owen Complex | Includes Glendell, Mt Owen and Ravensworth East coal mines |
| 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 |
| OEH | Office of Environment and Heritage |
| Open cut mining operations | Includes overburden removal, and extraction and processing of coal, but excludes mine closure activities and post-mining rehabilitation |
| POEO Act | *Protection of the Environment Operations Act 1997* |
| Previous EAs | Previous environmental impact assessments or environmental impact statements for the project, as listed in Appendix 2 |
| Privately-owned land | Land that is not owned by a public agency, or a mining company (or its subsidiary) |
| Project | The underground project, as described in the documents listed in condition 2 of Schedule 2, including the implementation of any development associated with the previous EAs |
| Project area | All land within the dashed black line on the figure in Appendix 3 |
| Project layout plan | The plans for underground mining depicted in the figures in Appendix 3 |
| Proponent | HV Coking Coal 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 project 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 |
| Rix's Creek | Rix's Creek coal mine |
| Rix's Creek North | All land to which project approval 08_0102 applies |
| RMS | Roads and Maritime Services |
| ROM coal | Run-of-mine coal |
| Safe, serviceable and repairable | Safe means no danger to users, serviceable means available for its intended purpose, and repairable means damaged components can be repaired economically |
| SANSW | Subsidence Advisory NSW |
| Secretary | Secretary of the Department, or nominee |
| Second workings | Extraction of coal from longwall panels, mini-wall panels or pillar extraction |
| Site | The land listed in Appendix 1 Schedule of Land |
| Statement of Commitments | The Proponent's commitments in Appendix 7 |
| 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 subsidence and surface depressions or troughs |
| Underground mining operations | Includes first workings and the extraction, processing, handling, storage, and transportation of coal within the site |
| Underground project EA | Environmental assessment titled *Proposed Integra Underground Coal Project*, dated July 2009, and the associated response to submissions, titled *Integra Underground Project Collated Response to Submissions*, dated March 2010 |
| Water pipeline infrastructure | The water pipeline from Integra Underground to Mount Owen Complex depicted in Figure 3 of Appendix 3 |

## SCHEDULE 2
## ADMINISTRATIVE CONDITIONS

### OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this project approval, the Proponent must 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 project.

### TERMS OF APPROVAL

2. The Proponent must carry out the project generally in accordance with the:
   (a) previous EAs;
   (b) underground project EA;
   (c) EA Mod 1;
   (d) EA Mod 2;
   (e) EA Mod 4;
   (f) EA Mod 5;
   (g) EA Mod 6;
   (h) EA Mod 7; and
   (i) project layout plan.

3. The Proponent must comply with the:
   (a) Statement of Commitments; and
   (b) conditions of this approval.

   *Notes to condition 2 and 3:*
   - *Previous EAs for the project are listed in Appendix 2;*
   - *The project layout plan is shown in Appendix 3;*
   - *The Statement of Commitments is reproduced in Appendix 7; and*
   - *This project approval is intended to regulate all existing and approved development on site.*

4. If there is any inconsistency between the above documents then the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.

5. The Proponent must comply with any reasonable requirement/s of the Secretary 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) any reviews, reports or audits undertaken or commissioned by the Department regarding compliance with the conditions of this approval; and
   (c) the implementation of any actions or measures contained in these documents.

### LIMITS OF APPROVAL

#### Mining Operations

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

   *Note: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings to the satisfaction of both the Secretary and DRG. 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

7. The Proponent must not extract more than 4.5 million tonnes of ROM coal from the underground mining operations on site in a calendar year.

#### Coal Transport

8. The Proponent must not transport coal from the site by public road, except in an emergency situation and with the prior written approval of the Secretary.

### SURRENDER OF CONSENTS AND APPROVALS

9. By the end of June 2017, or as otherwise agreed by the Secretary, 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.*

10. 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**

11. The Proponent must 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 SANSW.

*Notes:*

- *Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works;*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the project; and*
- *The project 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 SANSW's approval before constructing or relocating any improvements on site.*

**DEMOLITION**

12. The Proponent must ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures,* or its latest version.

**INFRASTRUCTURE**

**Protection of Public Infrastructure**

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

    except where impacts to such works have otherwise been fully compensated through the compensation provisions of the *Mining Act 1992*.

**OPERATION OF PLANT AND EQUIPMENT**

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

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## SCHEDULE 3
## ENVIRONMENTAL PERFORMANCE CONDITIONS

### ACQUISITION UPON REQUEST

1. Upon receiving a written request for acquisition from an owner of the land containing a residential receiver listed in Table 1, the Proponent must acquire the land in accordance with the procedures in conditions 7 and 8 of Schedule 4.

*Table 1: Land subject to acquisition upon request*

| ***Residential Receiver No.*** | ***Acquisition Basis*** |
|---|---|
| 47 – B & R Cherry | Subsidence and Air Quality |
| 80 – G Donnellan | Noise |
| 153 – R & D Hall | Noise |

For the purposes of acquisition under this condition, parcels of land that are in close proximity and operated as a single agricultural enterprise by the owner of a listed residential receiver should be included as part of the land to be acquired. Where the Proponent and the owner(s) cannot agree whether non-contiguous parcels of land should be included, either party may refer the matter to the Secretary for resolution. The Secretary's decision as to the lands to be included for acquisition under the procedures in conditions 7 and 8 of Schedule 4 shall be final.

Acquisition rights in Table 1 for receiver 153 only has effect when, in the opinion of the Secretary, open cut mining operations at Rix's Creek North have been placed on care and maintenance or have permanently ceased.

*Note: To interpret the locations referred to in Table 1, see the applicable figures in Appendix 4.*

### NOISE

#### Noise Criteria

2. Except for the land referred to in Table 1 for which the acquisition basis is noise, the Proponent must ensure that the noise generated by the project (excluding construction works specified in conditions 2A and 2B of Schedule 3) 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*** | ***Night*** |
|---|---|---|---|---|---|
| | | $L_{Aeq(15min)}$ | $L_{Aeq(15min)}$ | $L_{Aeq(15min)}$ | $L_{A1(1min)}$ |
| 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, 48,149, 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 |

However, these criteria do not apply if the Proponent, or another mining company, has acquired the land or 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.

Noise generated by the project is to be measured in accordance with the relevant requirements of the INP. Appendix 5 sets out the requirements for evaluating compliance with these criteria.

The noise criteria in Table 2 only have effect when, in the opinion of the Secretary, open cut mining operations at Rix's Creek North have been placed on care and maintenance or have permanently ceased.

*Note: To interpret the locations referred to in Table 2, see the applicable figures in Appendix 4.*

### Construction Noise

2A. The Proponent must manage noise from construction activities associated with the water pipeline infrastructure, in accordance with the noise management levels defined in Table 2 of the *Interim Construction Noise Guideline*.

During construction of the water pipeline infrastructure, the Proponent must ensure that combined operational and construction noise from the development does not exceed a level of 5 dB(A) above the daytime operational $L_{Aeq(15min)}$ noise criteria in Table 3 during Standard Construction Hours (7 am to 6 pm, Monday to Friday; and 8 am to 1 pm on Saturdays) and does not exceed the evening or night time operational $L_{Aeq(15min)}$ noise criteria in Table 2, except where an alternative temporary limit has been approved by the Secretary for specific works or where the Proponent has an agreement with the owner/s of the relevant residence/land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

2B. In seeking an alternative temporary construction noise limit above the levels identified in condition 2A, the Proponent must submit a Construction Work Noise Protocol to the Secretary for approval, prior to undertaking the nominated construction works. This protocol must:
(a) be prepared to the satisfaction of the Secretary;
(b) be prepared in consultation with the EPA and any landowners who may be affected by the proposed variation; and
(c) address the relevant requirements of the *Interim Construction Noise Guideline*.

The Proponent may only undertake construction activities that require a Construction Work Noise Protocol, in accordance with a Construction Work Noise Protocol as approved from time to time by the Secretary.

### Noise Acquisition Criteria

3. If noise generated by the project (excluding construction works specified in conditions 2A and 2B of Schedule 3) 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 must acquire the land in accordance with the procedures in conditions 7 and 8 of Schedule 4.

*Table 3: Noise acquisition criteria dB(A)*

| ***Location*** | ***Day*** | ***Evening*** | ***Night*** |
|---|---|---|---|
| | $L_{Aeq(15min)}$ | $L_{Aeq(15min)}$ | $L_{Aeq(15min)}$ |
| 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 |

Noise generated by the project is to be measured in accordance with the relevant requirements of the INP. Appendix 5 sets out the requirements for evaluating compliance with these criteria.

The acquisition noise criteria in Table 3 only have effect when, in the opinion of the Secretary, open cut mining operations at Rix's Creek North have been placed on care and maintenance or have permanently ceased.

*Notes:*
- *To interpret the locations referred to in Table 3, see the applicable figures in Appendix 4; and*
- *For this condition to apply, the exceedances of the criteria must be systemic.*

**Cumulative Noise Criteria**

4. The Proponent must implement all reasonable and feasible measures to ensure that the noise generated by the project combined with the noise generated by other mines in the vicinity 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 (except for the residential receivers in Table 1 for which the acquisition basis is noise). The Proponent must share the costs associated with implementing these measures on as equitable basis as possible with the relevant mines.

*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 |

Cumulative noise is to be measured in accordance with the relevant requirements of the INP. Appendix 5 sets out the requirements for evaluating compliance with these criteria.

For the purposes of this condition, 'reasonable and feasible avoidance and mitigation measures' includes, but is not limited to, the requirements in conditions 8 and 9 to develop and implement a real-time noise management system that ensures effective operational response to the risk of exceedance of the criteria.

*Note: To interpret the locations referred to in Table 4, see the applicable figures in Appendix 4.*

**Cumulative Noise Acquisition Criteria**

5. If the noise generated by the project combined with the noise generated by other mines in the vicinity exceeds the criteria in Table 5 at any residence on privately-owned land or on more than 25 percent of privately-owned land (except for the residential receivers in Table 1 for which the acquisition basis is noise), then upon receiving a written request for acquisition from the landowner, the Proponent must acquire the land on as equitable basis as possible with the relevant mines in accordance with the procedures in conditions 7 and 8 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 |

Cumulative noise is to be measured in accordance with the relevant requirements of the INP. Appendix 5 sets out the requirements for evaluating compliance with these criteria.

*Notes:*

- *To interpret the locations referred to in Table 5, see the applicable figures in Appendix 4; 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 for which the acquisition basis is noise; or
   (b) on the land listed in Table 6; or
   (c) on privately-owned land where subsequent noise monitoring shows the noise generated by the project is greater than or equal to the criteria in Table 7,

   the Proponent must implement additional noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner.

   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 Secretary for resolution.

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

| | |
|---|---|
| 11 – F Ferraro | 64 – W & A Gardner |
| 87 – B & R Richards | |

*Note: To interpret the locations referred to in Table 6, see the applicable figures in Appendix 4.*

*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 |

Cumulative noise is to be measured in accordance with the relevant requirements of the INP. Appendix 5 sets out the requirements for evaluating compliance with these criteria.

The additional mitigation measures in Tables 6 and 7 only have effect when, in the opinion of the Secretary, open cut mining operations at Rix's Creek North have been placed on care and maintenance or have permanently ceased.

*Notes:*
- *To interpret the locations referred to in Table 7, see the figures in Appendix 4; and*
- *For these conditions to apply, the exceedances of the criteria must be systemic.*

7. If the cumulative noise generated by the project combined with the noise generated by other mines in the vicinity 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 must implement additional noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. The Proponent must share the costs associated with implementing these measures on as 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 Secretary 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 |

Cumulative noise is to be measured in accordance with the relevant requirements of the INP. Appendix 5 sets out the requirements for evaluating compliance with these criteria.

*Notes:*
- *To interpret the locations referred to in Table 8, see the figures in Appendix 4; and*
- *For these conditions to apply, the exceedances of the criteria must be systemic.*

**Operating Conditions**

8. The Proponent must:
   (a) implement best practice noise management, including all reasonable and feasible noise mitigation measures, to minimise the construction, operational and low frequency noise generated by the project at all times, including during temperature inversions;
   (b) operate a comprehensive noise management system that uses a combination of predicted meteorological forecasting and real-time noise monitoring data to guide the day-to-day planning of mining operations and the implementation of both proactive and reactive mitigation measures to ensure compliance with the relevant conditions of this approval;
   (c) implement all reasonable and feasible measures to minimise the release of noise emissions from noisy plant and equipment on site;
   (d) minimise the noise impacts of the project during meteorological conditions under which the noise limits of this approval do not apply (see Appendix 5); and
   (e) co-ordinate the noise management on site with noise management at nearby mines (including Ashton, Rix's Creek North, Rix's Creek and the Mount Owen Complex) to minimise cumulative noise impacts,

   to the satisfaction of the Secretary.

*Note: Noisy plant and equipment includes both fixed and mobile sources, either underground or at the surface (such as pumps, conveyors, compressors, workshops, ventilation shafts, gaswell sites and diesel operated vehicles and loaders).*

**Noise Management Plan**

9. The Proponent must prepare a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
   (a) be prepared in consultation with the EPA, and then submitted to the Secretary for approval;
   (b) describe the measures that would be implemented to ensure:
      - compliance with the noise criteria and operating conditions of this approval; and
      - best management practice is being employed;
   (c) describe the noise management system in detail;
   (d) include a noise monitoring program that:
      - uses a combination of real-time and supplementary attended monitoring measures to evaluate the performance of the project;
      - includes a protocol for determining exceedances of the relevant conditions in this approval;
      - evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and

(e) includes a protocol that has been prepared in consultation with the owners of nearby mines (including Ashton, Rix's Creek North, Rix's Creek and the Mount Owen Complex) to minimise the cumulative noise impacts of the mines.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

## AIR QUALITY & GREENHOUSE GAS

### Odour

10. The Proponent must ensure that no offensive odours are emitted from the site, as defined under the POEO Act.

### Greenhouse Gas Emissions

11. The Proponent must implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Secretary.

### Air Quality Criteria

12. The Proponent must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the project does not exceed or contribute to an exceedance of the criteria listed in Table 9 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

*Table 9: Air quality criteria*

| ***Pollutant*** | ***Averaging Period*** | ***Criterion*** [d] | |
|---|---|---|---|
| Particulate matter < 10 µm ($PM_{10}$) | Annual | [a] 30 µg/m$^3$ | |
| Particulate matter < 10 µm ($PM_{10}$) | 24 hour | [b] 50 µg/m$^3$ | |
| Total suspended particulates (TSP) | Annual | [a] 90 µg/m$^3$ | |
| [c] Deposited dust | Annual | [b] 2 g/m$^2$/month | [a] 4 g/m$^2$/month |

*Notes to Table 9:*

- *[a] Cumulative impact (i.e. increase in concentrations due to the project plus background concentrations due to all other sources);*
- *[b] Incremental impact (i.e. incremental increase in concentrations due to the project on its own);*
- *[c] Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and*
- *[d] Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity which has been endorsed by the EPA and then agreed to by the Secretary.*

For the purposes of this condition, 'reasonable and feasible avoidance and mitigation measures' includes, but is not limited to, the requirements in conditions 14 and 15 to develop and implement a real-time air quality management system that ensures effective operational response to the risk of exceedance of the criteria.

### Mine-owned Land

13. The Proponent must ensure that particulate matter emissions generated by the project do not exceed the criteria in Table 9 at any occupied residence on any mine-owned land (including land owned by adjacent mines), unless:
    (a) the tenant and/or landowner has been notified of any health risks in accordance with the notification requirements under Schedule 4 of this approval;
    (b) the tenant on land owned by the Proponent can terminate the tenancy agreement without penalty, subject to giving reasonable notice, and the Proponent uses its best endeavours to provide assistance with relocation and sourcing of alternative accommodation;
    (c) air mitigation measures (such as air filters, a first flush roof water drainage system and/or air conditioning) are installed at the residence, if requested by the tenant and landowner (where owned by another mine other than the Proponent);
    (d) particulate matter air quality monitoring is undertaken to inform the tenant and landowner (where owned by a mine other than the Proponent) of potential health risks; and

(e) monitoring data is presented to the tenant in an appropriate format, for a medical practitioner to assist the tenant in making an informed decision on the health risks associated with occupying the property,

to the satisfaction of the Secretary.

**Operating Conditions**

14. The Proponent must:
    (a) 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 project, including those generated by spontaneous combustion;
    (b) minimise any visible air pollution generated by the project;
    (c) operate an air quality management system on site to ensure compliance with the relevant conditions of this approval;
    (d) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d in condition 12);
    (e) minimise surface disturbance of the site; and
    (f) co-ordinate the air quality management on site with the air quality management of nearby mines (including Ashton, Rix's Creek North, Rix's Creek and the Mount Owen Complex) to minimise cumulative air quality impacts,

    to the satisfaction of the Secretary.

**Air Quality & Greenhouse Gas Management Plan**

15. The Proponent must prepare an Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the Secretary. This plan must:
    (a) be prepared in consultation with EPA, and then submitted to the Secretary for approval;
    (b) describe the measures that would be implemented to ensure:
        - compliance with the air quality criteria and operating conditions of this approval; and
        - best practice air quality management is being employed;
    (c) describe the air quality management system in detail;
    (d) include an air quality monitoring program that:
        - uses a combination of real-time monitors and supplementary monitors to evaluate the performance of the project;
        - includes a protocol for determining any exceedances of the relevant conditions of this approval;
        - adequately supports the proactive and reactive air quality management system;
        - includes $PM_{2.5}$ 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 and the best practice air quality management measures; and
    (e) include a protocol that has been prepared in consultation with the owners of nearby mines (including Ashton, Rix's Creek North, Rix's Creek and the Mount Owen Complex) to minimise the cumulative air quality impacts of the mines.

    The Proponent must implement the approved management plan as approved from time to time by the Secretary.

**METEOROLOGICAL MONITORING**

16. For the life of the project, the Proponent must ensure that there is a meteorological station in the vicinity of the site that:
    (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
    (b) is capable of continuous real-time measurement of temperature lapse rate in accordance with the *NSW Industrial Noise Policy* or as otherwise approved by the EPA.

**SUBSIDENCE**

**Performance Measures**

17. The Proponent must ensure that the project does not cause any exceedance of the performance measures in Table 10.

*Table 10: Subsidence performance measures*

| ***Water*** | |
|---|---|
| Glennies Creek alluvial aquifer | Negligible impact |
| Natural watercourses on site | No greater environmental consequences than predicted in the Underground Project EA |

| | |
|---|---|
| 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 |
| ***Biodiversity*** | |
| Threatened species, populations, habitat or ecological communities | Negligible impact |
| ***Built Features*** | |
| All built features (except those fully covered by an operative contractual arrangement with another mine owner or other owner of the relevant built feature) | Safe, serviceable and repairable, unless the owner agrees otherwise in writing, including:<br>• serviceability should be maintained wherever practicable;<br>• loss of serviceability must be fully compensated; and<br>• damage must be fully repaired or replaced, or else compensated |
| ***Public Safety*** | |
| Public Safety | No additional risk due to mining |

*Notes:*

- *The Proponent will be required to define more detailed performance indicators for each of these performance measures in the various management plans that are required under this approval.*
- *Requirements regarding "safe" or "serviceable" do not prevent preventative or mitigatory actions being taken prior to or during mining in order to achieve or maintain these outcomes.*
- *Compensation required under this condition includes any compensation payable under the Mine Subsidence Compensation Act 1961 and/or the Mining Act 1992.*
- *These subsidence impact performance measures should be read in conjunction with the conditions relating to rehabilitation at the end of this Schedule.*

18. Any dispute between the Proponent and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 10 is to be settled by the Secretary, following consultation with the SANSW and DRG. Any decision by the Secretary shall be final and not subject to further dispute resolution under this approval.

**First Workings**

19. The Proponent may carry out first workings on site, other than in accordance with an approved Extraction Plan, provided that DRG is satisfied that the first workings are designed to remain stable and non-subsiding, except insofar as they may be impacted by approved second workings.

**Extraction Plan**

20. The Proponent must prepare an Extraction Plan for all second workings on site. This plan must:
    (a) be prepared by a team of suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
    (b) be approved by the Secretary before the Proponent undertakes any second workings covered by the plan;
    (c) include detailed plans of the proposed second workings and any associated surface development;
    (d) include detailed performance indicators for each of the performance measures in Table 10;
    (e) 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;
    (f) describe the measures that would be implemented to ensure compliance with the performance measures in Table 10, and remediate any predicted subsidence impacts and/or environmental consequences; including the following, which have been prepared in consultation with DRG:
        - a coal resource recovery plan that demonstrates effective recovery of the available resource;
        - 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 at the site; and
        - a revised Rehabilitation Management Plan;

(g) include a:
- Water Management Plan, which has been prepared in consultation with EPA and DPI Water, to manage the potential impacts and consequences of subsidence on surface water and groundwater resources, flooding and existing and proposed creek diversions; and which includes:
  - surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;
  - a program to monitor and report groundwater inflows to underground workings;
  - a program to manage and monitor impacts on groundwater bores on privately-owned land;
- Biodiversity Management Plan, which has been prepared in consultation with OEH, to manage the potential impacts and consequences of subsidence on biodiversity and which includes measures to manage potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna;
- 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;
- Heritage Management Plan, which has been prepared in consultation with OEH and relevant stakeholders of Aboriginal heritage, to manage the potential impacts and consequences of subsidence on heritage sites or values;

(h) include Trigger Action Response Plans, or equivalent, to address potential subsidence impacts and environmental consequences that may result from mining subsidence;

(i) include a contingency plan that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of any performance measures in Table 10, or where any such exceedance appears likely; and

(j) include a program to collect sufficient baseline data for future Extraction Plans.

The Proponent must implement the approved plan as approved from time to time by the Secretary.

**Payment of Reasonable Costs**

21. The Proponent must 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**

22. The Proponent must obtain all necessary water licences for the project under the *Water Act 1912* or the *Water Management Act 2000*.

23. The Proponent must ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of mining operations to match its available water supply, to the satisfaction of the Secretary.

**Baseflow Offsets**

24. The Proponent must offset the loss of any baseflow to the surrounding watercourses and/or associated creeks caused by the project to the satisfaction of the Secretary.

*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 project.*
- *The Proponent is not required to provide additional baseflow offsets where such offsets have already been provided under previous consents or approvals for the project. These existing offsets are to be described and evaluated in the Surface and Ground Water Response Plan (see below).*

**Compensatory Water Supply**

25. The Proponent must 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 project, in consultation with DPI Water, and to the satisfaction of the Secretary.

The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent, in quality and volume, to the loss attributed to the project, unless otherwise agreed with the landowner. Equivalent water supply must be provided (at least on an interim basis) as soon as practicable after the loss being identified, unless otherwise agreed with the landowner.

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 Secretary for resolution.

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

**Surface Water Discharges**

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

**Creek Diversions**

27. The Proponent must carry out the proposed diversions of Bettys Creek and Main Creek in the project area to the satisfaction of the Secretary.

28. Within 6 months of completing the construction of the diversions, the Proponent must submit, to the satisfaction of the Secretary and DPI Water, an as-executed report, certified by a practising engineer, confirming that the diversions are hydraulically and geomorpholigically stable.

**Mt Owen Bettys Creek Diversions**

29. The Proponent must:
    (a) commission a suitably qualified and independent expert, whose appointment has been approved by the Secretary, to carry out a detailed survey of geotechnical, geomorphic and ecological baseline condition of the 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 Performance Measures**

30. The Proponent must comply with the performance measures in Table 11 to the satisfaction of the Secretary.

*Table 11: Water management performance measures*

| ***Feature*** | ***Performance Measure*** |
|---|---|
| Water Management – General | • Maximise water sharing with the other mines in the region (including through the Greater Ravensworth Water Sharing Scheme)<br>• Minimise the use of clean water on site<br>• Minimise the need for supplementary water from external supplies |
| Glennies Creek and Station Creek alluvial aquifers | • Negligible environmental consequences to the alluvial aquifer (as shown in Appendix 6) beyond those predicted in the documents referred to in conditions 2 and 3 of Schedule 2, including:<br>○ negligible change in groundwater levels;<br>○ negligible change in groundwater quality; and<br>○ negligible impact to other groundwater users |
| Construction and operation of infrastructure | • Design, install and maintain erosion and sediment controls generally in accordance with the series *Managing Urban Stormwater: Soils and Construction* including *Volume 1, Volume 2A – Installation of Services*, *Volume 2C – Unsealed Roads*, *Volume 2D – Main Road Construction and Volume 2E - Mines and Quarries*<br>• Design, install and maintain all new infrastructure within 40 m of watercourses generally in accordance with the *Guidelines for Controlled Activities on Waterfront Land (DPI 2007)*, or its latest version<br>• Design, install and maintain creek crossings generally in accordance with the *Policy and Guidelines for Fish Friendly Waterway Crossings* (NSW Fisheries, 2003) and *Why Do Fish Need To* |

| | |
|---|---|
| | *Cross The Road? Fish Passage Requirements for Waterway Crossings* (NSW Fisheries 2003), or their latest versions |
| Mine sediment dams | • Design, install and maintain the dams generally in accordance with the series *Managing Urban Stormwater: Soils and Construction – Volume 1 and Volume 2E Mines and Quarries* |
| Clean water diversion & storage infrastructure | • Design, install and maintain the clean water system to capture and convey the 100 year ARI flood<br>• Maximise as far as reasonable and feasible the diversion of clean water around disturbed areas on site |
| Mine water storages | • Design, install and maintain mine water storage infrastructure to store a 100 year ARI 72 hour storm event<br>• Design, install and maintain on-site storages (including mine infrastructure dams, groundwater storage and treatment dams) to ensure they are suitably lined to comply with a permeability standard of < $1 \times 10^{-9}$ m/s |
| Chemical and hydrocarbon storage | • Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standards |
| Creek Diversions | • In accordance with conditions 27 and 28 above |
| Aquatic and riparian ecosystems | • Maintain or improve baseline channel stability<br>• Develop site-specific in-stream water quality objectives in accordance with ANZECC 2000 and *Using the ANZECC Guidelines and Water Quality Objectives in NSW* procedures (DECC 2006), or its latest version |

**Water Management Plan**

31. The Proponent must prepare a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:
    (a) be prepared in consultation with OEH, EPA, DRG and Council, and be endorsed by DPI Water and then submitted to the Secretary for approval;
    (b) include detailed performance criteria and describe measures to ensure that the Proponent complies with the Water Management Performance Measures (see Table 11);
    (c) include a Site Water Balance, which must:
        - include details of:
            - sources and security of water supply, including contingency planning;
            - 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;
    (d) include a Creek Diversion Management Plan for the proposed creek diversions in the 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;
    (e) include an Erosion and Sediment Control Plan, which must:
        - identify activities that could cause soil erosion, generate sediment or affect flooding;
        - describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk;

- describe the location, function and capacity of erosion and sediment control structures and flood management structures; and
- describe what measures would be implemented to maintain the structures over time;

(f) include 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 project;
- a detailed description of the water management system on site;
- a description of measures used to manage, monitor and report on the transfer of water under the Greater Ravensworth Water Sharing Scheme;
- surface water and stream health impact assessment criteria including trigger levels for investigating any potentially adverse surface water impacts from the project (for existing creeks and reinstated/rehabilitated creeks);
- a program to monitor and assess:
  - surface water flows and quality;
  - impacts on water users;
  - stream health;
  - channel stability; and
  - the effectiveness of the water management system;

(g) Include a Groundwater Management Plan, which must include:
- detailed baseline data of groundwater levels, yield and quality in the region, particularly for privately-owned groundwater bores that could be affected by the project;
- groundwater impact assessment criteria including trigger levels for investigating any potentially adverse groundwater water impacts; and
- a program to monitor and assess:
  - groundwater inflows to the mining operations;
  - impacts on regional aquifers;
  - impacts on the groundwater supply of potentially affected landowners;
  - impacts on the Glennies Creek and Station Creek;
  - impacts on groundwater dependent ecosystems and riparian vegetation; and
  - the effectiveness of the water management system;

(h) a Surface and Groundwater Response Plan, which must include:
- a response protocol for any exceedances of the surface water and groundwater assessment criteria, including provisions for independent investigation by a suitable qualified hydrogeologist whose appointment has been approved by the Secretary;
- measures to offset the loss of any baseflow to watercourses caused by the project;
- measures to compensate landowners of privately-owned land whose water supply is adversely affected by the project; and
- measures to mitigate and/or offset any adverse impacts on groundwater dependent ecosystems or riparian vegetation.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

**Water Pipeline Infrastructure**

31A. Prior to the construction of any bridge crossing for the water pipeline infrastructure, a detailed design of the bridge crossing must be determined following consideration of flood modelling undertaken to the satisfaction of OEH, that assesses the impacts for flood events up to and including the Probable Maximum Flood.

The design and modelling must demonstrate to the satisfaction of the Secretary, that the water pipeline infrastructure will not result in any significant flooding impacts on privately-owned land.

**BIODIVERSITY**

**Biodiversity Management Plan**

32. The Proponent must prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:

(a) be prepared in consultation with OEH and then submitted to the Secretary for approval;

(b) include:
- a description of the short, medium, and long term measures that would be implemented to manage the remnant vegetation and habitat on site;
- a detailed description of the measures and procedures to be implemented for:
  - protecting vegetation and soil outside the areas that are to be impacted;
  - rehabilitating creeks and drainage lines on the site (both inside and outside the disturbance areas), to minimise net loss of stream length and aquatic habitat;
  - managing salinity;

- managing impacts on fauna;
- landscaping the site and along public roads to minimise visual and lighting impacts;
- controlling weeds and feral pests, including terrestrial and aquatic species;
- controlling access; and
- bushfire management;

- a detailed description of the measures and procedures to be implemented to:
  - minimise, to the greatest extent practicable, the disturbance of threatened species and EECs (including undertaking pre-clearance surveys), and rehabilitate any areas of disturbed land associated with the construction of the water pipeline infrastructure;
  - provide for the salvage, transplanting and/or propagation of any threatened flora (including, but not limited to, threatened orchid species) found during pre-clearance surveys, in accordance with the *Guidelines for the Translocation of Threatened Plants in Australia* (Vallee *et al.*, 2004); and
  - satisfy the requirements of conditions 32A to 32C of Schedule 3;
- 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.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

### Water Pipeline Infrastructure

32A. The Proponent must plant and maintain, until established, 10 like-for-like trees for every established tree removed during construction of the water pipeline infrastructure that is associated with the following flora communities:

- Central Hunter Ironbark — Spotted Gum — Grey Box Forest EEC;
- Central Hunter Swamp Oak Forest;
- Hunter Valley River Oak Forest; and
- Central Hunter Bulloak Forest.

*Note: An established tree is considered to be two metres or greater in height.*

32B. The Proponent must ensure that the rehabilitation of land disturbed during construction of the water pipeline infrastructure focuses on the regeneration, enhancement and/or re-establishment of:

(a) significant and/or threatened flora communities, including:
- Central Hunter Ironbark — Spotted Gum — Grey Box Forest EEC;
- Central Hunter Swamp Oak Forest;
- Hunter Valley River Oak Forest;
- Central Hunter Bulloak Forest; and

(b) habitat and/or foraging resources for other significant and/or threatened flora and fauna species that occur in the vicinity of the disturbance area for the water pipeline infrastructure.

32C. The Proponent must implement the mitigation and management measures specified in EA Mod 7 during construction of the water pipeline infrastructure, including avoiding disturbance of stags, hollow bearing trees and the Bettys Creek Habitat Management Area.

## HERITAGE

### Protection of Aboriginal Heritage Items

32D. Unless otherwise authorised under the *National Parks and Wildlife Act 1974*, the Proponent must ensure that the development does not cause any direct or indirect impact on identified Aboriginal heritage items located outside the approved disturbance area of the development.

### Heritage Management Plan

33. The Proponent must prepare a Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:

(a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;

(b) be prepared in consultation with OEH, the Aboriginal community, the Heritage Division, Council, local historical organisations and any relevant landowners;

(c) be submitted to the Secretary for approval;

(d) include the following for the management of Aboriginal cultural heritage on site:
- details regarding the measures to be implemented to avoid (as far as practicable) and manage Aboriginal cultural heritage on site;

- an Aboriginal cultural heritage education program, to be developed in consultation with all relevant registered Aboriginal parties, and used for the induction of all personnel and contractors involved in construction or surface disturbance activities;
- methods for recording, salvaging and/or managing all Aboriginal sites, objects and deposits that are to be destroyed within the project area;
- methods for conserving, managing and monitoring all Aboriginal sites, objects and deposits that are to be protected within the project 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 sites, objects or skeletal remains identified during the project; 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 Division:
- 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 project.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

**VISUAL**

**Visual Amenity and Lighting**

34. The Proponent must:
(a) implement all reasonable and feasible measures to mitigate visual and off-site lighting impacts of the project;
(b) ensure no unshielded outdoor lights shine above the horizontal; and
(c) ensure that all external lighting associated with the project complies with Australian Standard *AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting*, or its latest version,
to the satisfaction of the Secretary.

**Additional Visual Mitigation Measures**

35. Upon receiving a written request from the owner of any residence on privately-owned land which has significant direct views of the underground mining operations on site, the Proponent must 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 Secretary for resolution.

**WASTE**

36. The Proponent must:
(a) minimise and monitor the waste generated by the project; and
(b) ensure that the waste generated by the project is appropriately stored, handled, and disposed of;
(c) manage on-site sewage treatment and disposal in accordance with the requirements of Council; and
(d) report on waste management and minimisation in the Annual Review,
to the satisfaction of the Secretary.

**BUSHFIRE MANAGEMENT**

37. The Proponent must:
(a) ensure that the project 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

38. The Proponent must rehabilitate the site in a manner that is generally consistent with the rehabilitation strategy described in the documents referred to in conditions 2 or 3 of Schedule 2 and the objectives in Table 12.

*Table 12: Rehabilitation objectives*

| ***Area/Domain*** | ***Rehabilitation Objectives*** |
|---|---|
| Site (as a whole) | Safe, stable & non-polluting |
| Surface infrastructure | To be decommissioned and removed, unless DRG agrees otherwise |
| Other land affected by the project | Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of:<br>• local native plant species (unless DRG agrees otherwise); and<br>• a landform consistent with the surrounding environment |
| Glencore 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 |
| Creek Diversions | Hydraulically and geomorphologically stable, with diverse habitats and ecology |
| Built features | Repair to pre-mining condition or equivalent unless:<br>• the owner agrees otherwise; or<br>• the damage is fully restored, repaired or compensated for under the *Mine Subsidence Compensation Act 1961* |
| Community | • Ensure public safety<br>• Minimise the adverse socio-economic effects associated with mine closure |

### Progressive Rehabilitation

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

### Rehabilitation Management Plan

40. The Proponent must prepare a Rehabilitation Management Plan for the project to the satisfaction of the DRG. This plan must:
    (a) be prepared in consultation with the Department, OEH, DPI Water, Council and the CCC;
    (b) be submitted to the DRG for approval;
    (c) be prepared in accordance with any relevant DRG guideline, and be consistent with the rehabilitation objectives in Table 12 and in the documents referred to in conditions 2 and 3 of Schedule 2;
    (d) build, to the maximum extent practicable, on the Biodiversity Management Plan and the other management plans required under this approval; and
    (e) address all aspects of rehabilitation and mine closure, including final land use assessment, rehabilitation objectives, domain objectives, completion criteria and rehabilitation monitoring.

    The Proponent must implement the approved management plan as approved from time to time by the Secretary.

## EXPLORATION ACTIVITIES & SURFACE INFSTRASTRUCTURE

### Exploration Activities and Minor Surface Infrastructure Management Plan

41. The Proponent must prepare an Exploration Activities and Minor Surface Infrastructure Management Plan for the project to the satisfaction of the Secretary. This Plan must:
    (a) be prepared by suitably qualified and experienced persons whose appointment has been approved by the Secretary;
    (b) be prepared in consultation with DRG;
    (c) be submitted to the Secretary for approval prior to carrying out exploration activities causing surface disturbance or constructing surface infrastructure, unless the Secretary agrees otherwise;
    (d) include a description of the measures that would be implemented for:
        - managing exploration activities;

- managing construction and operation of minor surface infrastructure (including minewater drainage bores, service boreholes, gaswells and infrastructure corridors) and associated access tracks;
- consulting with and compensating affected landowners;
- avoiding threatened species, populations or their habitats and EECs;
- minimising clearance and disturbance of native vegetation;
- minimising erosion and sedimentation;
- achieving applicable standards and goals; and
- rehabilitating disturbed areas.

The Proponent must implement the approved management plan as approved from time to time by the Secretary.

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## SCHEDULE 4
## ADDITIONAL PROCEDURES

### NOTIFICATION OF LANDOWNERS

1. By the end of December 2010, the Proponent must:
   (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 project;
      - any residence on the land listed in Table 1, for which the acquisition basis is noise, 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 project;
      - any residence on the land listed in Table 1 of Schedule 3, for which the acquisition basis is air quality, that they are entitled to ask for additional air quality mitigation measures to be installed at their residence at certain stages of the project; 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 underground project EAs identify that the dust emissions from the project are likely to be greater than the relevant air quality criteria in Schedule 3 at any time during the life of the project.

2. Prior to entering into any tenancy agreement for any land owned by the Proponent that is predicted to experience exceedances of the relevant noise criteria or dust criteria in Schedule 3, the Proponent must:
   (a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land and give them a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time); and
   (b) advise the prospective tenants of the rights they would have under this approval,

   to the satisfaction of the Secretary.

3. As soon as practicable after obtaining monitoring results showing:
   (a) an exceedance of any relevant criteria in Schedule 3, the Proponent must notify the affected landowner and/or tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the project is again complying with the relevant criteria;
   (b) an exceedance of any relevant criteria in conditions 6(c) or 7 of Schedule 3, the Proponent must notify the applicable owner in writing that they are entitled to ask for additional noise mitigation to be installed at their residence; and
   (c) an exceedance of any relevant criteria in condition 12 of Schedule 3, the Proponent must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).

### INDEPENDENT REVIEW

4. If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impact of the project on his/her land.

   If the Secretary is not satisfied that an independent review is warranted, the Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 60 days of the request for a review.

   If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Proponent must:
   (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
      - consult with the landowner to determine his/her concerns;
      - conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and
      - if the project is 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 Secretary and landowner a copy of the independent review.

5. If the independent review determines that the project is complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary.

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

(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 Secretary.

If the independent review determines that the project is not complying with the relevant acquisition criteria in Schedule 3, and that the project is primarily responsible for this non-compliance, then upon receiving a written request from the landowner, the Proponent must acquire all or part of the landowner's land in accordance with the procedures in conditions 7 and 8 below.

6. 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 must:

(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 Secretary.

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 must 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 7 and 8 below.

**LAND ACQUISITION**

7. Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent must 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 project, 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 or 7 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 Secretary; 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 Secretary for resolution.

Upon receiving such a request, the Secretary 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 must 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 Secretary 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 Secretary 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 must make a binding written offer to the landowner to purchase the land at a price not less than the Secretary'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 Secretary determines otherwise.

8. The Proponent must pay all reasonable costs associated with the land acquisition process described 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.

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## SCHEDULE 5
## ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

### ENVIRONMENTAL MANAGEMENT

#### Environmental Management Strategy

1. If the Secretary requires, the Proponent must prepare an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:
   (a) be submitted to the Secretary for approval;
   (b) provide the strategic framework for the environmental management of the project;
   (c) identify the statutory approvals that apply to the project;
   (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
   (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 project;
      - receive, handle, respond to, and record complaints;
      - resolve any disputes that may arise during the course of the project;
      - respond to any non-compliance; and
      - respond to emergencies; 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.

   The Proponent must implement the approved strategy as approved from time to time by the Secretary.

#### Adaptive Management

1A. The Proponent must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

   Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:
   (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
   (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
   (c) implement remediation measures as directed by the Secretary,
   to the satisfaction of the Secretary.

#### Management Plan Requirements

2. The Proponent must 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 project or any management measures;
   (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
   (d) a program to monitor and report on the:
      - impacts and environmental performance of the project; 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 project over time;
   (g) a program to regularly review management practices to align with contemporary best practice industry standards;
   (h) 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

(i) a protocol for periodic review of the plan.

*Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*

**Preparation of Management Plans**

3. Prior to approval of management plans required under Schedule 3, all existing management plans, monitoring programs, strategies, programs, protocols, etc approved as at the date of approval of Modification 5 shall continue to have full force and effect, and may be revised under the requirements of condition 6 below as if subject to the conditions of this approval that applied prior to the approval of Modification 5, or otherwise with the approval of the Secretary.

**Relationships between Management Plans**

4. With the agreement of the Secretary, the Proponent may combine any strategy, plan or program required by this approval with any similar strategy, plan or program required for the Mount Owen Complex.

5. The Water, Biodiversity and Heritage Management Plans required by conditions 31, 32 and 33 of Schedule 3, respectively, are to be prepared in respect of all parts of the project that are not covered by an approved Extraction Plan under condition 20 of Schedule 3. In particular, the Water, Biodiversity and Heritage Management Plans should address all areas subject to existing or proposed surface disturbance associated with the project.

**Revision of Strategies, Plans & Programs**

6. Within 3 months of:
   (a) the submission of an incident report under condition 9 below
   (b) the submission of an annual review under condition 11 below;
   (c) the submission of an audit report under condition 12 below, or
   (d) approval of a modification to this consent,

   The Proponent must review and if necessary revise, the strategies, plans and programs required under this consent, to the satisfaction of the Secretary.

   Within 4 weeks of conducting any such review, the Proponent must advise the Secretary of the outcomes of the review, and provide any documents that have been revised to the Secretary for review and approval.

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

**Updating & Staging Submissions of Strategies, Plans or Programs**

7. To ensure the strategies, plans or programs under this approval are updated on a regular basis, and that they incorporate any appropriate mitigation measures to improve the environmental performance of the project, the Proponent may at any time submit revised strategies, plans or programs to the Secretary for approval. With the agreement of the Secretary, the Proponent may also submit any strategy, plan or program required by this approval on a staged basis.

   With the agreement of the Secretary, the Proponent may revise any strategy, plan or program approved under this approval without consulting with all the parties nominated under the applicable conditions of approval.

   *Notes:*
   - *While any strategy, plan or program may be submitted on a progressive basis, the Proponent must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times; and*
   - *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.*

**Community Consultative Committee**

8. The Proponent must operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. This CCC must be operated in general accordance with the Department's *Community Consultative Committee Guidelines State Significant Projects November 2016*, or its latest version.

*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 Proponent may, with the approval of the Secretary, combine the function of this CCC with the function of other CCCs in the area.*

## REPORTING

### Incident Reporting

9. The Proponent must notify the Secretary and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident.

### Regular Reporting

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

### Annual Review

11. By the end of March each year, or other timing as may be agreed by the Secretary, the Proponent must submit a report to the Department reviewing the environmental performance of the project to the satisfaction of the Secretary. This review must:
    (a) describe the works (including any rehabilitation) that were carried out during the previous calendar year, and the works that are proposed to be carried out over the current calendar year;
    (b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar 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 condition 2 of Schedule 2;
    (c) identify any non-compliance over the previous calendar 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 project;
    (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and

    describe what measure will be implemented over the current calendar year to improve the environmental performance of the project.

## INDEPENDENT ENVIRONMENTAL AUDIT

12. By the end of December 2011, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent must commission, commence and pay the full cost of an Independent Environmental Audit of the project. This audit must:
    (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
    (b) include consultation with the relevant agencies;
    (c) assess the environmental performance of the project and whether it is 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, with particular reference to management practices to ensure that they align with contemporary best practice industry standards;
    (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and
    (f) be conducted and reported to the satisfaction of the Secretary.

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

13. Within 12 weeks of commencing each audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of any measures proposed to address the recommendations.

**ACCESS TO INFORMATION**

14. The Proponent must:

(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 project;
- all approved strategies, plans and programs required under the conditions of this approval;
- the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans or programs;
- a complaints register, which is to be updated on a monthly basis;
- minutes of CCC meetings;
- the annual reviews over the life of the project;
- any independent environmental audit, and the Proponent's response to the recommendations in any audit; and
- any other matter required by the Secretary;

(b) keep this information up-to-date,

to the satisfaction of the Secretary.

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## APPENDIX 1: SCHEDULE OF LAND

| *Lot Number* | *Deposited Plan Number* | *Lot Number* | *Deposited Plan Number* |
|---|---|---|---|
| 8 | 6830 | 111 | 850054 |
| 10 | 6830 | 112 | 850054 |
| 11 | 6830 | 1 | 851867 |
| 12 | 6830 | 2 | 851867 |
| 13 | 6830 | 3 | 851867 |
| 17 | 6830 | 4 | 851867 |
| 21 | 6830 | 5 | 851867 |
| 5 | 133183 | 6 | 851867 |
| 791 | 580967 | 7 | 851867 |
| 3 | 606344 | 8 | 851867 |
| 710 | 624852 | 2 | 859544 |
| 71 | 625171 | 3 | 859544 |
| 1 | 626854 | 5 | 859544 |
| 1 | 655758 | 6 | 859544 |
| 1 | 701939 | 7 | 859544 |
| 2 | 701939 | 8 | 859544 |
| 3 | 701939 | 924 | 862883 |
| 1221 | 709371 | 925 | 862883 |
| 1 | 725524 | 926 | 862883 |
| 64 | 752499 | 1 | 865784 |
| 65 | 752499 | 1 | 940619 |
| 66 | 752499 | 1 | 996213 |
| 1 | 770733 | 1 | 998045 |
| 2 | 770733 | 1 | 1009231 |
| 1 | 772332 | 2 | 1072124 |
| 2 | 780607 | 3 | 1072124 |
| 1 | 781057 | 4 | 1072124 |
| 532 | 788015 | 1 | 1083482 |
| 1 | 799154 | 622 | 1097524 |
| 104 | 804053 | 1 | 1180252 |
| 332 | 832646 | 2 | 1180252 |
| 12 | 835203 | 4 | 1180252 |
| 921 | 844642 | 1 | 1206886 |
| 922 | 844642 | 2 | 1206886 |
| 923 | 844642 | 3 | 1206886 |

## 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 19991, 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 Section96(1A) application by Integra Coal Operations dated May 2008.

**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.

## APPENDIX 3: PROJECT LAYOUT PLANS

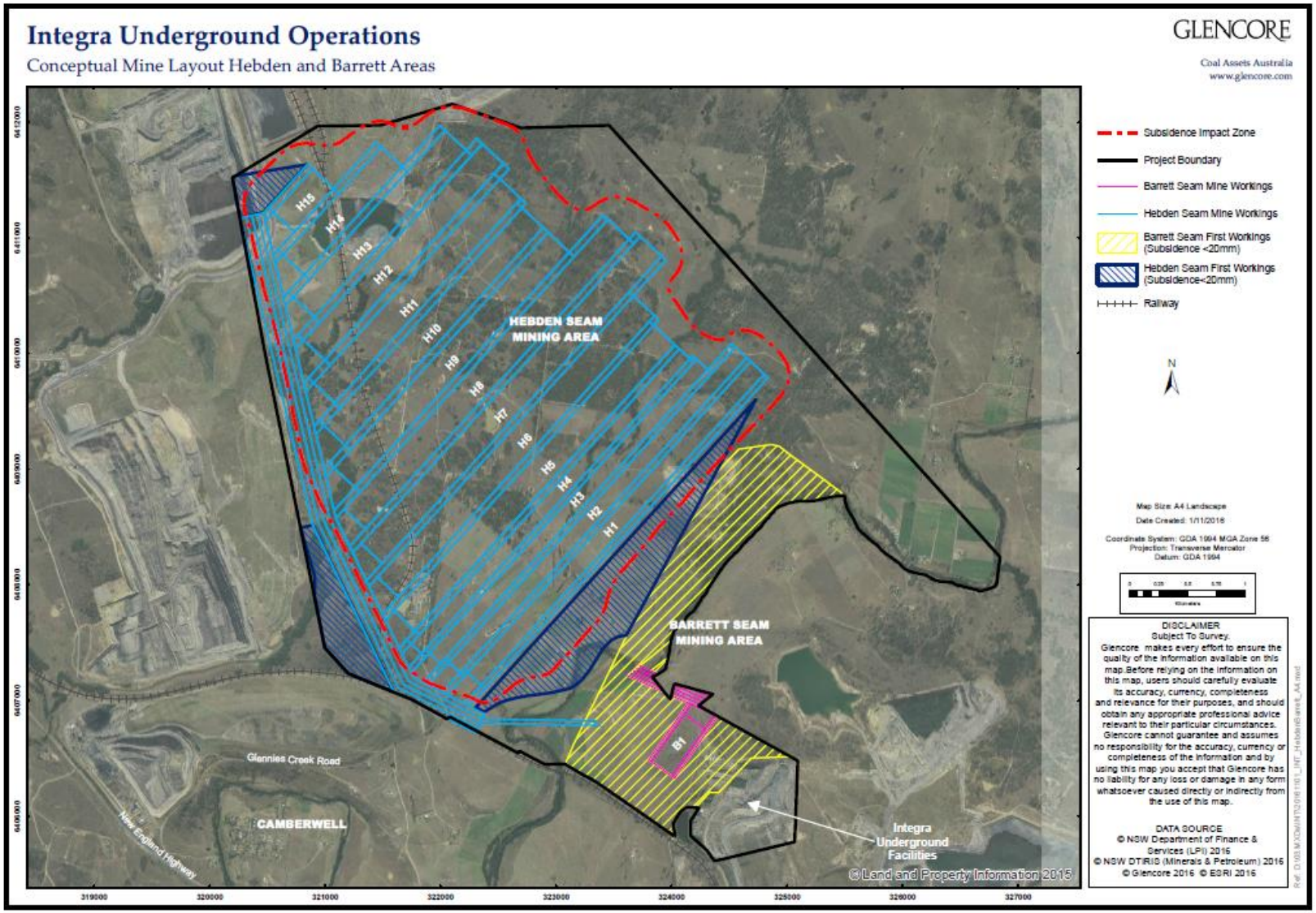



Figure 1: Hebden and Barrett Mine Seam Areas

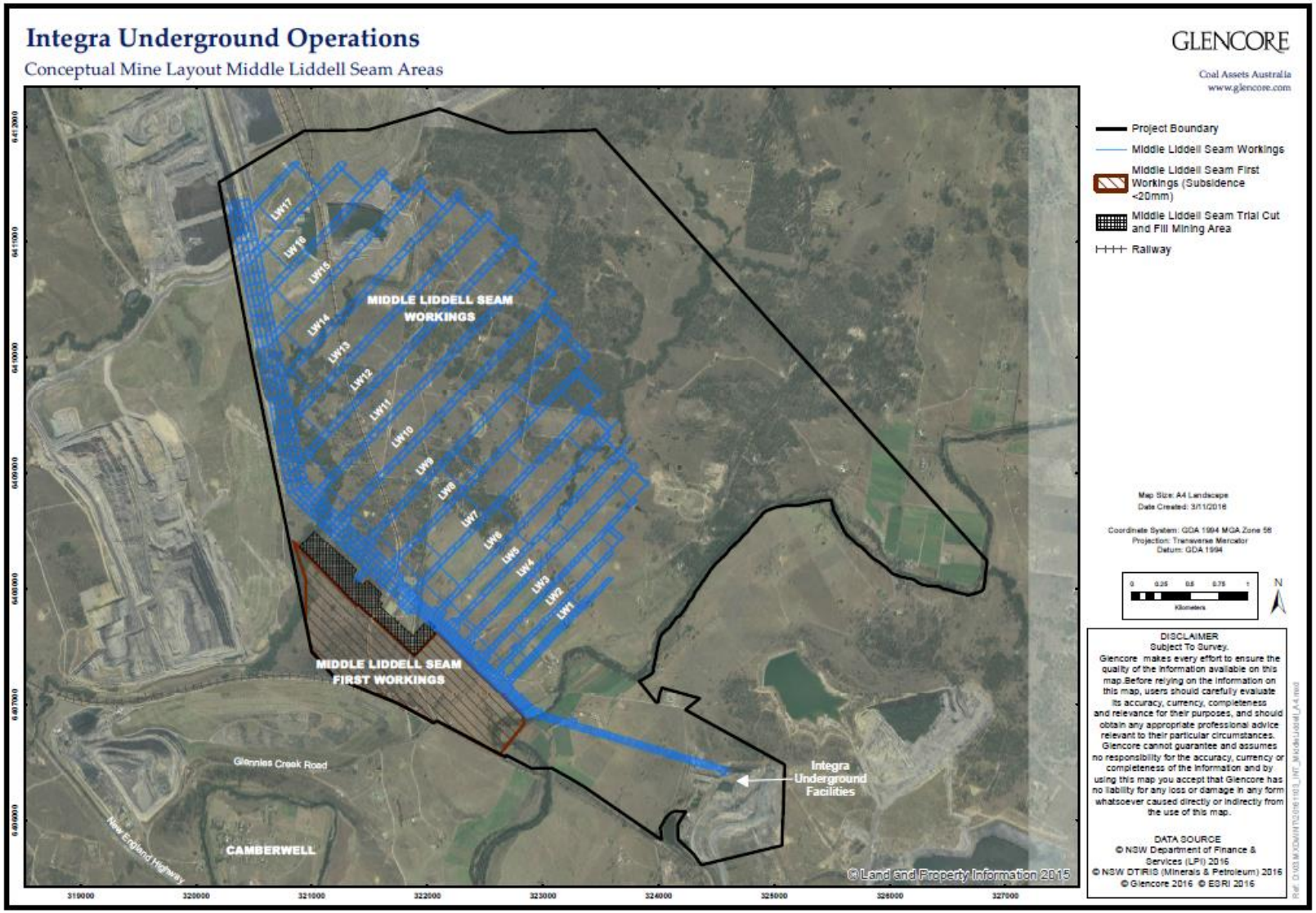
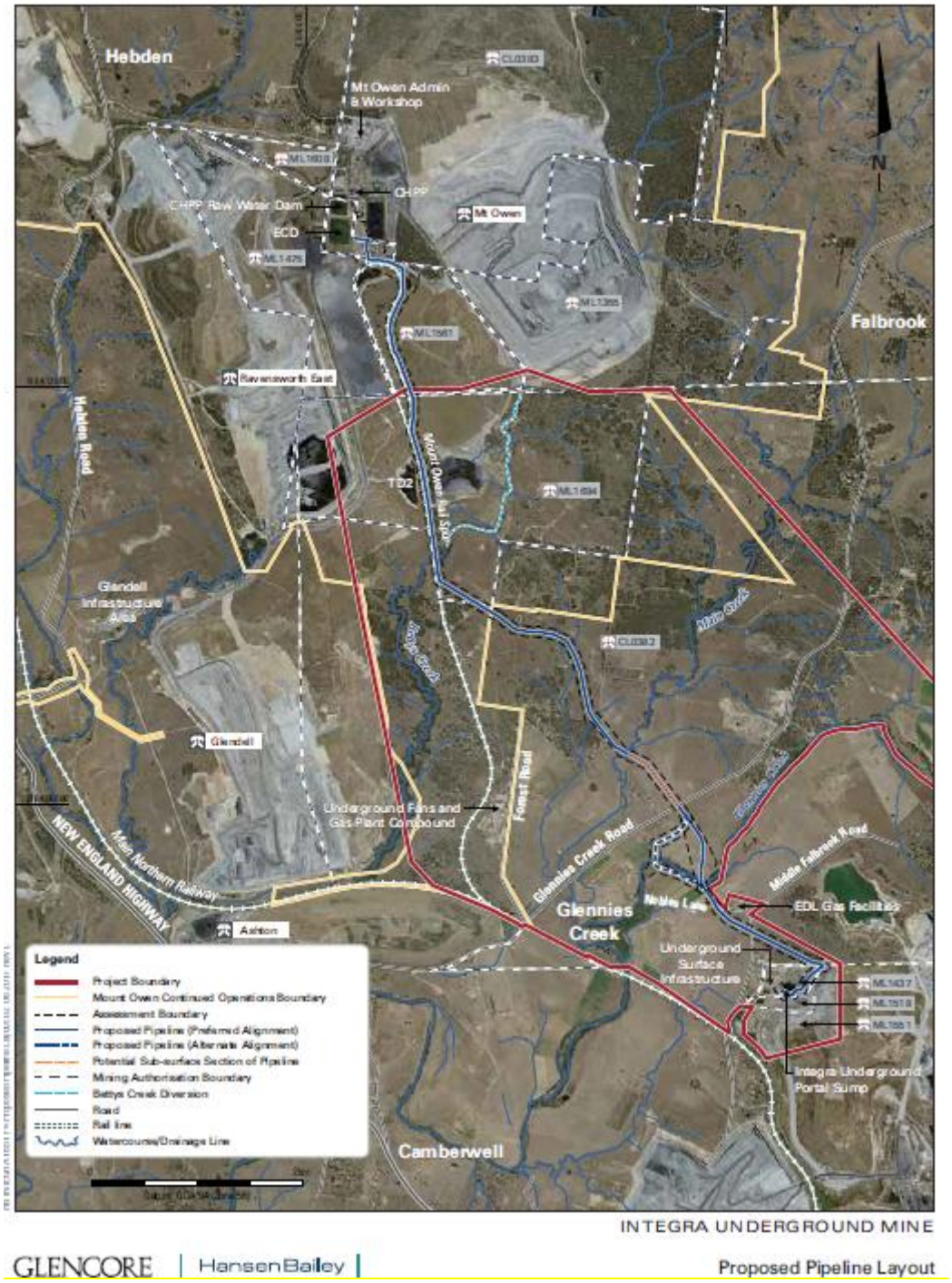



**Figure 2: Middle Liddell Seam Areas**

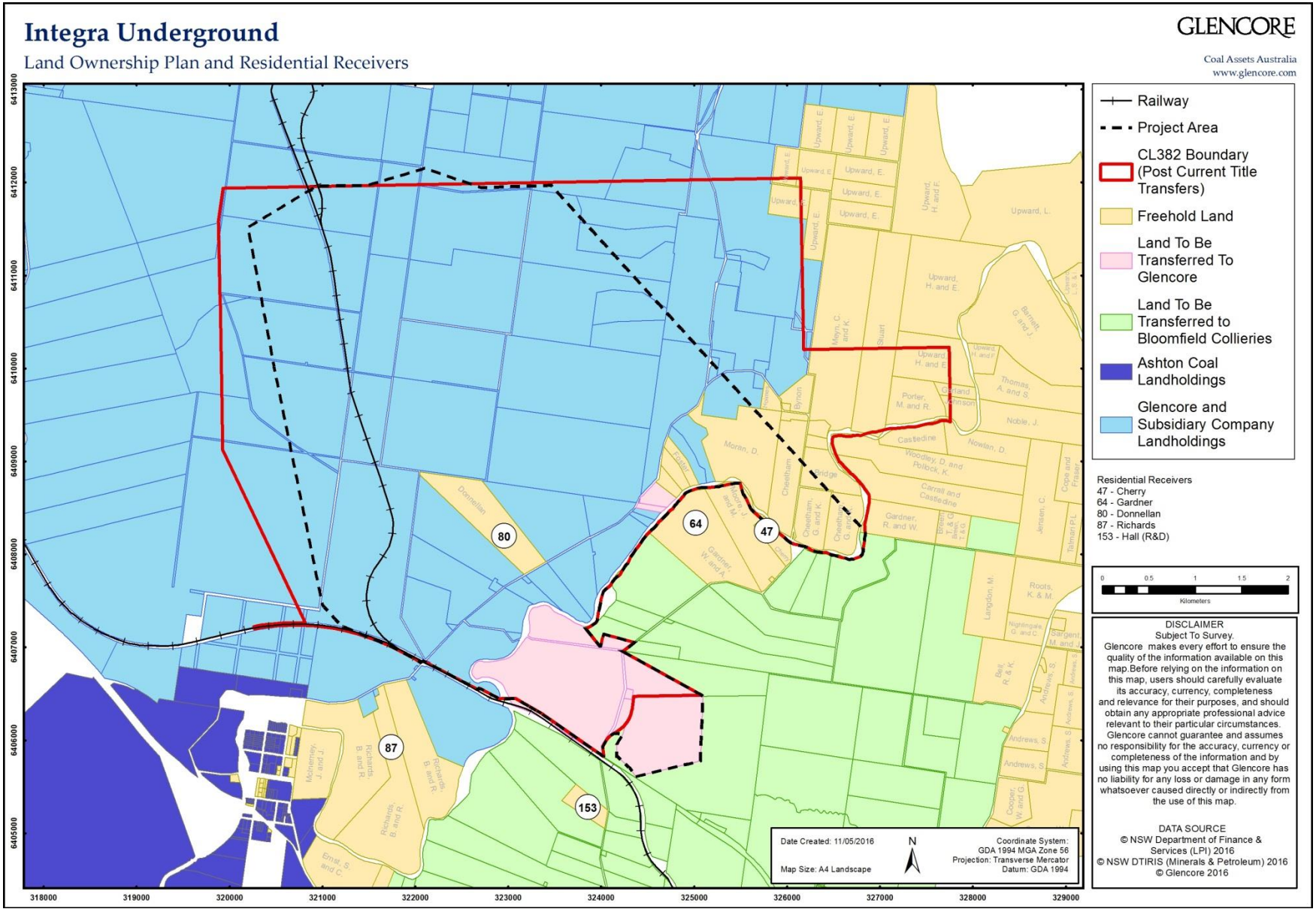



INTEGRA UNDERGROUND MINE

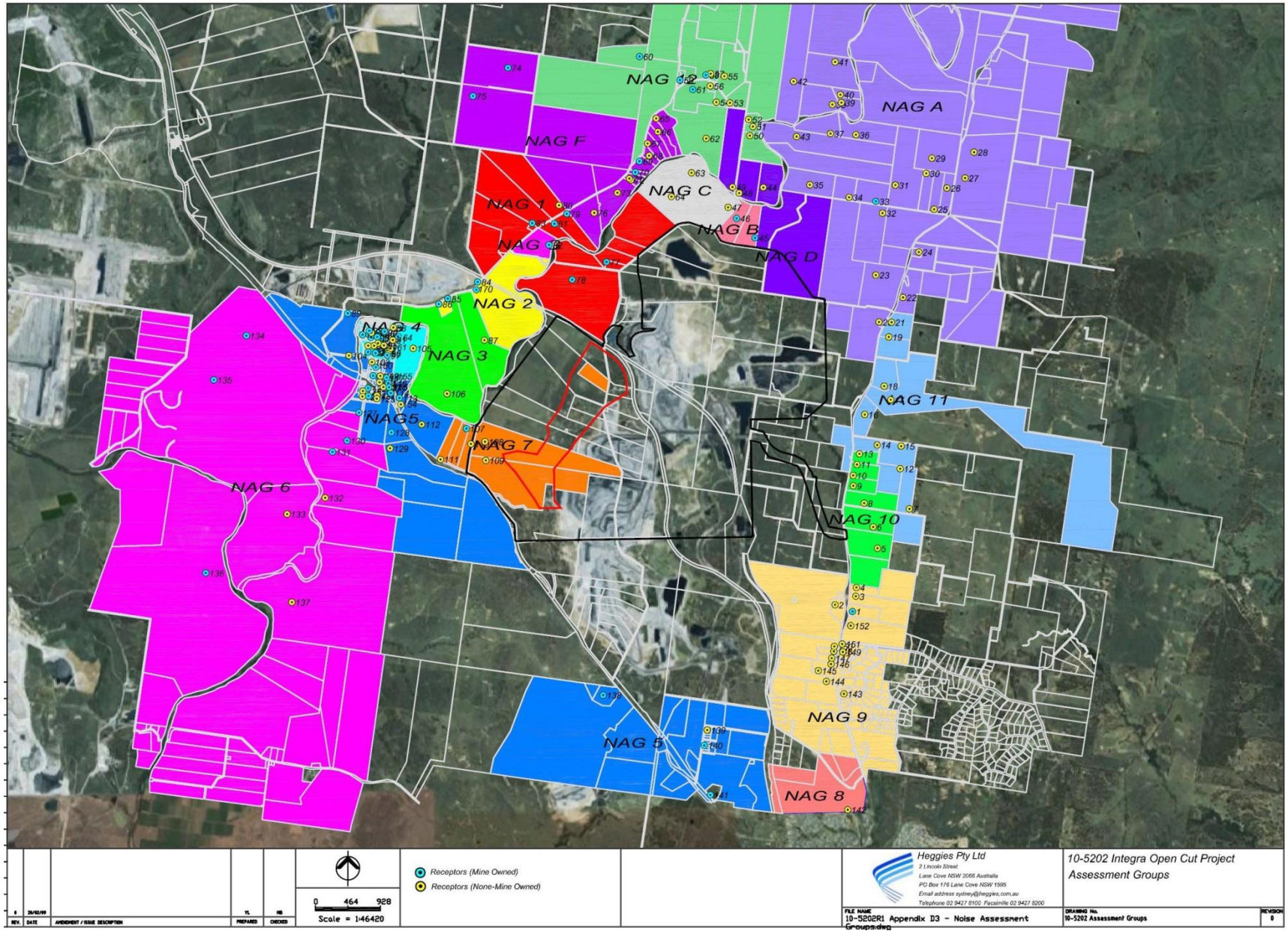
GLENCORE | HansenBailey | Proposed Pipeline Layout

**Figure 3: Water Pipeline Infrastructure**

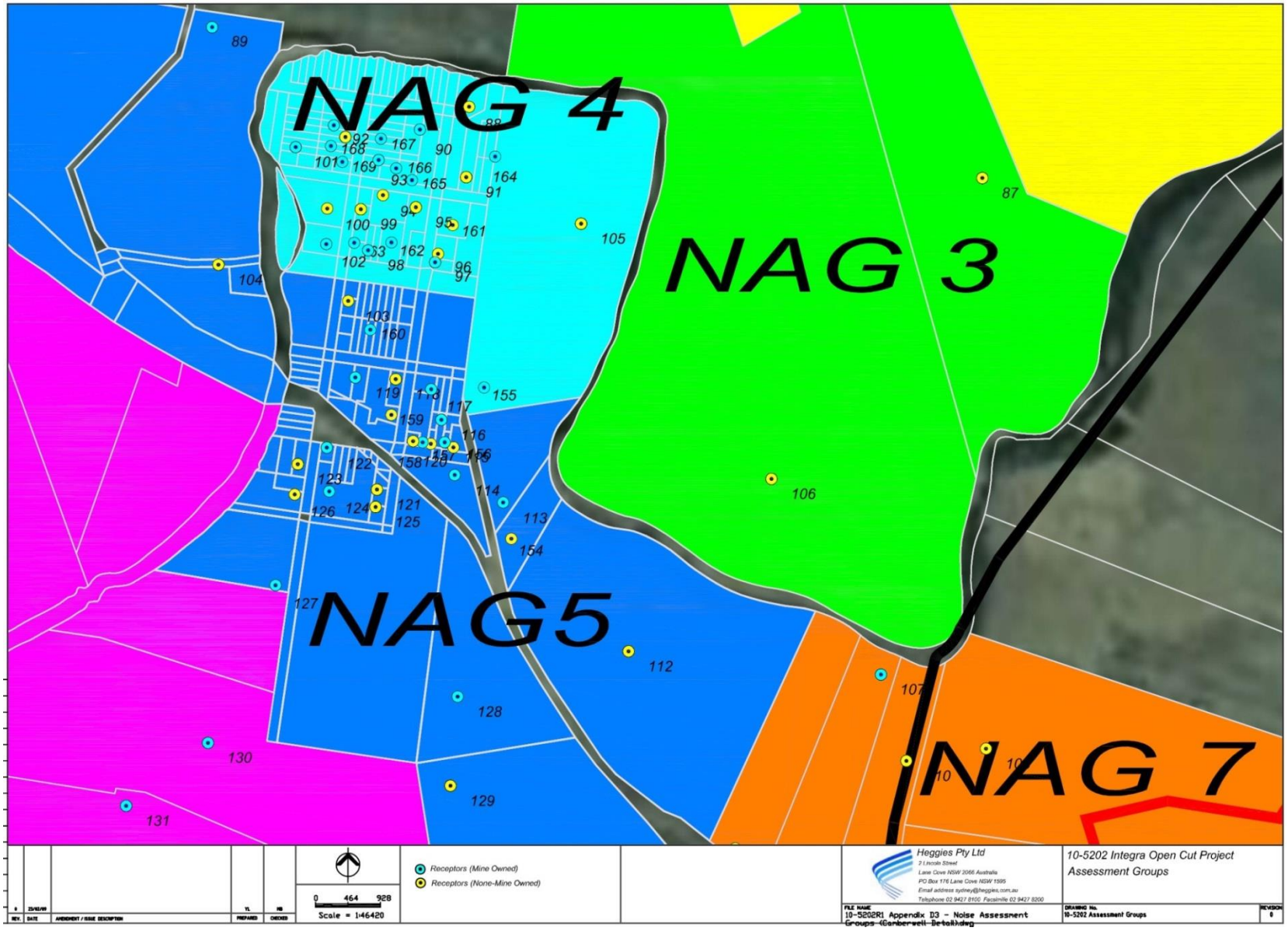
## APPENDIX 4: LAND OWNERSHIP & RESIDENTIAL RECEIVERS




**Underground Project Land Ownership (at time of EA Mod 5 production)**




**Residential Receivers**




**Residential Receivers in Camberwell Village**

## APPENDIX 5: NOISE COMPLIANCE ASSESSMENT

**Compliance Monitoring**

1. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this approval.

2. Data collected for the purposes of determining compliance with the relevant conditions of this approval is to be excluded under the following meteorological conditions:
   a) during periods of rain or hail;
   b) average wind speed at microphone height exceeds 5 m/s;
   c) wind speeds greater than 3 m/s measures at 10 m above ground level; and
   d) temperature inversion conditions greater than 3°C/100m.

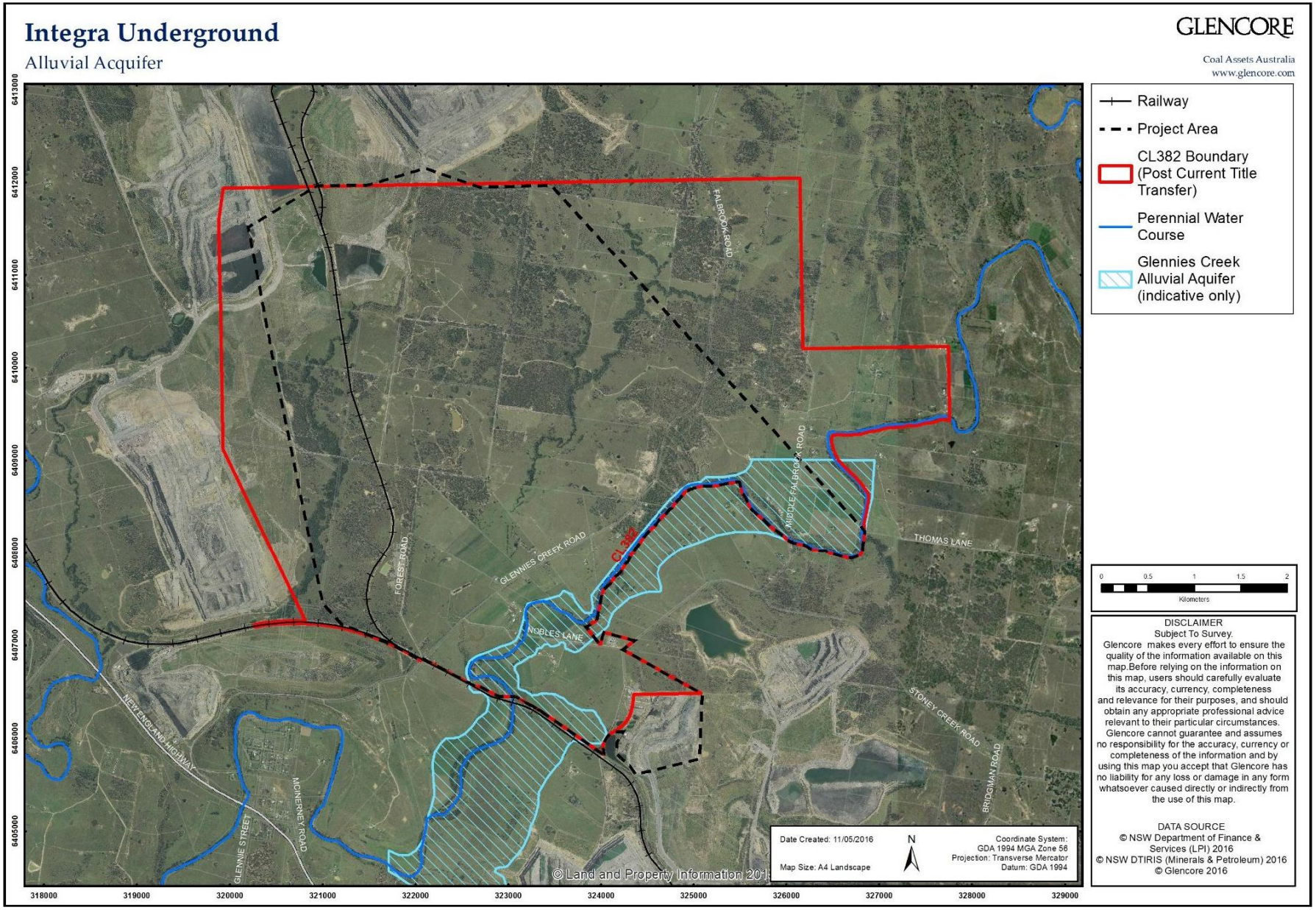
3. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements relating for reviewing performance set out in the INP, in particular the requirements relating to:
   a) monitoring locations for the collection of representative noise data;
   b) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
   c) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

4. To the extent that there is any inconsistency between the INP and the requirements set out in this Appendix, the Appendix prevails to the extent of the inconsistency.

**Determination of Meteorological Conditions**

5. Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological station located on the site (as required by condition 16 of Schedule 3).

## APPENDIX 6: GLENNIES CREEK AND STATION CREEK ALLUVIAL AQUIFERS



## APPENDIX 7: STATEMENT OF COMMITMENTS

### Underground Project Statement of Commitments

| *Desired Outcome* | *Existing or Proposed Actions* | *Timing* |
|---|---|---|
| **STATUTORY REQUIREMENTS** | | |
| Compliance with all conditional requirements in all approvals, licences and leases. | • The development will be carried out as outlined in the following:<br>• this Environmental Assessment Report (EA);<br>• Project Approval;<br>• Environment Protection Licence;<br>• Subsidence Management Plans (SMPs);<br>• Mining Lease(s); and<br>• any other approvals, licences or leases. | • Continuous and as required. |
| All operations conducted in accordance with all relevant documentation. | • 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. | • Continuous and as required. |
| **STAKEHOLDER CONSULTATION** | | |
| That effective communication/consultation is undertaken throughout the life of the Project. | • Preparation of a community newsletter following Project Approval. | • Within three months from the date of Project Approval. |
| | • Biannual meetings of the Community Consultative Committee. | • Continuous and as required. |
| | • Ongoing communication with the management of Glencore and provision of subsidence monitoring data. | • Continuous and as required. |
| | • Conduct a more detailed assessment of the potential impacts of subsidence on items of Glencore infrastructure. | • Prior to longwall mining under areas containing Glencore owned infrastructure. |
| **SUBSIDENCE**<br>Potential adverse impacts from subsidence are managed, monitored and remediated where necessary. | | |
| ***Subsidence management*** | • Subsidence Management Plan applications will be submitted to DRG detailing strategies to manage subsidence impacts, inclusive of measures referenced in this EA. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • 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. | • Prior to the commencement of longwall mining in the affected area and ongoing. |
| | • 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. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • 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. | • Prior to, during and after mining in the Barrett and Hebden Seams. |
| | • Temporary remediation works will progress during mining, with permanent remediation works completed following full subsidence impacts in an area. | • Continuous and as required. |

| Desired Outcome | Existing or Proposed Actions | Timing |
|---|---|---|
| ***Management of subsidence impacts on surface infrastructure.*** | • The new Forest Road Subsidence Management Plan to be built upon the existing management plan to reflect the expected subsidence and associated impacts. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • As part of Hebden SMP development, a management plan for Glennies Creek Road and associated infrastructure will be prepared. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • As part of Barrett SMP development, a management plan for Middle Falbrook Road and associated infrastructure will be prepared. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • Possum Skin Dam will be decommissioned. | • Prior to the commencement of longwall mining which would potentially affect the stability or integrity of the dam wall. |
| | • 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. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • 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. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • 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. | • As required. |
| | • Should GMO's mine plan change, any potential subsidence effects on its tailings dams or highwalls will be addressed in the relevant SMPs at that time. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • HV Coking Coal will undertake a more detailed assessment of potential impacts on the Ravensworth East / GMO and Glendell Open Cuts. | • Following finalisation of the surface mine layout and prior to mining within these areas. |
| | • HV Coking Coal 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. | • Monthly. |
| | • Signs will be erected by HV Coking Coal at points on the road at the edge of the longwall subsidence impact zone. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • Approval will be sought from DRG and ARTC prior to any mining within the Main Northern Railway protection zone.<br>• Any proposed workings in the Main Northern Railway protection zone will be designed to be long term stable – taking site conditions into consideration | • Prior to mining within the protection zone. |
| | • A subsidence management plan will be devised in consultation with the SANSW and the owners of houses above Barrett Seam Longwall 7. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • 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. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • HV Coking Coal and the SANSW 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. | • As required. |

| Desired Outcome | Existing or Proposed Actions | Timing |
|---|---|---|
| ***Ensure minimal subsidence impacts on natural features.*** | | |
| | • The Hebden SMPs to be developed will incorporate and build upon the existing Surface Drainage Management Plan. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • A Bettys Creek Diversion Management Plan will be prepared as part of the Hebden SMPs. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | HV Coking Coal will prepare:<br>• a response strategy to address any destabilisation of Main Creek;<br>• a works programming for any necessary remedial works in Main Creek should subsidence expression initiate incision and headward erosion;<br>• an outline of expansion of piezometric monitoring; and<br>• a TARP as part of a surface water and groundwater monitoring and management program. | Prior to Hebden Seam longwall mining undermining Man Creek. |
| ***Ensure minimal subsidence impacts on farm infrastructure.*** | | |
| | • 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. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • In consultation with the relevant landowner, HV Coking Coal 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. | • As required. |
| **ECOLOGY** | | |
| Operations are managed such that adverse impacts to native flora and fauna are prevented, minimised and/or offset. | • HV Coking Coal will implement the following flora and fauna management procedures.<br>• Revegetate the planned Bettys Creek diversion channel and adjacent areas;<br>• 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.<br>• 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.<br>• 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.<br>• 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.<br>• Undertake pre-clearance inspections of borehole sites. Where possible, the inspections will be undertaken during the summer flowering period to optimise detection of *Bothriochloa biloba* and to avoid impacting directly on any individual plants. | • Continuous, as required. |
| **HERITAGE** | | |

| *Desired Outcome* | *Existing or Proposed Actions* | *Timing* |
|---|---|---|
| Operations are managed such that adverse impacts to significant Aboriginal and Historical heritage items are avoided, minimised and/or offset. | • 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 involve the following.<br>• During clearing works in the areas where surface earthworks will occur, a qualified archaeologist will undertake field work with assistance from the Aboriginal community.<br>• 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. | • Prior to the diversion of Bettys Creek. |
| | • Monitoring of excavation works along the banks of Bettys Creek will be undertaken by a representative of the Aboriginal community. | • During excavations works undertaken for the diversion of Bettys Creek. |
| | • 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. | • Prior to the diversion of Main Creek. |
| | • 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 OEH and the Secretary. | • Prior to the diversion of Main Creek. |
| | • 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:<br>• be undertaken by a qualified archaeologist during clearing works in the areas where surface earthworks will occur with assistance from the Aboriginal community; and<br>• 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. | • Prior to the diversion of Main Creek |
| | • Monitoring of excavation works along the banks of Main Creek will be undertaken by a representative of the Aboriginal community. | • During excavations works undertaken for the diversion of Main Creek. |
| | • Infrastructure will be sited to avoid impacts to known heritage sites. Should impacts be unavoidable, OEH and the local Aboriginal community representatives will be consulted. | • Continuous, as required. |
| | • The Aboriginal community will be given the opportunity to collect any surface artefacts from the planned surface (remediation) activities. | • Prior to ground disturbing works in an area. |
| | • 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. | • Prior to the commencement of ground disturbing works. |
| Ensure minimal subsidence impacts on archaeology. | • OEH 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. | • Prior to any remediation that may be required. |

| *Desired Outcome* | *Existing or Proposed Actions* | *Timing* |
|---|---|---|
| | • A qualified archaeologist will assess the potential impact of the planned works. | • Prior to any subsidence remediation works. |
| | • Should subsidence levels be greater than predicted, archaeological sub - surface testing may be undertaken in affected areas with the involvement of the Aboriginal stakeholders and OEH. | • As required. |
| | • The Hebden SMPs to be developed will incorporate and build upon the existing Archaeology Subsidence Management Plan. | • Prior to the commencement of proposed longwall mining in the affected area. |
| **SURFACE WATER** | | |
| Operations are managed such that adverse impacts to surface water are prevented, minimised and/or offset. | • HV Coking Coal 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 major 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. | • Continuous, as required. |
| | • HV Coking Coal will maintain a photographic record of the creeks and dam walls to determine historical (baseline) rates of erosion. | • Continuous, as required. |
| | • As part of the erosion and flood studies, HV Coking Coal will assess whether rapid changes in channel or floodplain form occur in the aftermath of runoff events. | • Continuous, as required. |
| | • Monitoring results will be reported in the AEMR and distributed to the relevant Government agencies, CCC members and other relevant stakeholders. | • Annually. |
| | HV Coking Coal will prepare:<br>• a response strategy to address any destabilisation of Main Creek;<br>• a works programming for any necessary remedial works in Main Creek should subsidence expression initiate incision and headward erosion;<br>• an outline of expansion of piezometric monitoring; and<br>• a TARP as part of a surface water and groundwater monitoring and management program. | Prior to Hebden Seam longwall mining undermining Man Creek. |
| | • No impacts will occur to licensed water users, basic landholder rights or minimum baseflows in Glennies Creek regulated river or environmental water requirements. | • Continuous. |
| | • 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. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • 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. | • Prior to the commencement of proposed longwall mining in the affected area. |
| | • HV Coking Coal will not restrict Glencore'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 | • Prior to the commencement of proposed longwall mining in the affected area. |

| Desired Outcome | Existing or Proposed Actions | Timing |
|---|---|---|
| | monitoring data by an independent consultant agreed to by HV Coking Coal and Glencore prior to the diversion being undermined. | |
| | • HV Coking Coal will provide evidence that their water accounting procedure 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). | • Continuous, as required. |
| | • HV Coking 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.<br>• 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 | • Continuous, as required. |
| **GROUNDWATER** | | |
| Operations are managed such that adverse impacts to local and regional groundwater resources are prevented, minimised and/or offset. | • 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. | • Continuous, as required. |
| | • 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. | • Annually, as required. |
| | • A private well monitoring program will be initiated to determine its pre mining yield if requested by a private bore owner.<br>• Should a reduction in groundwater availability be detected, remedial action will be undertaken by HV Coking Coal to offset the measured losses. Such actions may include digging the well deeper, installing a new well or installing a replacement bore. | • 12 months prior to extraction of the Barrett Seam (subject to the timing of any request).<br>• Subsequent to detecting a loss of groundwater availability due to mining. |
| | • 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. | • Prior to longwall mining in the Hebden Seam. |
| | • Contingency procedures will be developed. Activation of contingency procedures will be linked to the assessment of monitoring results. | • As required. |
| | • 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. | • Following the completion of extraction of each longwall panel and in the AEMR. |

| *Desired Outcome* | *Existing or Proposed Actions* | *Timing* |
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| **AIR QUALITY** | | |
| Operations are managed to minimise potential adverse impacts to the environment, residences and the community. | • Implement the following air quality control procedures.<br>• 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.<br>• Water sprays will be used at the longwall and development face to control particulates.<br>• All haul roads will have edges clearly defined with marker posts or equivalent to control their locations, especially when crossing large overburden emplacement areas.<br>• Obsolete roads will be ripped and re-vegetated;<br>• Development of minor roads will be limited and the locations of these will be clearly defined.<br>• Minor roads used regularly for access etc will be watered/treated to control dust.<br>• 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. | • Continuous, as required. |
| | • HV Coking Coal will continue air monitoring in accordance with the Integra Underground EMS Procedure 002-2, Air Quality Monitoring Program, including monitoring weather conditions, TSP, $PM_{10}$ (using HVAS), real time $PM_{10}$ (using TEOM) and dust fallout. | • Continuous. |
| | • The results of the ongoing air quality monitoring program will be communicated to residents in the Local Community. | • Continuous, as required. |
| **GREENHOUSE GASES** | | |
| Manage operations such that greenhouse gas emissions on the environment are minimised and beneficial use of methane is maximised. | • Fugitive methane emissions will be captured for energy generation where possible. If not feasible, flaring will be adopted, where practicable. | • Continuous. |
| | • Greenhouse gas emissions will be estimated and reported annually. | • Following commencement of proposed mining. |
| | • Energy and greenhouse gas emission reduction initiatives will be implemented throughout the life of the development, including the following.<br>• The efficiency of all new and upgraded mobile and fixed equipment will be considered during procurement for fuel powered equipment.<br>• Ensuring equipment will be maintained to retain high levels of energy efficiency.<br>• The inventory of emissions developed for this environmental; assessment will be maintained.<br>• 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. | • Continuous, as required. |
| **NOISE AND VIBRATION** | | |
| Operations are managed to minimise potential adverse impacts on the environment, residences and the community. | • HV Coking Coal will implement the following noise management procedures and monitoring programs. | • Continuous, as required. |

| Desired Outcome | Existing or Proposed Actions | Timing |
|---|---|---|
| | • Use of conveyors instead of haul roads where approved.<br>• Construction of acoustic bunds adjacent to haul roads where recommended by an acoustic consultant.<br>• Use of routine monitoring results to refine on-site noise mitigation measures and operating procedures.<br>• Undertake noise audits at boundary positions to static sources to verify potential change in overall sound emissions.<br>• Undertake regular discussions with potentially affected residents to proactively identify noise related issues of concern.<br>• Undertake quarterly monitoring at identified representative receivers.<br>• Implement acoustic mitigation at residences where exceedances of the project specific criteria are demonstrated via the monitoring program and requested by the landowner.<br>• Consideration of negotiated agreements with landowners where exceedances of the project specific criteria are substantiated by monitoring.<br>• Informing residents that the existing community information line for Integra Underground would apply to this proposal.<br>• Existing and / or additional real time noise monitoring will be utilised to manage, assess and control potential emissions from site. | |
| | • A blast management protocol will be developed in conjunction with GMO to manage potential impacts from other mine's blasting on the underground mining activities. | • Prior to the commencement of proposed mining in the vicinity of open cut mining operations. |
| | • 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 Secretary. | • Prior to 30 June 2010 |
| **TRANSPORT** | | |
| Management of rail infrastructure. | • A new Mt Owen Rail Spur Management Plan will be prepared in consultation with GMO, and will include monitoring, stakeholder consultation and mitigation measures. | • Prior to the commencement of proposed longwall mining in the affected area. |
| Management of roads. | • 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. | • Continuous. |
| **WASTE** | | |
| 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. | • Wastes will continue to be managed in accordance with the Integra Underground Procedure PRO_0381 - Waste Management, including the following.<br>• Reuse of mine water for dust suppression at the Integra Underground and Open Cut, in the CHPP and at neighbouring mines.<br>• All waste oils will be pumped into on site storage tanks for subsequent transfer to a registered waste disposal company.<br>• Old batteries will be stored in a designated bin prior to collection by a licensed contractor.<br>• All scrap steel will be stored in dedicated skips and sold to scrap steel merchants for recycling. | • Continuous, as required. |

| *Desired Outcome* | *Existing or Proposed Actions* | *Timing* |
|---|---|---|
| | • Bulk chemical containers will be returned to suppliers for reuse as part of the supply agreement.<br>• Pallets will be collected by a recycling contractor.<br>• Colour-coded recycling containers will be placed in identified areas for collection of cardboard and paper products and collected regularly by licensed contractors / recyclers.<br>• 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.<br>• Sludge from the aerated wastewater systems will be pumped out as required by contractors and disposed of to a licensed facility.<br>• Hazardous materials will be stored in accordance with Australian Standards.<br>• Old paints /preservatives, disused chemicals, solvents and coolants will be stored in allocated areas prior to being removed by a licensed hazardous water contractor.<br>• Liquid waste from parts washers will be stored in 200L containers for removal by licensed waste contractors.<br>• Waste oil filters will be taken to a recycling facility by a registered waste disposal contractor.<br>• Materials containing liquids will be removed by a licensed contractor for recycling or disposal at a licensed waste management facility.<br>• Domestic wastes and maintenance consumables will be separated and collected by waste contractors. | |
| **REHABILITATION** | | |
| That effective rehabilitation is undertaken at the completion of mining. | • Rehabilitation associated with proposed mining will be undertaken in accordance with the relevant MOP, REMP, Extraction Plans and SMPs. | • Following the completion of mining in the affected area. |
| **SOCIO-ECONOMIC**<br>Net benefits of the proposal sufficiently outweigh potential adverse impacts. | • 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. | • Following commencement of proposed longwall mining in the affected area. |