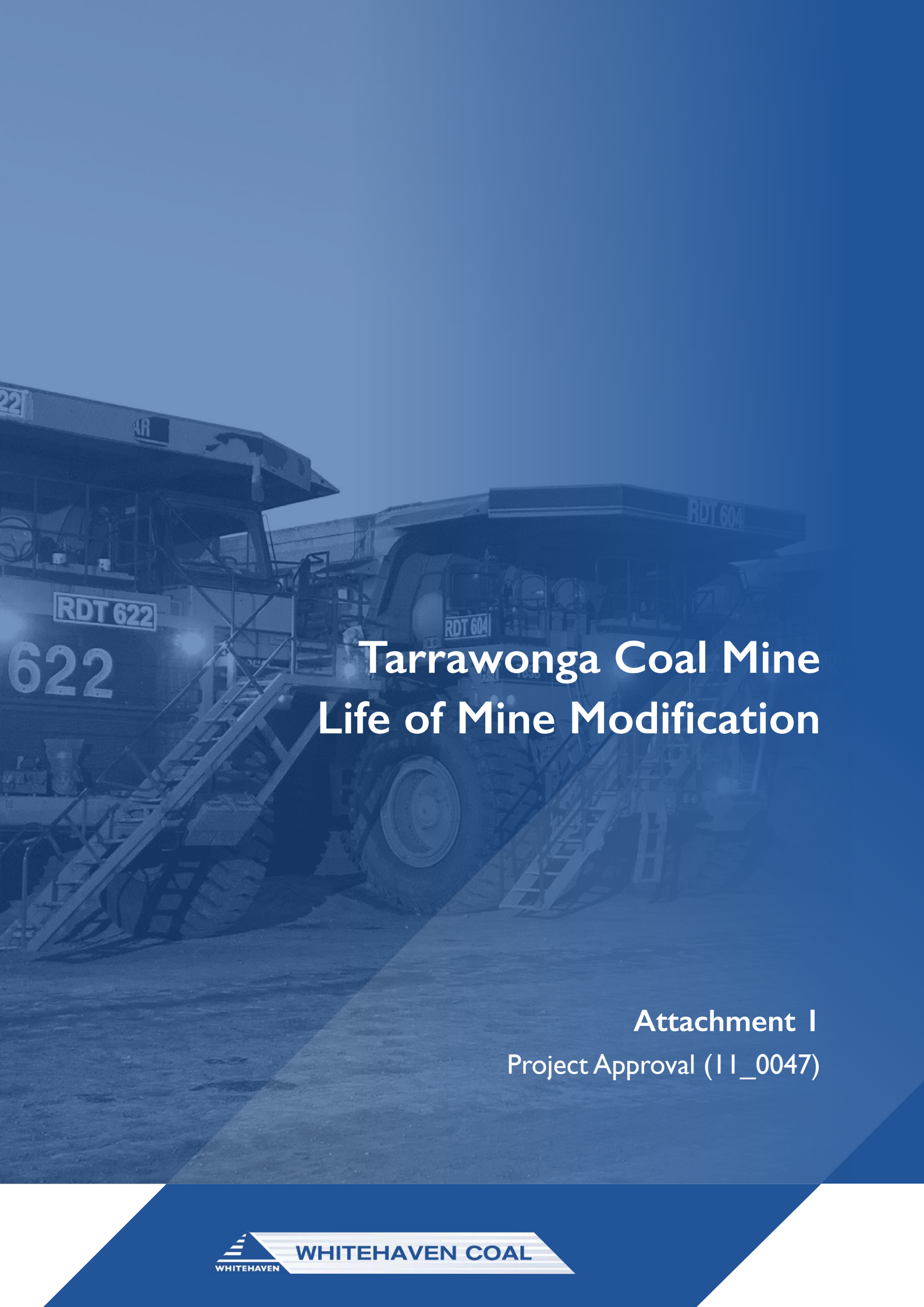




Tarrawonga Coal Mine Life of Mine Modification

Attachment I
Project Approval (II_0047)



WHITEHAVEN COAL

Project Approval

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

As delegate of the Minister for Planning and Infrastructure, the Planning Assessment Commission of NSW approves the project application referred to in schedule 1, subject to 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 project.

Gabrielle Kibble AO
Member of the Commission

Brian Gilligan
Member of the Commission

Joe Woodward PSM
Member of the Commission

Sydney

22 January 2013

Blue Type represents 2014 modification

Red type represents 2016 modification

Green Type represents February 2017 modification

Orange Type represents May 2017 Modification

Purple Type represents August 2017 Modification

Pale Blue Type represents October 2018 Modification

SCHEDULE 1

Application Number:	11_0047
Proponent:	Tarrawonga Coal Pty Limited
Approval Authority:	Minister for Planning and Infrastructure
Land:	See Appendix 1
Project:	Tarrawonga Coal Project

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DEFINITIONS

Annual review	The review required by condition 4 of schedule 5
Approved haulage route	The route used to transport coal from the Project and the Rocglen and Vickery coal mines to the Whitehaven CHPP, including the use of sections of the public road network, as shown in Figure 4 of Appendix 2
BCA	Building Code of Australia
Biodiversity offset strategy	The biodiversity conservation and enhancement strategy described in the EA, required by condition 40 and 42 of schedule 3 of this approval and depicted conceptually in the figure in Appendix 7
Blast misfire	The failure of one or more holes in a blast pattern to initiate
Boggabri coal mine	The Boggabri coal mine (MP 09_0182)
Boggabri rail spur line	The railway line between the Narrabri-Werris Creek railway line and the Boggabri coal mine
CCC	Community Consultative Committee
CEEC	Critically endangered ecological community, as defined under the TSC Act or EPBC Act
CHPP	Coal Handling and Preparation Plant
Coal Rejects	Coarse, fine and blended coarse and fine waste material from the processing of coal at the Whitehaven CHPP
Conditions of this approval	Conditions contained in schedules 1 to 5 inclusive
Council	Narrabri Shire Council
Cumulative haulage	The total amount of ROM coal transported from the Project and the Rocglen and Vickery coal mines
Day	The period from 7am to 6pm Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
DoEE	Commonwealth Department of the Environment and Energy
Dol Lands & Water	NSW Department of Industry – Lands and Water Division
DRG	Division of Resources and Geosciences within the Department
EA	The <i>Tarrawonga Coal Project Environmental Assessment</i> dated January 2012, associated response to submissions titled <i>Tarrawonga Coal Project Environmental Assessment - Response to Submissions (A and B)</i> dated May 2012; and the <i>Preferred Project Report</i> dated September 2012; as modified by: • <i>Whitehaven ROM Coal Haulage modification</i>, dated February 2014, and associated response to submissions titled <i>Whitehaven ROM Coal Haulage Modification – Response to Submissions</i>, dated April 2014; • <i>Whitehaven Coal Limited – Tarrawonga Coal Mine Rejects Disposal Modification (mod 2) and Environmental Assessment</i>, dated 22 July 2016; • <i>Whitehaven Temporary Road Haulage Increase ROM Coal Haulage Modification (MOD3)</i>, dated October 2016, associated response to submissions titled <i>Whitehaven ROM Coal Haulage Modification – Response to Submissions</i>, dated November 2016, and <i>Kamilaroi Highway Review, Reference #N106011, GTA Consultants</i>, dated 24 November 2016; • <i>Tarrawonga Coal Mine Sound Power Level Modification Environmental Assessment</i>, dated January 2017, and associated response to the Department dated 19 April 2017; and • <i>Tarrawonga Coal Mine Open Cut Augmentation Modification Environmental Assessment</i>, dated June 2017. • <i>Whitehaven Temporary Road Haulage Modification Environmental Assessment</i>, dated September 2018
EEC	Endangered ecological community, as defined under the TSC Act or EPBC Act
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	Environment Protection Authority
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence issued under the POEO Act
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build or carry out
Heritage item	An item as defined under the <i>Heritage Act 1977</i> and/or an Aboriginal Object or Aboriginal Place as defined under the <i>National Parks and</i>

Incident	<i>Wildlife Act 1974</i> 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
Kamilaroi Highway overpass	A section of private haul road to be developed over the Kamilaroi Highway, providing access from Blue Vale Road directly to the Whitehaven CHPP access road, and to be constructed as part of the Vickery Coal Project (SSD 5000)
Land	As defined in the EP&A Act, except where the term is used in the noise and air quality conditions in schedules 3 and 4 of this approval, where it is defined as 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
Leard Forest mining precinct	The area incorporating the existing and proposed coal mining operations centred around Leard Community Conservation Area (CCA) 4 including the Tarrawonga coal mine, Boggabri coal mine and Maules Creek coal mine
LLS	Local Land Services
LPB	Low permeability barrier to be constructed between the mine and Goonbri Creek
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Mine water	Water that accumulates within, or drains from, active mining areas, emplacements, stockpiles, tailings dams and infrastructure areas, synonymous with dirty water
Mining operations	Includes the removal of overburden and extraction, processing, handling, storage and transportation of coal on site as well as the receipt and disposal of coal rejects from the Whitehaven CHPP
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the project
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	NSW Office of Environment and Heritage
PAC	Planning Assessment Commission
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or a mining company (or its subsidiary)
Project	The project as described in the EA
Proponent	Tarrawonga Coal Pty Limited, or any person who seeks carry out the approved project under this approval
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, 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 restoration of land disturbed by the project to a good condition and for the purpose of establishing a safe, stable and non-polluting environment
RMS	Roads and Maritime Services
Rocglen coal mine	The Rocglen Extension Project (MP 10_0015)
ROM coal	Run-of-mine coal
Secretary	Secretary of the Department, or nominee
Site	The land described in Appendix 1
Statement of commitments	The Proponent's commitments in Appendix 4
TSC Act	<i>Threatened Species Conservation Act 1995</i>
Vickery coal mine	The Vickery Coal Project (SSD 5000)
VPA	Voluntary Planning Agreement
Whitehaven CHPP	Whitehaven Coal Handling and Preparation Plant near Gunnedah

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this approval, the Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the project.

TERMS OF APPROVAL

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

Notes:

- The general layout of the project is shown in Appendix 2; and
- The statement of commitments is reproduced in Appendix 4.

3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent shall comply with any reasonable requirement/s of the [Secretary](#) arising from the Department's assessment of:
 - (a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this approval (including any stages of these documents);
 - (b) any review, reports or audits commissioned by the Department regarding compliance with this consent; and
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON APPROVAL

Mining Operations

5. The Proponent may carry out mining operations on the site until the end of December 2030.

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 other respects - other than the right to conduct mining operations - until the rehabilitation of the site and these additional undertakings have been carried out satisfactorily.

Coal Extraction

6. The Proponent shall not extract more than 3 million tonnes of ROM coal from the site in any calendar year.

Coal Transport

7. For the period up until the commissioning of the Kamilaroi Highway overpass, the Proponent:
 - (a) shall not transport more than 3 million tonnes of ROM coal from the site in any calendar year;
 - (b) may transport up to 150,000 tonnes of this ROM coal from the site in any calendar year for direct distribution to domestic markets via the approved haulage route to the Kamilaroi Highway;
 - (c) shall transport all remaining coal from the site to the Whitehaven CHPP via the approved haulage route;
 - (d) shall, together with the owners of the Rocglen and Vickery coal mines, ensure that the cumulative haulage of coal along the approved haulage route does not exceed 4.0 million tonnes per year during calendar years 2017 and 2018; and
 - (e) shall, together with the owners of the Rocglen and Vickery coal mines, ensure that the cumulative haulage of coal along the approved haulage route does not exceed 3.5 million tonnes each year during all other calendar years.

Note: For the avoidance of doubt, the total amount of coal permitted to be transported from the site by road in any calendar year is 3 million tonnes.

8. For the period following the commissioning of the Kamilaroi Highway overpass, the Proponent:
 - (a) shall not transport more than 3 million tonnes of ROM coal from the site in any calendar year;
 - (b) may transport up to 150,000 tonnes of this ROM coal from the site in any calendar year for direct distribution to domestic markets via the approved haulage route to the Kamilaroi Highway;
 - (c) shall transport all remaining coal from the site to the Whitehaven CHPP via the approved haulage route and the Kamilaroi Highway overpass; and
 - (d) shall, together with the owners of the Rocglen and Vickery coal mines, ensure that the cumulative haulage of coal along the approved haulage route does not exceed 4.5 million tonnes.

Notes:

- *For the avoidance of doubt, the total amount of coal permitted to be transported from the site by road in any calendar year is 3 million tonnes.*
- *For the avoidance of doubt, while any ROM coal transported from the site to the Whitehaven CHPP must use the Kamlaroi Highway overpass (once commissioned), this requirement does not apply to the transport of ROM coal directly to domestic markets or the transport of gravel off site.*

9. The Proponent shall only transport coal from the site or receive coal reject from the Whitehaven CHPP by truck between the hours of:
- (a) 6 am to 9.15 pm Monday to Friday;
 - (b) 7 am to 5.15 pm Saturday; and
 - (c) at no time on Sundays or public holidays.
10. Within 6 months of the Boggabri rail spur line and Boggabri CHPP being commissioned, and every 2 years thereafter, the Proponent shall use all reasonable efforts to reach an agreement with the owners of the Boggabri coal mine to use this infrastructure to process and transport coal from the site, to the satisfaction of the Secretary.

If an agreement is reached to transport coal via the Boggabri rail spur line, the Proponent:

- (a) shall not transport more than 3 million tonnes of ROM coal from the site in any calendar year;
- (b) may transport up to 150,000 tonnes of this ROM coal from the site in any calendar year for direct distribution to domestic markets by road via the approved haulage route to the Kamlaroi Highway; and
- (c) shall transport all remaining coal from the site via the Boggabri rail spur line.

Coal Rejects Transport

10A. The Proponent shall not receive more than 700,000 tonnes of coal rejects on the site in any calendar year.

10B. The Proponent shall ensure all coal rejects transported to the site from the Whitehaven CHPP are transported via the approved haulage route.

Gravel Extraction and Transport

11. The Proponent shall not extract more than 90,000m³ of gravel from the site for distribution off-site in any calendar year.
12. The Proponent may transport up to 90,000m³ of gravel from the site by truck in any calendar year. This gravel is to be transported from the site to the Kamlaroi Highway via the [approved](#) haulage route.
13. The Proponent shall only transport gravel from the site by truck between 7 am and 6 pm Monday to Saturday.

SURRENDER OF EXISTING DEVELOPMENT CONSENT

14. By the end of December 2013, or as otherwise agreed by the [Secretary](#), the Proponent shall surrender the existing development consent (DA-88-4-2005) for the Tarrawonga Coal Mine in accordance with Section 104A of the EP&A Act.

Prior to the surrender of this development consent, the conditions of this approval shall prevail to the extent of any inconsistency with the conditions of the development consent.

STRUCTURAL ADEQUACY

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

Notes:

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

DEMOLITION

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

PROTECTION OF PUBLIC INFRASTRUCTURE

17. Unless the Proponent and the applicable authority agree otherwise, the Proponent shall:

- (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; 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.

Note: This condition does not apply to any damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

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

UPDATING & STAGING STRATEGIES, PLANS OR PROGRAMS

- 19. With the approval of the Secretary, the Proponent may submit any strategies, plans or programs required by this approval on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this approval are updated on a regular basis, 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 prepare any revised strategy, plan or program without undertaking consultation with all parties under the applicable condition of this 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.*
- *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.*

- 20. The Proponent shall continue to implement the existing strategies, plans or programs that apply to any development on site under project approval DA-88-4-2005, until they are replaced by an equivalent strategy, plan or program approved under this approval.

COMMUNITY ENHANCEMENT

- 21. By the end of March 2013, unless otherwise agreed by the [Secretary](#), the Proponent shall enter into a planning agreement with Council in accordance with:
 - (a) Division 6 of Part 4 of the EP&A Act; and
 - (b) the terms of the Proponent's offer provided in Appendix 3.
-

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

ACQUISITION ON REQUEST

1. Upon receiving a written request for acquisition from an owner of the privately-owned land listed in Table 1, the Proponent shall acquire the land in accordance with the procedures in conditions 8 and 9 of schedule 4.

Table 1: Land subject to acquisition upon request

Acquisition Basis	Property ID
Noise & Air	44, 45, 49
Noise	43, 47

Notes:

- To interpret the locations referred to in Table 1 see the applicable figure(s) in Appendix 5.
- Properties 43, 44 and 45 also have acquisition rights under the approval for the Boggabri coal mine, and/or the existing consent (DA 88-4-2005) for the Tarrawonga mine. The Proponent may acquire these properties on an equitable basis with the owner of the Boggabri mine.
- For the purposes of acquisition under this condition, parcels of land that are in close proximity and operated as a single agricultural enterprise should be included as part of the land to be acquired. Where the Proponent and the owner(s) cannot agree on 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 8 and 9 of Schedule 4 shall be final.

ADDITIONAL NOISE AND/OR AIR QUALITY MITIGATION ON REQUEST

2. Upon receiving a written request from the owner of any residence on the land listed in Table 1, the Proponent shall implement additional noise and/or air quality mitigation measures (such as double glazing, insulation, air filters, a first flush roof water drainage system and/or air conditioning) at the residence in consultation with the owner. These measures must be reasonable and feasible and directed towards reducing the noise and/or air quality impacts of the project on 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.

NOISE AND VIBRATION

Noise Criteria

3. Except for the noise-affected land in Table 1, the Proponent shall ensure that operational noise generated by the project does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Noise criteria dB(A)

Land	Day, Evening & Night <i>L_{Aeq}(15 min)</i>	Night <i>L_{A1}(1 min)</i>
All other privately-owned residences	35	45

Notes:

- Operational noise includes noise from the mining operations and the use of private roads ([excluding the Kamilaroi Highway overpass](#)) and rail spurs.
- Noise is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions (also see condition 13)), of the NSW Industrial Noise Policy.

However, these noise criteria do not apply if the Proponent has an agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

Noise Acquisition Requirements - Residences

4. If the owner(s) of a privately-owned residence, that is not listed in Table 1, have reason to believe that operational noise from the project is causing the criteria in Table 2 to be exceeded at the residence, the owner(s) can request an independent noise impact assessment for the residence. The request shall be made in writing to the [Secretary](#). If the [Secretary](#) considers that a noise impact assessment is warranted, then the Proponent shall commission the assessment.

If the noise impact assessment determines that the noise generated by the project causes sustained exceedances, or is likely to cause sustained exceedances, of the criteria in Table 2, the owner(s) can make a written request to the Proponent for one of the following:

- (a) mitigation (such as double glazing, insulation and air conditioning) at the residence in consultation with the owner(s). These measures must be reasonable and feasible and directed towards reducing the noise impacts of the project on the residence. If within 3 months of receiving this request from the owner(s), the Proponent and owner(s) 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; or
- (b) acquisition of the residence and land in accordance with the procedures in conditions 8 and 9 of Schedule 4.

Upon receiving a written request from the owner(s), the Proponent must undertake whichever option has been requested by the owner(s).

However, this condition does not apply if the Proponent has an agreement with the owner(s) of the relevant residence to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

Notes:

1. *For the purposes of this condition a privately-owned residence is defined as a residence not owned by a mining company that: is regularly occupied; or is an existing residence that is not regularly occupied but for which a valid development consent exists; or is a proposed residence for which a development application has been lodged with the relevant authority prior to the date of this approval.*
2. *For the purposes of acquisition under this condition, parcels of land that are in close proximity and operated as a single agricultural enterprise should be included as part of the land to be acquired. Where the Proponent and the owner(s) cannot agree on 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 8 and 9 of Schedule 4 shall be final.*
3. *The noise assessment must be undertaken by a suitably qualified, experienced and independent person, whose appointment has been approved by the [Secretary](#) and include either:*
 - a. *sufficient monitoring at the affected residence to allow for assessment of the impacts under a range of meteorological conditions (including adverse conditions) likely to be experienced at the residence; or*
 - b. *sufficient monitoring to allow reliable prediction of the likely impacts under the range of meteorological conditions (including adverse conditions) likely to be experienced at the residence.*
4. *Monitoring should be conducted in accordance with the requirements of the NSW Industrial Noise Policy.*
5. *Where predictions of likely impacts is to be used, either in substitution for, or in conjunction with, direct measurement of noise impacts at the residence, it must be based on sufficient monitoring data to provide a reliable estimate of the impacts (including under adverse meteorological conditions) and be derived using standard noise modelling techniques accepted by the EPA.*
6. *The Proponent shall ensure that the requested noise impact assessment is submitted to the [Secretary](#) within 3 months of the [Secretary's](#) decision that the assessment was warranted. The Proponent shall also provide a copy of the assessment to the owner(s) of the residence at the same time it is submitted to the [Secretary](#).*

Noise Acquisition Requirements - Land

5. If the owner(s) of land containing a privately owned residence, which is not listed in Table 1, have reason to believe that operational noise from the project is causing noise levels to exceed 40 dB(A) $L_{Aeq}(15 \text{ min})$ over more than 25% of that land, the owner(s) can request an independent noise impact assessment for the land. The request shall be made in writing to the [Secretary](#). If the [Secretary](#) considers that a noise impact assessment is warranted, then the Proponent shall commission the assessment.

If the noise impact assessment determines that the noise generated by the project causes sustained exceedances, or is likely to cause sustained exceedances, of the 40 dBA criteria, the owner(s) can make a written request to the Proponent for acquisition of the residence and land in accordance with the procedures in conditions 8 and 9 of Schedule 4.

Upon receiving a written request from the owner(s), the Proponent must purchase the residence and land in accordance with the procedures in conditions 8 and 9 of Schedule 4.

However, this condition does not apply if the Proponent has an agreement with the owner(s) of the relevant residence to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

Note: The notes to condition 4 of this Schedule also apply to this condition.

Cumulative Noise Criteria

6. Except for the land listed in Table 1, the Proponent shall ensure that the operational noise generated by the project combined with the noise generated by other mines does not exceed the criteria in Table 3 at any residence on privately-owned land.

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

Land	Day/Evening/Night L_{Aeq} (period)
All privately-owned land	40

Notes:

- Cumulative noise is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions(also see condition 13)), of the NSW Industrial Noise Policy.
- Operational noise includes noise from the mining operations and the use of private roads (excluding the Kamilaroi Highway overpass) and rail spurs.

Cumulative Noise Acquisition Requirements

7. If the owner(s) of a privately-owned residence, which is not listed in Table 1, reasonably believes that the noise limits in Table 3 are being exceeded at the residence and that the exceedance is caused by operational noise from the project and one or more other mines (including use of private roads or rail spurs), the owner(s) can request an independent noise impact assessment for the residence. The request shall be made in writing to the [Secretary](#). If the [Secretary](#) considers that a noise impact assessment is warranted, then the Proponent shall commission the assessment.

Where the noise impact assessment determines that the cumulative noise generated by the project combined with the noise from the other mine(s) causes, or is likely to cause, sustained exceedances of the criteria in Table 3, then the owner(s) can make a written request to the Proponent for one of the following:

- mitigation (such as double glazing, insulation and air conditioning) at the residence in consultation with the owner(s). These measures must be reasonable and feasible and directed towards reducing the noise impacts of the project on the residence. If within 3 months of receiving this request from the owner(s), the Proponent and owner(s) 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; or
- acquisition of the residence and land in accordance with the procedures in conditions 8 and 9 of Schedule 4.

Upon receiving a written request from the owner(s), the Proponent must undertake whichever option has been requested by the owner(s).

However, this condition does not apply if the Proponent has an agreement with the owner(s) of the relevant residence to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

The Proponent may seek to recover an equitable share of the costs incurred from the other mines contributing to the cumulative impact. Unless otherwise agreed between the mines, the proportional contributions should be based on expert analysis of the monitoring results to assess relative contribution to the impact. In the event of a dispute between the mines the Proponent, or one of the contributing mines, may submit the matter to the [Secretary](#) for resolution. The [Secretary's](#) decision shall be final.

Notes:

- The notes to condition 4 of this Schedule also apply to this condition.
- The noise impact assessment shall include assessment of the relative contribution of the mines to the impact at the residence.

Road Traffic Noise Criteria

8. The Proponent, together with the owners of the Rocglen and Vickery coal mines, shall ensure that the noise generated on public roads by the Project and the other mines, does not exceed the criteria in Table 4 at any existing residence on privately-owned land.

Table 4: Road traffic noise criteria dB(A)

Land	Day and Evening L_{Aeq} (15 hour)	Night L_{Aeq} (9 hour)
All privately-owned residences	60	55

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

Note: Traffic noise generated by the Project is to be measured in accordance with the relevant procedures in the NSW Road Noise Policy.

Attenuation of Plant

9. The Proponent shall:
 - (a) ensure that:
 - all trucks, dozers, drills and excavators purchased for use on the site after the date of this approval are commissioned as noise suppressed (or attenuated) units;
 - improvements are made to existing noise suppression equipment as improved technology becomes available where reasonable and feasible; and
 - (b) monitor and report on the implementation of these requirements annually on its website.
10. The Proponent shall:
 - (a) conduct an annual testing program of the plant on site;
 - (b) restore the effectiveness of any attenuation if it is found to be defective; and
 - (c) report on the results of any testing and/or attenuation work within the Annual Review.

Operating Conditions

11. The Proponent shall:
 - (a) implement best management practice to minimise all operational, low frequency, road and rail traffic noise levels associated with the project;
 - (b) operate a comprehensive on-site noise management system that uses a combination of predictive 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 noise mitigation measures to ensure compliance with the relevant conditions of this approval;
 - (c) maintain the effectiveness of noise suppression equipment on plant at all times and ensure defective plant is not operationally used until fully repaired;
 - (d) ensure that noise attenuated plant is deployed preferentially in locations near to sensitive receivers;
 - (e) minimise the noise impacts of the project during meteorological conditions under which the noise limits in this approval do not apply (see condition 13);
 - (f) ensure that project related trains on the Boggabri spur line only use locomotives that are approved to operate on the NSW rail network in accordance with the noise limits in ARTC's EPL (No. 3142);
 - (g) use its best endeavours to ensure that project-related rolling stock supplied by service providers on the Boggabri rail spur line is designed, constructed and maintained to minimise noise; and
 - (h) co-ordinate the noise management on site with the noise management at other mines within the Leard Forest Mining Precinct, to minimise the cumulative noise impacts of these mines, to the satisfaction of the [Secretary](#).

Noise Management Plan

12. The Proponent shall prepare and implement 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 be submitted to the [Secretary](#) for approval by the end of May 2013;
 - (b) describe the measures that would be implemented to ensure:
 - best management practice is being employed;
 - the noise impacts of the project are minimised during meteorological conditions under which the noise limits in this approval do not apply; and
 - compliance with the relevant conditions of this approval;
 - (c) describe the proposed noise management system in detail;
 - (d) include a risk/response matrix to codify operational responses to varying levels of risk resulting from weather conditions and specific mining activities;
 - (e) include commitments to provide summary reports and specific briefings at CCC meetings on issues arising from noise monitoring;
 - (f) [describe the measures that would be implemented to ensure the noise impacts from the operation of the Kamilaroi Highway overpass are minimised as far as practicable;](#)
 - (g) include a monitoring program that:
 - uses attended monitoring to evaluate the performance of the project [against all noise criteria in this approval](#), including a minimum of four days attended monitoring per quarter at locations agreed to by the [Secretary](#), or more regularly where required;
 - uses real-time monitoring to support the proactive and reactive noise management system on site;
 - includes monitoring of inversion strength at an appropriate sampling rate to determine compliance with noise limits;
 - evaluates and reports on the effectiveness of the noise management system on site;
 - provides for the annual validation of the noise model for the project (including the tenth percentile methodology); and
 - (h) includes a Leard Forest Mining Precinct Noise Management Strategy, that has been prepared in consultation with other coal mines in the Precinct, to minimise the cumulative noise impacts of all mines within the Precinct, and includes:

- a description of the measures that would be implemented to ensure that the noise management of the mines is properly co-ordinated to ensure compliance with the relevant noise criteria;
- a suitable monitoring network for the precinct;
- protocols for data sharing; and
- procedures for identifying and apportioning the source/s and contribution/s to cumulative noise impacts for the operating mines and other sources, using the noise and meteorological monitoring network and appropriate investigative tools.

Note: The Leard Forest Mining Precinct Noise Management Strategy can be developed in stages and will need to be subject to ongoing review dependent upon the determination and commencement of other mining projects in the area.

Noise Measurement

13. Where conditions in this approval refer to measurement of noise within the context of the NSW Industrial Noise Policy the inversion class to be applied to the project is Class G.

However, the Proponent may undertake an investigation to determine whether a proposal for change in this classification could be considered for approval by the [Secretary](#). Any such investigation must be conducted in consultation with the EPA and be conducted by a suitably qualified person whose appointment has been endorsed by the EPA and approved by the [Secretary](#). The report and recommendation must be submitted to the EPA for endorsement prior to submission to the [Secretary](#). If the [Secretary](#) is satisfied that the recommendation is reasonable, then the [Secretary](#) may amend the inversion class applying to the project under this approval.

BLASTING

Blasting Criteria

14. The Proponent shall ensure that blasting does not cause any exceedance of the criteria in Table 5.

Table 4: Blasting criteria

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Residence on privately-owned land	120	10	0%
	115	5	5% of the total number of blasts over a period of 12 months
All public infrastructure	-	50 (or a limit determined by the structural design methodology in AS 2187.2-2006, or its latest version, to the satisfaction of the Secretary)	0%

However, these criteria do not apply if the Proponent has a written agreement with the relevant owner or infrastructure provider/owner to exceed the limits in Table 5, and the Proponent has advised the Department in writing of the terms of this agreement.

Blasting Hours

15. The Proponent shall only carry out blasting on the site between 9 am and 5 pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the written approval of the [Secretary](#).

Blasting Frequency

16. The Proponent may carry out a maximum of:
- 1 blast a day; unless an additional blast is required following a blast misfire; and
 - 4 blasts a week, averaged over a calendar year, for the project.

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

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

Property Inspections

17. If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of the approved open-cut pit on site, for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection report updated, then within 2 months of receiving this request the Proponent shall:
- commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties, to:
 - establish the baseline condition of any buildings and/or structures on the land, or update the previous property inspection report; and
 - identify any measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures; and
 - give the landowner a copy of the new or updated property inspection report.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or landowner disagrees with the findings of the independent property investigation, either party may refer the matter to the [Secretary](#) for resolution.

Property Investigations

18. If any owner of privately-owned land within 2 kilometres of blasting operations, or any other landowner nominated by the [Secretary](#), claims that the buildings and/or structures on his/her land have been damaged as a result of blasting on site, then within 2 months of receiving this claim in writing from the landowner, the Proponent shall:
- commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties, to investigate the claim; and
 - give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent shall repair the damages to the satisfaction of the [Secretary](#).

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Proponent or landowner disagrees with the findings of the independent property investigation, either party may refer the matter to the [Secretary](#) for resolution.

Operating Conditions

19. During mining operations on site, the Proponent shall:
- implement best practice blasting management to:
 - protect the safety of people and livestock in the surrounding area;
 - protect public or private infrastructure/property in the surrounding area from any damage;
 - minimise the dust and fume emissions of any blasting; and
 - minimise blasting impacts on heritage items in the vicinity of the site;
 - co-ordinate the timing of blasting on site with the timing of blasting at other mines within the Leard Forest Mining Precinct to minimise the cumulative blasting impacts of the mines; and
 - operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site, to the satisfaction of the [Secretary](#).
20. The Proponent shall not undertake blasting on-site within 500 metres of:
- any public road without the approval of Council; or
 - any land outside of the site not owned by the Proponent, unless:
 - the Proponent has a written agreement with the relevant landowner to allow blasting to be carried out closer to the land, and the Proponent has advised the Department in writing of the terms of this agreement; or
 - the Proponent has:
 - demonstrated that the blasting can be carried out closer to the land without compromising the safety of the people or livestock on the land, or damaging the buildings and/or structures on the land; and
 - updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the land,
- to the satisfaction of the [Secretary](#).

Blast Management Plan

21. The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the [Secretary](#). This plan must:
- be submitted to the [Secretary](#) for approval by the end of May 2013;
 - be prepared in consultation with the EPA and interested members of the local community who would potentially be affected by blasting;
 - propose and justify any alternative ground vibration limits for public infrastructure in the vicinity of the site;
 - describe the measures that would be implemented to ensure:
 - best management practice is being employed; and
 - compliance with the relevant conditions of this approval;
 - include a road closure protocol for blasting within 500 metres of a public road, that has been prepared in consultation with Council;
 - include a specific blast fume management protocol to demonstrate how emissions will be minimised, including risk management strategies if blast fumes are generated;
 - include a monitoring program for evaluating blasting performance, which includes:
 - compliance with the applicable criteria; and
 - minimising blast fume emissions; and
 - include a Leard Forest Mining Precinct Blast Management Strategy, that has been prepared in consultation with other mines within the Leard Forest Mining Precinct, to minimise cumulative blasting impacts.

Note: The Leard Forest Mining Precinct Blast Management Strategy can be developed in stages, and will need to be subject to ongoing review dependent upon the determination of and commencement of other mining projects in the area.

AIR QUALITY & GREENHOUSE GAS

Odour

22. Unless otherwise authorised by an EPL, the Proponent shall ensure that no offensive odours are emitted from the site, as defined under the POEO Act.

Greenhouse Gas Emissions

23. The Proponent shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the [Secretary](#).

Air Quality Criteria

24. The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are implemented so that particulate matter emissions generated by the project do not cause exceedances of the criteria in Table 6, Table 7 and Table 8 at any residence-on privately-owned land or on more than 25 percent of any privately-owned land.

The assessment acknowledges that it may not be reasonable and feasible to prevent exceedance of the PM₁₀ criteria in Table 6 at property 45 and exceedance of the criteria in Table 7 in year 16 at property 49. (To interpret the property locations referred to see the applicable figure(s) in Appendix 5.)

Table 5: Long-term criteria for particulate matter

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

Table 6: Short-term criteria for particulate matter

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

Table 7: Long-term criteria for deposited dust

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

Notes to Table 6, Table 7 and Table 8:

^a Total impact (ie incremental increase in concentrations due to the project plus background concentrations due to all other sources);

^b Incremental impact (ie 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.

^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity agreed by the [Secretary](#).
"Reasonable and feasible avoidance measures" includes, but is not limited to, the operational requirements in conditions 28 and 29 to develop and implement a real-time air quality management system that ensures operational responses to the risks of exceedance of the criteria.

Mine-Specific Air Quality Criteria

25. The Proponent shall ensure that particulate matter emissions generated by the project do not exceed the criteria listed in Table 9 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, except on property 49 in year 16.

Table 8: Short-term criteria for particulate matter

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

Note:

As provided by the EP&A Act, the criterion in Table 8 may be amended to a more stringent criterion in an EPL, after the first review of the EPL under section 78 of the POEO Act.

Air Quality Acquisition Criteria

26. If particulate matter emissions generated by the project exceed the criteria, or contribute to an exceedance of the relevant cumulative criteria, in Table 10, Table 11 or Table 12, at any residence on privately-owned land or on more than 25 percent of any privately-owned land, then upon receiving a written request for acquisition from the landowner the Proponent shall acquire the land in accordance with the procedures in conditions 8 and 9 of schedule 4.

Table 9: Long term land acquisition criteria for particulate matter

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

Table 10: Short term land acquisition criteria for particulate matter

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

Table 11: Long term land acquisition criteria for deposited dust

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

Notes to Table 10, Table 11 and Table 12:

^a Total impact (ie incremental increase in concentrations due to the project plus background concentrations due to all other sources);

^b Incremental impact (ie 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;

^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, or any other activity agreed by the [Secretary](#).

Mine-owned Land

27. The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are implemented so that particulate matter emissions generated by the project do not exceed the criteria in Table 6, Table 7 and Table 8 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 project-related land 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 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

28. The Proponent shall:
- (a) implement best practice [air quality management practices on site, including all reasonable and feasible measures to minimise](#) odour, fume and dust emissions of the project;
 - (b) operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting, predictive and real time air dispersion modelling and real-time air quality monitoring data to guide the day-to-day planning of mining operations and implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this approval;
 - (c) manage PM_{2.5} levels in accordance with any requirements of an EPL;
 - (d) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d under Table 8);
 - (e) minimise any visible air pollution [generated by the project](#);
 - (f) minimise the surface disturbance of the site generated by the project; and
 - (g) co-ordinate the air quality management on site with the air quality management at other mines within the Leard Forest Mining Precinct to minimise the cumulative air quality impacts of the mines,
- to the satisfaction of the [Secretary](#).

Air Quality and Greenhouse Gas Management Plan

29. The Proponent shall prepare and implement an Air Quality and Greenhouse Gas Management Plan for the project to the satisfaction of the [Secretary](#). This plan must:
- (a) be prepared in consultation with the EPA and be submitted to the [Secretary](#) for approval by the end of May 2013;
 - (b) describe the measures that would be implemented to ensure:
 - best practice management is being employed;
 - the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events; and
 - compliance with the relevant conditions of this approval;
 - (c) describe the proposed air quality management system;
 - (d) include a risk/response matrix to codify mine operational responses to varying levels of risk resulting from weather conditions and specific mining activities;
 - (e) include commitments to provide summary reports and specific briefings at CCC meetings on issues arising from air quality monitoring;
 - (f) include an air quality monitoring program that:
 - uses a combination of real-time monitors and supplementary monitors to evaluate the performance of the project;
 - adequately supports the proactive and reactive air quality management system;
 - includes PM_{2.5} monitoring;
 - includes monitoring of occupied mine-owned residences and residences on the air quality affected land in Table 1, subject to the agreement of the tenant and/or landowner;
 - evaluates and reports on the effectiveness of the air quality management system;

- includes sufficient random audits of operating responses to real time air quality management systems to determine the ongoing effectiveness of these responses in maintaining the project within the relevant criteria in this Schedule and the requirements of conditions 24 and 25, above;
 - includes a protocol for determining any exceedences of the relevant conditions in this approval; and
- (g) includes a Leard Forest Mining Precinct Air Quality Management Strategy that has been prepared in consultation with other coal mines in the Precinct to minimise the cumulative air quality impacts of all mines within the Precinct, that includes:
- systems and processes to ensure that all mines are managed to achieve their air quality criteria;
 - a shared environmental monitoring network and data sharing protocol;
 - control monitoring site(s) to provide real time data on background air quality levels (ie not influenced by mining in the Leard Forest Mining Precinct and representative of regional air quality);
 - a shared predictive and real time air dispersion model covering the Leard Forest Mining Precinct to be used for assessment of cumulative impacts, optimising location of the shared real time monitoring network, validation of air predictions and optimising mitigation measures; and
 - procedures for identifying and apportioning the source/s and contribution/s to cumulative air impacts for both mines and other sources, using the air quality and meteorological monitoring network and appropriate investigative tools such as modelling of post incident plume dispersion, dual synchronised monitors and chemical methods of source apportionment (where possible).

Notes:

- *The requirement for regionally based control sites can be further reviewed if a regional air monitoring network is implemented and operated by the EPA as recommended in the draft Strategic Regional Land Use Plan for New England North West.*
- *The Leard Forest Mining Precinct Air Quality Management Strategy can be developed in stages and will need to be subject to ongoing review dependent upon the determination of and commencement of other mining projects in the area.*
- *The management plan should be consistent with the EPA's guidance on Best Management Practice reporting and Reactive Particulate Management Strategies.*

METEOROLOGICAL MONITORING

30. For the life of the project, the Proponent shall 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*, unless a suitable alternative is approved by the [Secretary](#) following consultation with the EPA.

SOIL AND WATER

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

Water Supply

31. The Proponent shall ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of mining operations on site to match its available water supply, to the satisfaction of the [Secretary](#).

Compensatory Water Supply

32. The Proponent shall provide a compensatory water supply to any owner of privately-owned land whose water supply is adversely and directly impacted (other than a negligible impact) as a result of the project, in consultation with [Dol Lands & 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 to the loss attributed to the project. Equivalent water supply should be provided (at least on an interim basis) within 24 hours of the loss being identified.

If the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the [Secretary](#) for resolution.

If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent shall provide alternative compensation to the satisfaction of the [Secretary](#).

Surface Water Discharges

33. The Proponent shall ensure that all surface water discharges from the site comply with the discharge limits (both volume and quality) set for the project in any EPL.

Goonbri Creek Diversion and Low Permeability Barrier – Performance Objectives

34. The Proponent shall ensure that the project has no greater environmental consequences than predicted in the EA and complies with the performance objectives in Table 13, to the satisfaction of the [Secretary](#).

Table 12: Goonbri Creek and alluvial aquifer performance objectives

Feature	Objective
Goonbri Creek and the Upper Namoi alluvial aquifer	No more than negligible environmental consequences to the alluvial aquifer, including: - negligible change in groundwater levels; - negligible leakage through low permeability barrier; - negligible change in groundwater quality; and - negligible impact to other groundwater users.
Goonbri Creek diversion	Hydraulically and geomorphologically stable (including the low permeability barrier) Negligible change to off-site flooding characteristics (including flood levels, velocities and flood storage capacity) Riparian vegetation, habitat, energy management and dissipation, bedload transport, biophysical maintenance and pool holding capacity that is the same or better than existed prior to mining Revegetation of the riparian zone focused on establishment of self-sustaining vegetation characteristic of the Bracteate Honey myrtle community (as proposed in the EA)
Low permeability barrier, including associated flood bund	Hydraulically and geomorphologically stable The effectiveness of the Low Permeability Barrier shall be at least 10⁻⁸ metres/second Negligible change to off-site flooding characteristics (including flood levels, velocities and flood storage capacity) Provides suitable protection for flood events up to and including the Probable Maximum Flood.

Goonbri Creek Diversion and Flood Bund Concept Design Plan

35. The Proponent shall prepare and implement a Goonbri Creek Diversion and Flood Bund Concept Design Plan, to the satisfaction of the [Secretary](#). The plan must:
- be prepared in consultation with [Dol Lands & Water](#), OEH and the [LLS](#);
 - be submitted to the [Secretary](#) for approval by December 2016;
 - set out the vision statement for the creek diversion;
 - assess the surface water and groundwater quality, ecology, hydrological (including flooding) and geomorphic baseline conditions within the creek;
 - set out the construction program for the creek diversion and LPB, describing how the work would be staged, and integrated with mining operations;
 - describe the revegetation program for the creek diversion and the use of a range of suitable native species;
 - establish the water quality, ecology, hydrological (including flooding) and geomorphic performance and completion criteria for the creek diversion and LPB based on the assessment of baseline conditions; and

- (h) be revised in consultation with [Dol Lands & Water](#), OEH and the [LLS](#), and resubmitted for approval by the [Secretary](#) in response to the findings of the detailed technical design required in condition 36 and the Monitoring and Management Plan in condition 38.

Goonbri Creek Diversion and Low Permeability Barrier – Design and Construction

36. The Proponent shall design the Goonbri Creek diversion and LPB to the satisfaction of [Dol Lands & Water](#) and the [Secretary](#). The detailed designs must:
- (a) be designed by a suitably qualified and experienced expert/s;
 - (b) be endorsed by [Dol Lands & Water](#) and approved by the [Secretary](#) prior to the commencement of any works or construction on the Goonbri Creek diversion and LPB;
 - (c) be generally in accordance with the conceptual designs in the EA (and depicted in Appendix 6), and applicable Australian Standards (including AS 3798-2007);
 - (d) include detailed design, construction and engineering specifications, performance criteria and completion criteria;
 - (e) demonstrate that the design would achieve the relevant performance objectives and criteria; and
 - (f) demonstrate the LPB design would remain effective over an appropriate lifespan and would withstand mining operations, geological and weather events, decay and corrosive attack – including biological attack.
37. The Proponent shall:
- (a) construct the Goonbri Creek diversion and LPB prior to undertaking any mining operations within 200 metres of the Goonbri Creek alluvium, and at least 5 years prior to the planned mining in the alluvium; and
 - (b) within 2 months of the construction of the Goonbri Creek diversion and LPB, submit an as-executed report to the [Secretary](#) and [Dol Lands & Water](#), certified by a practising engineer, confirming that the diversion and barrier have been constructed:
 - in accordance with the concept design in the EA, applicable Australian Standards (including AS 3798-2007) and the approved design (see condition 36 above); and
 - in a manner that achieves the performance objectives in Table 13.

Notes:

- *The Goonbri Creek alluvium, diversion, conceptual low permeability barrier and flood bunds are shown in Appendix 6.*
- *The diversion and low permeability barrier may be constructed on a staged basis. In this case, the reports required under conditions 36 and 37 shall be submitted for each stage.*

Goonbri Creek Diversion and Low Permeability Barrier – Monitoring and Management Plan

38. The Proponent shall prepare and implement a Goonbri Creek Diversion and Low Permeability Barrier Monitoring and Management Plan to the satisfaction of the [Dol Lands & Water](#) and the [Secretary](#). The plan must:
- (a) be prepared by a suitably qualified and experienced expert/s;
 - (b) be endorsed by the [Dol Lands & Water](#) and approved to the [Secretary](#) prior to commencement of any works or construction on the Goonbri Creek diversion and LPB;
 - (c) describe the monitoring and maintenance procedures to be implemented and the scheduling of these procedures;
 - (d) demonstrate the monitoring system would be capable of timely detection of any failure or deficiency in the LPB and any impacts on Goonbri Creek and its associated alluvium;
 - (e) describe the contingency measures that would be implemented in the event of a failure or deficiency in the LPB, or other impact on Goonbri Creek and its associated alluvium; and
 - (f) identify the entity that would take responsibility for the future liabilities and costs associated with the long-term monitoring and maintenance of the LPB, flood bund, void and pit lake, and demonstrate that this entity's security and finances would be assured in the long term.

Water Management Plan

39. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the [Secretary](#). This plan must:
- (a) be prepared in consultation with OEH, [Dol Lands & Water](#) and [LLS](#), by suitably qualified and experienced person/s whose appointment has been approved by the [Secretary](#);
 - (b) be submitted to the [Secretary](#) for approval by the end of May 2013; and
 - (c) in addition to the standard requirements for management plans (see condition 3 of schedule 5), include a:
 - (i) Site Water Balance, that includes:
 - details of:
 - o sources and security of water supply, including contingency for future reporting periods;
 - o water use and management on site;
 - o any off-site water discharges;
 - o reporting procedures, including the preparation of a site water balance for each calendar year;

- a program to validate the surface water model, including monitoring discharge volumes from the site and comparison of monitoring results with modelled predictions; and
 - describes the measures that would be implemented to minimise clean water use on site;
- (ii) Surface Water Management Plan, that includes:
- detailed baseline data on surface water flows and quality in the water-bodies that could potentially be affected by the project;
 - detailed baseline data on soils within the irrigation area;
 - detailed baseline data on hydrology across the downstream drainage system of the Namoi River floodplain from the mine site to the Namoi River, including Barbers Lagoon and The Slush Holes;
 - a detailed description of the water management system on site, including the:
 - o clean water diversion systems;
 - o erosion and sediment controls (mine water system);
 - o mine water management systems including irrigation areas;
 - o discharge limits in accordance with EPL requirements; and
 - o water storages;
 - detailed plans, including design objectives and performance criteria for:
 - o design and management of final voids;
 - o design and management for the emplacement of reject materials, sodic and dispersible soils and acid or sulphate generating materials;
 - o the Goonbri Creek diversion and low permeability barrier;
 - o reinstatement of drainage lines on the rehabilitated areas of the site; and
 - o control of any potential water pollution from the rehabilitated areas of the site;
 - performance criteria for the following, including trigger levels for investigating any potentially adverse impacts associated with the project:
 - o the water management system;
 - o soils within the irrigation area;
 - o downstream surface water quality;
 - o downstream flooding impacts, including flood impacts due to the flood bunds required for the project; and
 - o stream and riparian vegetation health, including the Namoi River and its tributaries including Barbers Lagoon and The Slush Holes;
 - a program to monitor and assess:
 - o the effectiveness of the water management system;
 - o soils within the irrigation area;
 - o the effectiveness of the Goonbri Creek diversion and flood bunds (see conditions 34-38);
 - o surface water flows and quality in the watercourses that could be affected by the project; and
 - o downstream flooding impacts;
 - reporting procedures for the results of the monitoring program; and
 - a plan to respond to any exceedences of the performance criteria, and mitigate and/or offset any adverse surface water impacts of the project;
- (iii) Groundwater Management Plan, that includes:
- detailed baseline data of groundwater levels, yield and quality in the region, and privately-owned groundwater bores including a detailed survey/schedule of groundwater dependent ecosystems (including stygo-fauna), that could be affected by the project;
 - detailed plans, including design objectives and performance criteria, for the design and management of:
 - o the proposed final void; and
 - o coal reject and potential acid forming material emplacement;
 - groundwater assessment criteria including trigger levels for investigating any potentially adverse groundwater impacts;
 - a program to monitor and assess:
 - o groundwater inflows to the open cut mining operations;
 - o the effectiveness of the LPB;
 - o the seepage/leachate from the LPB, water storages, emplacements and the final void;
 - o interconnectivity between the alluvial and bedrock aquifers;
 - o background changes in groundwater yield/quality against mine-induced changes;
 - o the impacts of the project on:
 - regional and local (including alluvial) aquifers;
 - groundwater supply of potentially affected landowners;
 - groundwater dependent ecosystems (including potential impacts on stygo-fauna) and riparian vegetation;

- a program to validate the groundwater model for the project, including an independent review of the model every 3 years, and comparison of monitoring results with modelled predictions; and
 - a plan to respond to any exceedences of the performance criteria; and
- (iv) Leard Forest Mining Precinct Water Management Strategy, that has been prepared in consultation with other mines within the precinct to:
- minimise the cumulative water quality impacts of the mines;
 - review opportunities for water sharing/water transfers between mines;
 - co-ordinate water quality monitoring programs as far as practicable;
 - undertake joint investigations/studies in relation to complaints/exceedences of trigger levels where cumulative impacts are considered likely; and
 - co-ordinate modelling programs for validation, re-calibration and re-running of the groundwater and surface water models using approved mine operation plans.

Note: The Leard Forest Mining Precinct Water Management Strategy can be developed in stages and will need to be subject to ongoing review, dependent upon the determination of and commencement of other mining projects in the area.

BIODIVERSITY

Biodiversity Offset Strategy

40. The Proponent shall implement the biodiversity offset strategy described in the EA, summarised in Table 14 and shown conceptually in Appendix 7, to the satisfaction of the [Secretary](#).

Table 13: Summary of the biodiversity offset strategy

Area	Offset Type	Minimum Size (hectares)
Willeroi Offset Area	Existing native vegetation to be enhanced, and additional native vegetation to be established with the restoration of at least 193 ha of Box Gum Woodland EEC, as listed under the TSC Act	1,660
Rehabilitation Area	Native woodland vegetation communities to be re-established, focused on Box Gum Woodland EEC	752

Note: For the purposes of this approval Box Gum Woodland refers to the EEC listed as White Box Yellow Box Blakely's Red Gum Woodland under the TSC Act, and the CEEC listed as White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grasslands under the EPBC Act, or similar EEC as may be updated from time to time.

Leard Forest Mining Precinct Regional Biodiversity Strategy

41. The Proponent shall contribute to the funding and preparation of the Leard Forest Mining Precinct Regional Biodiversity Strategy, as required under the approvals for the Boggabri coal mine and Maules Creek coal mine, to the satisfaction of the [Secretary](#).

Notes:

- The approvals for the Boggabri coal mine and Maules Creek coal mine require the proponents of the mines in the Leard Forest mining precinct to prepare the regional biodiversity strategy in 3 stages, including:
 - o Stage 1 Scoping Stage, by the end of January 2013;
 - o Stage 2 Strategy Development Stage, by the end of January 2014; and
 - o Stage 3 Strategy Review Stage, by the end of December 2018.
- The strategy is required to be prepared in collaboration with a working group comprising relevant government agencies and the Leard Forest mining precinct mines, and chaired by an independent person.
- Funding of the strategy should be based on predicted clearing of native vegetation for the three projects within the Leard Forest Mining Precinct. Based on the predicted clearing for the projects, the funding split would equate to total contributions of 36% from Boggabri (clearing of 1,385 ha), 54% from Maules Creek (clearing of 2,078ha) and 10% from Tarrawonga (clearing of 397 ha). This funding arrangement can be further refined in the Stage 1 Scoping Stage.

Revised Biodiversity Offset Strategy

42. Within 6 months of the approval of Stage 2 of the Leard Forest Mining Precinct Regional Biodiversity Strategy the Proponent shall review, and if necessary revise, the biodiversity offset strategy for the project to the satisfaction of the [Secretary](#). The review/revision must:
- be prepared in consultation with OEH, [LLS](#), Forests NSW, the CCC, [DoI Lands & Water](#) and [DoEE](#);
 - not reduce the size or quality of the offset area; and
 - be consistent (as far as is possible) with the recommendations and objectives of the Leard Forest Mining Precinct Regional Biodiversity Strategy.

Threatened Species

43. For the White Box – Yellow Box – Blakely's Red Gum Grassy Woodland Endangered Ecological

Community the Proponent shall:

- (a) ensure that the Biodiversity Offset Strategy and site Rehabilitation Strategy is focused on protection rehabilitation, re-establishment and long-term maintenance of viable stands of this community;
 - (b) investigate in consultation with OEH and the [LLS](#), all factors likely to enhance or impede the effective long term restoration of degraded remnants of this EEC in offset areas or regeneration of this EEC on disturbed areas (both offset areas and the site);
 - (c) within 24 months of the date of this approval (and if possible in conjunction with Stage 2 of the Leard Forest Mining Precinct Regional Biodiversity Strategy), submit a report of this investigation and provide an implementation plan to maximise the prospects for rehabilitation and regeneration of this EEC on the offset areas and the site, for approval by the [Secretary](#); and
 - (d) incorporate the approved implementation plan into the revised Biodiversity Management Plan, required under condition 48.
44. For all threatened species on site, the Proponent shall ensure that the Biodiversity Offset Strategy and Rehabilitation Strategy are focused on protection, rehabilitation and long-term maintenance of viable stands of suitable habitat for these species.
45. The Proponent shall:
- (a) investigate, in consultation with OEH and the [LLS](#), all factors likely to enhance or impede the effective long term provision of suitable habitat(s) for the following species: Speckled Warbler, Brown Treecreeper, Grey-crowned Babbler, Hooded Robin, Varied Sittella, Turquoise Parrot, Masked Owl, Yellow-bellied Sheath Tail Bat and Squirrel Glider;
 - (b) within 12 months of the date of this approval (and if possible, in conjunction with Stage 2 of the Leard Forest Mining Precinct Regional Biodiversity Strategy), submit a report of this investigation and provide an implementation plan to ensure delivery of suitable areas of viable habitat for the species included in (a) above, for approval by the [Secretary](#); and
 - (c) incorporate the approved implementation plan into the revised Biodiversity Management Plan, required under condition 48.

Long Term Security of Offset

46. The Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas:
- (a) for the Willeroi Offset Area the long-term security shall be provided by way of:
 - the Proponent entering into a conservation agreement or agreements pursuant to section 69B of the *National Parks and Wildlife Act 1974*, recording the obligations assumed by the Proponent under the conditions of this approval in relation to these offset areas, and registering the agreement(s) pursuant to section 69F of the *National Parks and Wildlife Act 1974*; or
 - a tenure of higher conservation status such as a National Park, or Nature Reserve, under the *National Parks and Wildlife Act 1974*,
The conservation agreement(s) must be registered by the end of December 2013 unless agreed otherwise by the [Secretary](#) after consultation with OEH. The conservation agreements must remain in force in perpetuity; and
 - (b) by the end of December 2030 unless otherwise agreed by the [Secretary](#), for the woodland to be established in the Rehabilitation Area, as identified in Table 14, to the satisfaction of the [Secretary](#).

Note: The Department acknowledges that the Proponent is investigating the potential to transfer part or all of the Willeroi Offset Area directly to the national park estate, and accepts that interim conservation measures may be implemented prior to this transfer.

Biodiversity Management Plan

47. The Proponent shall prepare and implement a Biodiversity Management Plan for the project to the satisfaction of the [Secretary](#). This plan must:
- (a) be prepared in consultation with OEH, [DoEE](#), Forests NSW, the CCC, [DoI Lands & Water](#) Catchments and Lands and the [LLS](#), and be submitted to the [Secretary](#) for approval by the end of May 2013;
 - (b) describe the short, medium, and long term measures that would be implemented to:
 - manage the remnant vegetation and habitat on the site and in the offset area; and
 - implement the biodiversity offset strategy, including detailed performance and completion criteria;
 - (c) include detailed performance and completion criteria for evaluating the performance of the biodiversity offset strategy, and triggering remedial action (if necessary);
 - (d) include a detailed description of the measures that would be implemented for:
 - enhancing the quality of existing vegetation and fauna habitat;
 - restoring native vegetation and fauna habitat on the biodiversity offset area and rehabilitation area through focusing on assisted natural regeneration, targeted vegetation establishment and the introduction of naturally scarce fauna habitat features;

- maximising the salvage of resources within the approved disturbance area – including vegetative, top and sub soils and cultural heritage resources – for beneficial reuse in the enhancement of the biodiversity offset area or rehabilitation area;
 - collecting and propagating seed;
 - minimising the impacts on fauna on site, including undertaking pre-clearance surveys;
 - managing any potential conflicts between the proposed restoration works in the biodiversity offset area and any Aboriginal heritage values (both cultural and archaeological);
 - managing salinity;
 - controlling weeds and feral pests;
 - controlling erosion;
 - controlling access; and
 - managing bushfire risk;
- (e) include a seasonally-based program to monitor and report on the effectiveness of these measures, and progress against the detailed performance and completion criteria;
- (f) identify the potential risks to the successful implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate against these risks; and
- (g) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

Note: The Biodiversity Management Plan and Rehabilitation Management Plan need to be substantially integrated for achieving biodiversity objectives for the rehabilitated mine-site.

48. The Proponent shall review and if necessary revise the Biodiversity Management Plan within 6 months of the completion of Stage 2 of the Leard Forest Mining Precinct Regional Biodiversity Strategy, to the satisfaction of the [Secretary](#). The review/revision must:
- (a) be prepared in consultation with OEH, [DoEE](#), Forests NSW, the CCC, [Dol Lands & Water](#) and the [LLS](#);
 - (b) be consistent with the findings of Leard Forest Mining Precinct Regional Biodiversity Strategy; and
 - (c) include any implementation plans arising from the studies required under conditions 43 and 45 of this approval.

Conservation Bond

49. By the end of May 2013, the Proponent shall lodge a Conservation and Biodiversity Bond with the Department to ensure that the biodiversity offset strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan. The sum of the bond shall be determined by:
- (a) calculating the full cost of implementing the biodiversity offset strategy (other than land acquisition costs); and
 - (b) employing a suitably qualified quantity surveyor to verify the calculated costs, to the satisfaction of the [Secretary](#).

If the offset strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the [Secretary](#), the [Secretary](#) will release the bond.

If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the [Secretary](#) will call in all, or part of, the conservation bond, and arrange for the satisfactory completion of the relevant works.

With the agreement of the [Secretary](#), this bond may be combined with rehabilitation security deposit administered by [DRG](#).

Notes:

- *Alternative funding arrangements for long term management of the Biodiversity Offset Strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate can be used to reduce the liability of the conservation and biodiversity bond.*
- *The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy.*

Independent Biodiversity Audit

50. By the end of June 2014 and every 3 years thereafter, unless both the [Secretary](#) and OEH agree to a different timeframe, the Proponent shall commission suitably qualified, experienced and independent person/s, whose appointment has been approved by the [Secretary](#), to undertake an audit of the revegetation of the rehabilitation area and management and restoration within the Biodiversity Offset Strategy areas to the satisfaction of the [Secretary](#). This audit must:
- (a) include consultation with OEH, [LLS](#), [Dol Lands & Water](#), [DoEE](#), CCC and [DRG](#);
 - (b) assess the performance of the revegetation in the rehabilitation area completed to date (and the Goonbri Creek Diversion, once commenced) against the completion criteria in the Rehabilitation Management Plan;
 - (c) assess the performance of management and restoration in the off-site Biodiversity Offset Strategy areas completed to date against the completion criteria in the Biodiversity Management Plan;

- (d) identify any measures that should be implemented to improve the performance of rehabilitation, management and restoration within the rehabilitation and biodiversity offset areas; and
- (d) identify any additional measures that should be applied in the establishment of native vegetation, including riparian vegetation around the realigned Goonbri Creek, both before and after the realignment is undertaken;
- (e) if the completion criteria have not been met, or are not adequately trending towards being met, determine the likely ecological value of the rehabilitation and restoration once completed, and recommend additional measures to augment the Biodiversity Offset Strategy to ensure that it adequately offsets the project's impacts on biodiversity.

If the audit recommends the implementation of additional measures to augment the Biodiversity Offset Strategy in accordance with (e) above, then within 6 months of the completion of the audit the Proponent shall revise the Biodiversity Offset Strategy, in consultation with the Department, OEH and DoEE, and to the satisfaction of the Secretary.

HERITAGE

Aboriginal Heritage Conservation Strategy

51. The Proponent shall prepare and implement an Aboriginal Heritage Conservation Strategy for the project and the Biodiversity Offset Strategy areas to the satisfaction of the Secretary. This Strategy must enhance and conserve the Aboriginal cultural heritage values (both cultural and archaeological) and provide for their long-term protection and management. The Strategy must:
 - (a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - (b) be prepared in consultation with OEH, the local Aboriginal community and other mines within the Leard Forest Mining Precinct, and submitted to the Secretary for approval within 12 months from the date of project approval;
 - (c) identify the Aboriginal cultural heritage values of the Biodiversity Offset Strategy areas;
 - (d) identify areas of high Aboriginal cultural heritage significance within both the site and the Leard Forest Mining Precinct;
 - (e) identify a range of options for enhancing and conserving Aboriginal cultural heritage values, with specific consideration of the potential for the long-term protection and management of significant sites within either the site, the Biodiversity Offset Strategy areas or other lands within the Leard Forest Mining Precinct identified as having high cultural heritage significance to the Aboriginal community; and
 - (f) consider cumulative impacts and potential for developing joint initiatives with other mines within the Leard Forest Mining Precinct for enhancing and conserving Aboriginal cultural heritage values.

Heritage Management Plan

52. The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:
 - (a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - (b) be prepared in consultation with OEH and local Aboriginal stakeholders (in relation to the management of Aboriginal heritage values);
 - (c) be submitted to the Secretary for approval prior to undertaking any activities that may impact heritage items or sites, unless the Secretary agrees otherwise;
 - (d) include the following for the management of Aboriginal cultural heritage:
 - a detailed archaeological salvage program for Aboriginal sites/objects within the project disturbance area, including methodology and procedures/protocols for:
 - o sub-surface testing;
 - o staged salvage, based on anticipated mine planning;
 - o pre-disturbance monitoring;
 - o site assessment and reporting;
 - o research objectives to inform knowledge of Aboriginal occupation;
 - o protection, storage and management of salvaged Aboriginal objects;
 - o addressing relevant statutory requirements under the *National Parks and Wildlife Act 1974*; and
 - o long term protection of salvaged Aboriginal objects;
 - a description of the measures that would be implemented for:
 - o protecting, monitoring and managing Aboriginal sites outside the project disturbance area;
 - o maintaining and managing reasonable access for Aboriginal stakeholders to cultural heritage items on site and in the biodiversity offset area;
 - o managing the discovery of any human remains or previously unidentified Aboriginal objects on site, including (in the case of human remains) stop work provisions and notification protocols;

- o ongoing consultation with the local Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage both on-site and in the biodiversity offset area;
- o ensuring any workers on site receive suitable heritage inductions prior to carrying out any activities which may disturb Aboriginal sites, and that suitable records are kept of these inductions;
- (e) include the following for the management of historic heritage:
 - a description of the measures that would be implemented for:
 - o managing the discovery of human remains or previously unidentified historic heritage items at the site, including (in the case of human remains) stop work provisions and notification protocols; and
 - o ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and ensure that suitable records of these inductions are kept.

Note: The Department acknowledges that the initial Heritage Management Plan may not include a detailed plan for the implementation of the Aboriginal Heritage Conservation Strategy. If this occurs, the Proponent will be required to update the plan as soon as practicable following the [Secretary's](#) approval of the Aboriginal Heritage Conservation Strategy.

TRANSPORT

Roadworks

53. The Proponent shall:

- (a) construct the Goonbri Road realignments and associated mine access road intersection, Goonbri Road/private coal haulage road intersection and the Goonbri Road/Dripping Rock Road/Blair Athol Lane intersection as shown conceptually in the EA; and
 - (b) install appropriate advance warning signs and lighting on Goonbri Road, the private coal haulage road at the intersection of the Northern Site Access Road,
- to the satisfaction of Council.

The road realignments and associated intersection upgrades shall be undertaken:

- to a bitumen sealed standard, unless otherwise agreed by Council; and
- prior to any project works occurring within 25 metres of the existing Goonbri Road alignment, or on the southern/eastern side of the existing road alignment.

Note: The road upgrade works may be undertaken in stages, with the agreement of Council.

Coal Transport

54. Whilst coal transport by road is permitted under this approval, the Proponent shall ensure that:

- (a) trucks travelling to and from the site do not exceed 40 kilometres per hour in the vicinity of the school bus when it is operating [near school bus stops along the approved haulage route](#), unless an alternative protocol is agreed by the [Secretary](#); and
- (b) spillage from coal haulage vehicles is minimised and promptly managed.

Traffic Management Plan

54A. The Proponent shall prepare and implement a revised Traffic Management Plan for the Project, to the satisfaction of the Secretary. This plan must:

- (a) be prepared in consultation with RMS, Gunnedah Shire Council, Narrabri Shire Council and the owners of the Rocglen and Vickery coal mines;
- (b) be submitted to the Secretary for approval by 31 March 2017;
- (c) include a program for implementing Whitehaven's commitments in the EA;
- (d) include transport protocols that describe control measures for coal haulage:
 - during school bus hours;
 - on the Kamilaroi Highway; and
 - during seasonal and event based peak traffic periods.
- (e) include a driver's Code of Conduct to include but not limited to:
 - behavioural safety practises and initiatives used by drivers to implement the transport protocols;
 - induction process for vehicle operators and regular toolbox meetings; and
 - complaint resolution and disciplinary procedures;
- (f) describe measures to minimise dust from roads that may be used for access to the mine site;
- (g) arrangements to comply with cumulative coal haulage limits from the project and the Rocglen and Vickery coal mines; and
- (h) a monitoring program to audit vehicle movements, including the origin and destination of employees, against predictions in the EA.

Road Maintenance

55. During mining operations, the Proponent shall continue to implement road maintenance agreements with Narrabri Shire Council and Gunnedah Shire Council for the maintenance of the public roads affected by the project to the satisfaction of the respective Council. [These agreements may be modified from time to time by agreement of the Proponent and respective Council](#). If there is any dispute in relation to these agreements, then any of the parties may refer the matter to the [Secretary](#) for resolution.

Monitoring of Coal and Gravel Transport

56. The Proponent shall:
- keep records of the:
 - amount of coal and gravel transported from the site (on a monthly basis); and
 - date and time of each train movement on the Boggabri rail spur line generated by the project [\(if coal from the project is transported by rail\)](#); and
 - make these records available on its website at the end of each calendar year.

VISUAL

Operating Conditions

57. The Proponent shall:
- implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project;
 - ensure no outdoor lights shine above the horizontal;
 - wherever possible, ensure that mobile equipment is appropriately designed and/or retrofitted to prevent light being directed above the horizontal;
 - ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting* or its latest version;
 - provide for the establishment of trees and shrubs and/or the construction of mounding or bunding:
 - along the realigned Goonbri Road and access road to the mine site;
 - along the services corridor to the Boggabri Coal Mine;
 - around the water storage dams; and
 - at other areas identified as necessary for the maintenance of satisfactory visual amenity; and
 - ensure that the visual appearance of all buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape, to the satisfaction of the [Secretary](#).

Additional Visual Impact Mitigation

58. Upon receiving a written request from the owner of any residence on privately-owned land which has, or would have, significant direct views of the mining operations and infrastructure on-site during the project, the Proponent shall implement additional visual impact mitigation measures (such as landscaping treatments or vegetation screens) to reduce the visibility of the mining operations and infrastructure from the residences on the privately-owned land.

These mitigation measures must be reasonable and feasible, and must be implemented within a reasonable timeframe.

If 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.

Notes:

- The additional visual impact mitigation measures must be aimed at reducing the visibility of the mining operations on site from affected residences, and do not require measures to reduce the visibility of the mining operations from other locations on the affected properties.*
- The additional visual impact mitigation measures do not necessarily have to include the implementation of measures on the affected property itself (ie. the additional measures could involve the implementation of measures outside the affected property boundary that provide an effective reduction in visual impacts).*
- Except in exceptional circumstances, the [Secretary](#) will not require additional visual impact mitigation to be undertaken for residences that are more than 5 kilometres from the mining operations.*

BUSHFIRE MANAGEMENT

59. The Proponent shall:
- implement all reasonable and feasible measures to manage bushfire risks, including the suspension of activities that may have the potential to ignite a fire, during adverse conditions;
 - ensure that the project is suitably equipped to respond to any fires on site; and
 - assist the Rural Fire Service, Forests NSW, emergency services and National Parks and Wildlife Services as much as possible if there is a fire in the surrounding area.

WASTE

60. The Proponent shall:
- implement all reasonable and feasible measures to minimise the waste (including coal reject) generated by the project;
 - ensure that the waste generated by the project is appropriately stored, handled and disposed of; and
 - monitor and report on the effectiveness of waste minimisation and management measures in the Annual Review.

REHABILITATION

Rehabilitation Objectives

61. The Proponent shall rehabilitate the site to the satisfaction of DRG. This rehabilitation must be generally consistent with the proposed Rehabilitation Strategy described in the EA (and depicted conceptually in Appendix 8) and comply with the objectives in Table 15.

Table 14: Rehabilitation objectives

Feature	Objective
Mine site (as a whole)	Safe, stable and non-polluting Constructed landforms drain to the natural environment Landforms fully integrated with the final landform for the Boggabri coal mine
Final void	Minimise the size and depth of the final void as far as is reasonable and feasible Minimise the drainage catchment of the final void as far as is reasonable and feasible Negligible high wall instability risk Minimise risk of flood interaction for all flood events up to and including the Probable Maximum Flood level
Surface infrastructure	To be decommissioned and removed, unless DRG agrees otherwise
Agricultural land	Establish a minimum of 210 hectares of Class 3 agricultural suitability land, including 160 hectares with cropping capability
All land – excluding the 210 ha of agricultural land and the final void	Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of: - local native plant species (particularly Box Gum Woodland EEC); and - a landform consistent with the surrounding environment
Goonbri Creek diversion and LPB	See Table 13
Community	Ensure public safety Minimise the adverse socio-economic effects associated with mine closure

Operating Conditions

62. The Proponent shall, in consultation with the LLS:
- develop a detailed soil management protocol that identifies procedures for:
 - comprehensive soil surveys prior to soil stripping;
 - assessment of top-soil and sub-soil suitability for mine rehabilitation; and
 - annual soil balances to manage soil handling including direct resspreading and stockpiling;
 - maximise the salvage of suitable top-soils and sub-soils and biodiversity habitat components such as bush rocks, tree hollows and fallen timber for rehabilitation of disturbed areas within the site and for enhancement of biodiversity offset areas; and
 - ensure that coal reject, or any potentially acid forming interburden materials, are not emplaced at elevations in the pit shell where they may promote acid or sulphate species generation and migration beyond the pit shell.

Progressive Rehabilitation

63. The Proponent shall rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim rehabilitation strategies shall be employed when areas prone to dust generation cannot yet be permanently rehabilitated.

Note: It is accepted that the parts of the site that are progressively rehabilitated may be subject to further disturbance in future.

Rehabilitation Management Plan

64. The Proponent shall prepare and implement a Rehabilitation Management Plan to the satisfaction of DRG. This plan must:
- (a) be prepared in consultation with the Department, Forests NSW, [Dol Lands & Water](#), OEH, [LLS](#) and Council;
 - (b) be submitted to the [DRG](#) for approval by the end of May 2013;
 - (c) be prepared in accordance with any relevant [DRG](#) guideline;
 - (d) describe how the rehabilitation of the site would be integrated with:
 - the implementation of the biodiversity offset strategy; and
 - the final landform for the Boggabri coal mine;
 - (e) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and triggering remedial action (if necessary);
 - (f) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval and address all aspects of rehabilitation including mine closure, final landform and final land use;
 - (g) include interim rehabilitation where necessary to minimise the area exposed for dust generation;
 - (h) include a program to monitor, independently audit and report on the effectiveness of the rehabilitation measures, and progress against the detailed performance and completion criteria;
 - (i) **include a coal rejects disposal procedure and monitoring program for potential acid generation;** and
 - (j) build to the maximum extent practicable on the other management plans required under this approval.

Note: The Biodiversity Management Plan and Rehabilitation Management Plan require substantial integration to achieve biodiversity objectives for the rehabilitated mine site.

Final Void Design and Closure

65. The Proponent shall prepare and implement an updated Final Void and Mine Closure Plan (as a component of the overall Rehabilitation Management Plan required under condition 64 of schedule 3) to the satisfaction of [DRG](#), following consultation with the [Secretary](#). A draft plan must be prepared and submitted to [DRG](#) by the end of December 2019, and a final plan must be prepared and submitted to [DRG](#) by the end of December 2024. Each version of the plan must:
- (a) be subject to independent review and verification by suitably qualified, experienced and independent person/s (including a groundwater expert) whose appointment has been approved by the [Secretary](#);
 - (b) identify and consider:
 - options for continued mining beyond current project life;
 - interactions with the final landform of adjoining mines (including any direct or indirect interaction between final voids);
 - opportunities for integrated mine planning with adjoining mines to minimise environmental impacts of the mines' final landforms;
 - all reasonable and feasible landform options for the final void (including filling);
 - predicted stability of the proposed landforms; and
 - predicted hydrochemistry and hydrogeology (including long-term groundwater recovery and void groundwater quality);
 - (c) include a detailed proposed landform design; and
 - (d) demonstrate that the proposed final landform:
 - satisfies the relevant objectives in Table 15;
 - minimises the extent of any resulting pit lake;
 - avoids salt scalding;
 - maximises the capacity of emplaced spoil to drain to the natural environment; and
 - ensures that drained waters do not adversely affect the downstream environment.

AGRICULTURE

66. The Proponent shall use its best endeavours to ensure that the agricultural productivity and production of non-operational project-related land is maintained or enhanced.

Note: This includes properties primarily used for agriculture that are acquired by the Proponent due to noise and/or air quality impacts. However, it does not include land where disturbance is permitted under the conditions of this approval or land that forms part of the biodiversity offset area.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS/TENANTS

1. Within 3 months of the date of this approval, the Proponent shall:
 - (a) notify in writing the owners of:
 - the land listed in Table 1 of schedule 3 that they have the right to require the Proponent to acquire their land in accordance with the procedures in conditions 8 and 9 below at any stage during the project;
 - any residence on the land listed in Table 1 of schedule 3 that they have the right to request the Proponent to ask for additional noise and/or air quality mitigation measures to be installed at their residence at any stage during the project; and
 - any privately-owned land within 2 kilometres of the approved open-cut mining pit/s that they are entitled to ask for a property inspection, to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
 - (b) notify the tenants of any mine-owned land of their rights under this approval; and
 - (c) send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the EA identify that dust emissions generated by the 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 exceedences of the recommended dust and/or noise criteria, or for any of the land listed in Table 1 that is subsequently purchased by the Proponent, the Proponent shall:
 - (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);
 - (b) advise the prospective tenants of the rights they would have under this approval; and
 - (c) request the prospective tenants consult their medical practitioner to discuss the air quality monitoring data and predictions and health impacts arising from this information, to the satisfaction of the [Secretary](#).
3. As soon as practicable after obtaining monitoring results showing:
 - (a) an exceedence of the relevant criteria in schedule 3, the Proponent shall notify the affected landowner in writing of the exceedence, and provide regular monitoring results to the landowner until the project is complying with the relevant criteria again; and
 - (b) an exceedence of the relevant air quality criteria schedule 3, the Proponent shall send to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land) a copy of:
 - the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time); and
 - the monitoring data, in an appropriate format so that a medical practitioner can assist the resident in making an informed decision on the health risks associated with occupation of the property.

INDEPENDENT REVIEW

4. If an owner of privately-owned land considers the project to be exceeding the criteria in schedule 3 at his/her land, then he/she may ask the [Secretary](#) in writing for an independent review of the impacts of the project on his/her land.

If the [Secretary](#) is satisfied that an independent review is warranted, then within 2 months of the [Secretary's](#) decision, the Proponent shall:

 - (a) commission a suitably qualified, experienced and independent expert, 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 impact assessment criteria in schedule 3; and
 - if the project is not complying with the relevant criteria, then:
 - o determine if the more than one mine is responsible for the exceedence, and if so the relative share of each mine towards the impact on the land;
 - o 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, and that the project is primarily responsible for this non-compliance, then the Proponent shall:

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

If the independent review determines that the project is not complying with the relevant acquisition criteria, and that the project is primarily responsible for this non-compliance, then upon receiving a written request from the landowner, the Proponent shall acquire all or part of the landowner's land in accordance with the procedures in conditions 8 and 9 below.

6. If the independent review determines that the relevant criteria are being exceeded, but that more than one mine is responsible for this exceedance, then together with the relevant mine/s the Proponent shall:
 - (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring until there is compliance with the relevant criteria; or
 - (b) secure a written agreement with the landowner and other relevant mine/s to allow exceedances of the relevant impact assessment 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, but that more than one mine is responsible for this non-compliance, then upon receiving a written request from the landowner, the Proponent shall acquire all or part of the landowner's land on as equitable a basis as possible with the relevant mine/s, in accordance with the procedures in conditions 8 and 9 below.

Biodiversity & Heritage

7. If a person has good reason to believe the Proponent is not implementing the biodiversity and/or heritage conditions in schedule 3 satisfactorily, then he/she may ask the [Secretary](#) in writing for an independent review of the matter.

If the [Secretary](#) is satisfied that an independent review is warranted, then within 2 months of the [Secretary's](#) decision, the Proponent shall:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the [Secretary](#), to:
 - consult with the person and/or any relevant agencies;
 - investigate the person's complaints/claims;
 - review the environmental performance of the Proponent;
 - determine whether the Proponent's performance is satisfactory or not; and if necessary
 - recommend measures to improve the Proponent's performance; and
- (b) give the [Secretary](#) and complainant a copy of the independent review.

LAND ACQUISITION

8. Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:
 - (a) the current market value of the landowner's interest in the land at the date of the 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 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 the additional mitigation measures required under condition 2 of schedule 3;
 - (b) the reasonable costs associated with:
 - relocating within the Tamworth, Narrabri, Gunnedah or Moree local government areas, or to any other local government area as agreed 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 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](#) shall request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:

- consider submissions from both parties;
- determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above;
- prepare a detailed report setting out the reasons for any determination; and
- provide a copy of the report to both parties.

Within 14 days of receiving the independent valuer's report, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.

However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the [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 of the party that disputes the independent valuer's determination and any other relevant submissions.

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

9. The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 8 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.

SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the [Secretary](#). The strategy must:
 - (a) be submitted to the [Secretary](#) for approval by the end of May 2013;
 - (b) provide the strategic framework for 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, record, handle, and respond to complaints;
 - resolve any disputes that may arise during the course of the project;
 - respond to any non-compliance;
 - 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 to be carried out in relation to the project.

Adaptive Management

2. The Proponent must assess and manage project-related risks to ensure that there are no exceedences of the criteria and/or performance measures in schedule 3. Any exceedence of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedence 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 exceedence ceases and does not reoccur;
- (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 courses of action; and
- (c) implement remediation measures as directed by the [Secretary](#), to the satisfaction of the [Secretary](#).

Management Plan Requirements

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

Annual Review

4. By the end of June each year (or as otherwise agreed by the [Secretary](#)), the Proponent shall review the environmental performance of the project for the previous calendar year to the satisfaction of the [Secretary](#). This review must:
 - (a) describe the development (including any rehabilitation) that was carried out in the past calendar year, and the development that is 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 past year, which includes a comparison of these results against the:
 - relevant statutory requirements, limits or performance measures/criteria;
 - monitoring results of previous years; and
 - relevant predictions in the EA;
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the project;
 - (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the next year to improve the environmental performance of the project.

Revision of Strategies, Plans and Programs

5. Within 3 months of the submission of an:
 - (a) annual review under condition 4 above;
 - (b) incident report under condition 8 below;
 - (c) audit under condition 10 below; or
 - (d) any modification to the conditions of this approval,the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the [Secretary](#).

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

Management of Cumulative Impacts

6. In conjunction with the owners of the nearby mines in the Leard Forest Mining Precinct, the Proponent shall use its best endeavours to minimise the cumulative impacts of the project on the surrounding area, to the satisfaction of the [Secretary](#).

Community Consultative Committee

7. The Proponent shall establish and 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 *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version), and be operating by the end of May 2013.

The CCC must seek to include joint membership with CCCs for other operating coal mines within the Leard Forest Mining Precinct, unless otherwise agreed by the [Secretary](#).

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 Department's guideline, the CCC should be comprised on an independent chair and appropriate representation from the Proponent, Council and the local community.

REPORTING

Incident Reporting

8. The Proponent shall notify, at the earliest opportunity, the [Secretary](#) and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the project, the Proponent shall notify the [Secretary](#) and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the [Secretary](#) and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

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

AUDITING

Independent Environmental Audit

10. By the end of June 2014 and every 3 years thereafter, unless the [Secretary](#) directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
- (a) be conducted by a 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 assess whether it is complying with the requirements in this approval, and any other relevant approvals, relevant EPL/s and/or Mining Lease/s (including any assessment, plan or program required under these approvals);
 - (d) assess whether the Proponent is implementing best noise, blasting and air quality management practice;
 - (e) investigate and report on the measures taken to minimise the noise and air quality impacts of the project during meteorological conditions and/or extraordinary events when the relevant noise and air quality limits in this approval do not apply, including:
 - the effectiveness of these measures in maintaining impacts within the relevant criteria in this approval and/or the limits in the relevant EPL; and
 - any additional measures available to mitigate impacts under such conditions;
 - (f) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and
 - (g) recommend measures or actions to improve the environmental performance of the project and/or any strategy, plan or program required under these approvals.
- Note: This audit team must be led by a suitably qualified auditor, and include experts in noise, air quality, water, ecology, and any other fields specified by the [Secretary](#).*
11. Within 3 months of commissioning this audit, or as otherwise agreed by the [Secretary](#), the Proponent shall submit a copy of the audit report to the [Secretary](#), together with its response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

12. The Proponent shall:
- (a) within 3 months of the date of this approval, make the following information publicly available on its website:
 - the EA;
 - all current statutory approvals for the project;
 - approved strategies, plans and programs required under the conditions of this approval;
 - a comprehensive summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
 - a complaints register, which is to be updated on a monthly basis;
 - minutes of CCC meetings;
 - the last five annual reviews;
 - any independent environmental audit, and the Proponent's response to the recommendations in any audit;
 - any other matter required by the [Secretary](#); and
 - (b) keep this information up to date, to the satisfaction of the [Secretary](#).

On-line Communication of Onsite Activities and Monitoring of Noise and Air Quality

13. The Proponent shall, within 3 months of the date of this approval:
- (a) make the following information for the project publicly available on its website, on a daily basis and in a clearly understandable form:
 - daily weather forecasts for the coming week;
 - proposed operational responses to these weather forecasts;
 - real-time noise and air quality monitoring data (subject to any necessary caveats); and
 - any operational responses that were taken in response to the noise and air quality monitoring data, and
 - (b) make provision on its website for the provision of on-line and/or email comments by members of the community regarding this information, to the satisfaction of the [Secretary](#).

**APPENDIX 1
SCHEDULE OF LAND**

Tenure Type	Lot Number	Deposited Plan Number
Freehold	A	367991
Freehold	156	455004
Freehold	1	622375
Freehold	1	748046
Freehold	2	748046
Freehold	3	748046
Freehold	5	754940
Freehold	6	754940
Freehold	10	754940
Freehold	11	754940
Freehold	12	754940
Freehold	15	754940
Freehold	16	754940
Freehold	17	754940
Freehold	21	754940
Freehold	22	754940
Freehold	24	754940
Freehold	25	754940
Freehold	26	754940
Freehold	27	754940
Freehold	28	754940
Freehold	29	754940
State Forests of NSW	30	754940
Freehold	31	754940
Freehold	37	754940
State Forests of NSW	38	754940
Freehold	44	754940
Freehold	59	754948
Freehold	60	754948
Freehold	18	754953
Freehold	33	754953
Freehold	68	754953
Freehold	69	754953
Freehold	80	754953
Freehold	83	754953
Freehold	88	754953
Freehold	105	755470
Perpetual Lease	159	755475
Freehold	203	755475
Freehold	262	755475
State of NSW	263	755475
Freehold	1	970060
Freehold	1	1015797
Freehold	5	1018347
Freehold	2	1038308
Freehold	3	1038308

Tenure Type	Lot Number	Deposited Plan Number
Freehold	1	1131282
Freehold	3	1131282
Freehold	5	1131282
Freehold	3	1145592
Freehold	4	1145592
Narrabri Shire Council	Goonbri Road	N/A
Narrabri Shire Council	Dripping Rock Road	N/A
Narrabri Shire Council	Athol Lane	N/A
Narrabri Shire Council	Bollol Creek Corridor	N/A
Narrabri Shire Council or Department of Lands (Crown)	Other roads located within, between or adjacent to the above parcels of land	N/A
Part NSW State Forest (Leard State Forest)	N/A	N/A

Map of the Tarrawonga Coal Project Area

Legend:

- Road
- Railway
- River/Creek
- Land Subject to Inundation
- Aboriginal Area or State Conservation Area
- NSW State Forest
- Town
- Local Government Area Boundary
- Mining Lease Boundary (ML & CL)
- Mining Lease Application Boundary (MLA)
- Exploration Licence Boundary (EL)

Scale: 0 to 7.5 Kilometres
GRID DATUM: MGA 94 ZONE 56
Source: Geoscience Australia - Manilla (2009) and DECC (2009)

Regional Location: The map shows the project area within New South Wales, Australia, near the border with Queensland and Victoria. The project area is outlined in red, and the surrounding areas are labeled: Leard CCA Zone 3, Willawong State Forest, Tarragona Coal Project, Boggabri Coal Mine, Tarrawonga Coal Mine, Canyon Coal Mine (Under Closure), Vickery Coal Project, Vickery South Project, Emerald Hill, and Sunnyside Coal Mine (ML 1624).

Figure 1-1: Regional Location

NSW Government
Department of Planning and Environment

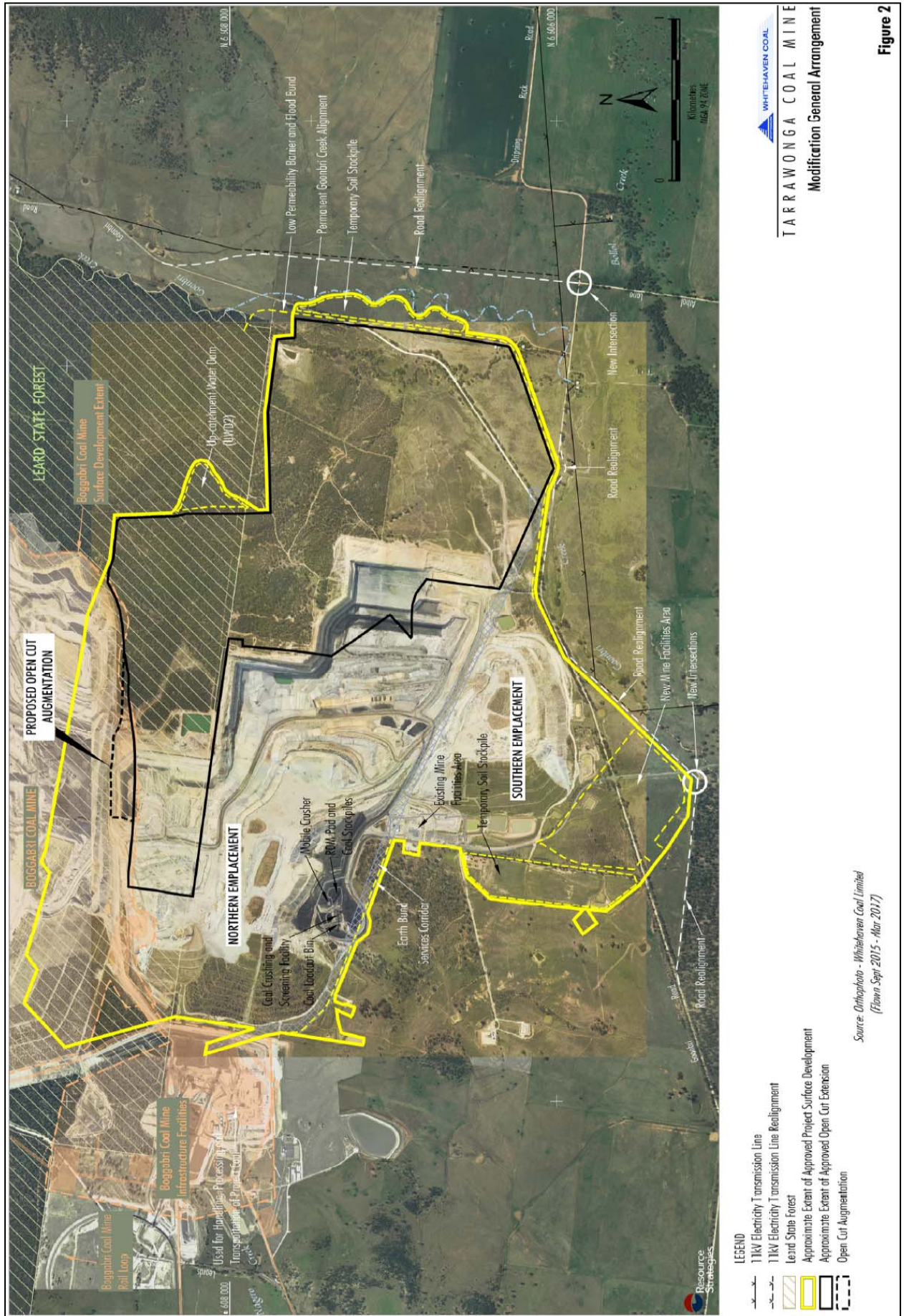


Figure 2: Project Layout

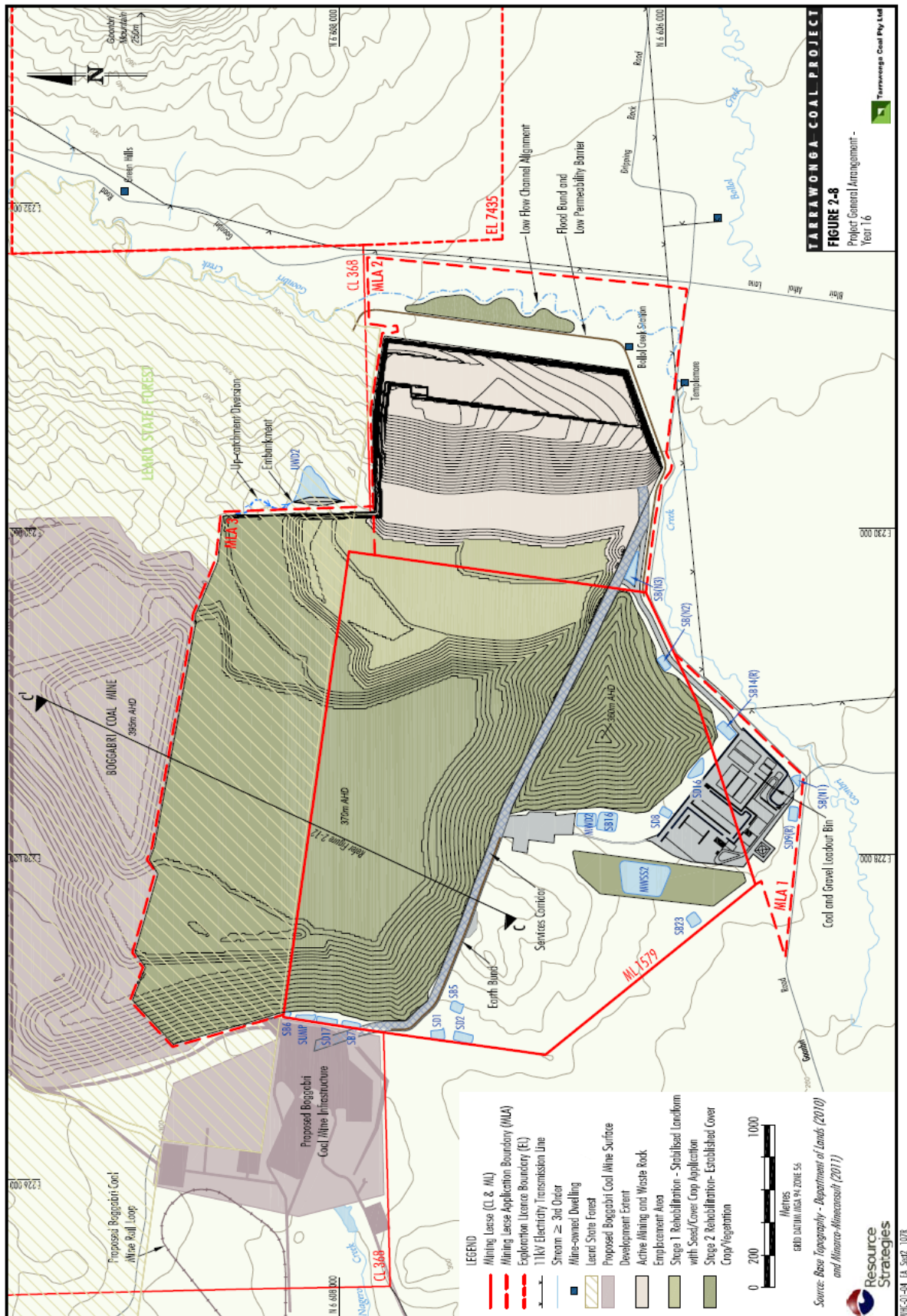


Figure 3: Project Layout (Year 16)

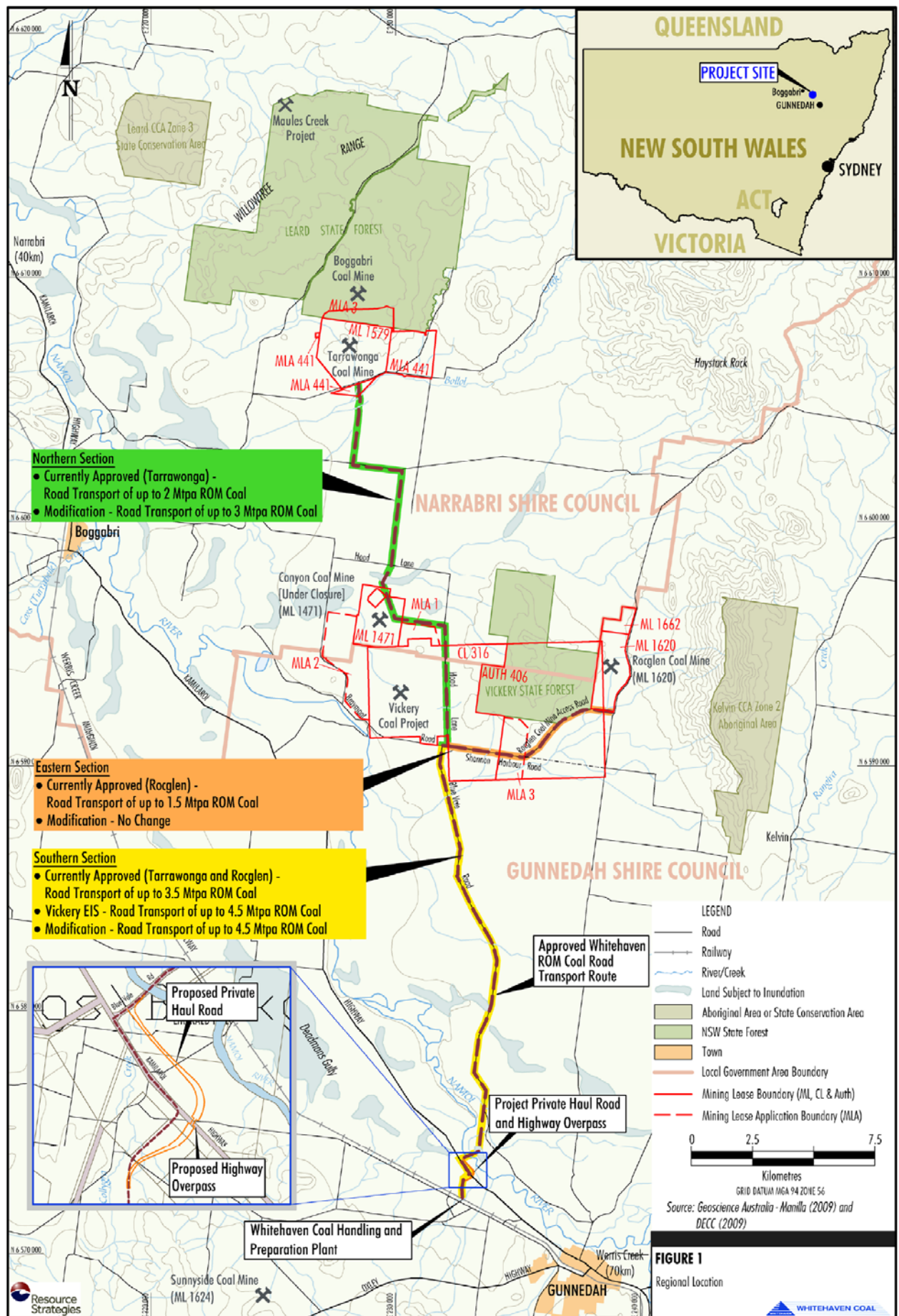


Figure 4: Approved Road Haulage Route

APPENDIX 3 GENERAL TERMS OF PLANNING AGREEMENT

Amount	Timeline for Payment	Description
\$1,400,000	\$1,000,000 to be payable on approval of the Extension Project \$400,000 to be payable on the first anniversary of the Approval of the Extension Project	Funds to be utilised for the construction of sealed roads around the Tarrawonga mine site with an emphasis on sealing Manila Road for the benefit of local residents. Unallocated funds to be spent at the discretion of NSC. Tarrawonga Coal will make available to NSC the opportunity for these road works, to the value of the Amount, to be undertaken by Tarrawonga Mine to councils specification with preliminary works to commence at the time of grant of the Development Consent.
\$100,000	Payable on the formation of an Environmental Trust associated with the Leard Forest Mining Industry Cluster but not before approval of the Extension Project.	Funds to be held in trust for Environmental Projects to be administered by NSC with expenditure recommended by the Community Consultative Committee (CCC) in consultation with similar funds set up by mines within the Leard Forest Mining Industry Cluster The NSC will supplement this Fund by annually adding to it, 1.5% of the annual increased amount which NSC receives from Tarrawonga as a result of the CPI Increase to the payment for saleable tonnes of coal. NSC will administer the fund with expenditure on projects agreed between NSC, Tarrawonga Coal and the other members of the CCC.
\$0.075 per saleable tonne	On Commencement of the movement of Tarrawonga Coal through the Boggabri Coal CHPP and only for tonnage moved through the Boggabri Coal CHPP Paid Monthly	The payment per tonne to be paid only on tonnes sold by Tarrawonga Coal and will mirror the calculation made in relation to Royalties to the NSW State Government CPI adjustment to be based on index published by the Australian Bureau of Statistics (ABS) CPI based on the weighted average of eight capital cities for the previous 12 months (based on closest applicable quarterly figure) with the start date for calculation being from the start of coal moving through the Boggabri Coal facility. The first review to be undertaken will be 12 months after the first coal has been moved through the Boggabri Coal facility

APPENDIX 4 STATEMENT OF COMMITMENTS

Tarrawonga Coal Project – Environmental Assessment

SOC1 STATEMENT OF COMMITMENTS

In accordance with the Director-General's Environmental Assessment Requirements, this section provides a statement of Tarrawonga Coal Pty Ltd's (TCPL's) commitments in relation to the Tarrawonga Coal Project (the Project).

SOC1.1 PROPOSED PROJECT ENVIRONMENTAL MANAGEMENT, MONITORING AND REPORTING

Section 4 of this Environmental Assessment (EA) outlines proposed environmental management and offset measures for the Project.

These include measures relating to land resources, agricultural production, groundwater, surface water, noise, blasting, air quality, greenhouse gas emissions, ecology, road transport, visual character, Aboriginal heritage, non-Aboriginal heritage, socio-economics and hazard and risk. Where relevant, Project specific environmental monitoring programs are also proposed in Section 4.

Section 5 of this EA describes how the Project would be progressively rehabilitated and integrated into the adjoining landscapes.

TCPL will review and revise the existing Tarrawonga Coal Mine management and monitoring plans listed in Table SOC-1. Table SOC-1 also lists new management and monitoring plans that are proposed to be prepared for the Project.

The existing monitoring program at the Tarrawonga Coal Mine will be augmented to address additional Project disturbance areas and the open cut extensions. Figure SOC-1 shows the location of environmental monitoring sites proposed to be maintained or added for the Project.

It is recognised that changes to the Project environmental management, monitoring and reporting proposals contained in this EA may be considered necessary during government agency assessment of this EA.

Environmental management, monitoring and reporting will be conducted in accordance with finalised Project Approval conditions, with the final monitoring details (locations, parameters and frequencies) to be provided in the relevant management plans/monitoring programs.

SOC1.2 SPECIFIC ENVIRONMENTAL COMMITMENTS

Environmental management and offset measures to be implemented for the Project are described in Section 4. Key commitments include:

- design and construction of an engineered low permeability barrier to the east and south-east of the open cut;
- design, construction and implementation of a permanent Goonbri Creek alignment and associated flood bund;
- integration of key aspects of the Project with the adjoining Boggabri Coal Mine (i.e. Northern Emplacement, coal processing and loading of Project product coal onto trains);
- cessation of sized run-of-mine (ROM) coal road transport to the Whitehaven Coal Handling and Preparation Plant (once suitable approvals and upgrades are in place);
- management and mitigation of operational noise;
- rehabilitation of Project disturbance areas, including the reinstatement of key agricultural and ecological values;
- provision of biodiversity offset measures for the Project;
- management of the Project final void to minimise potential long-term impacts on water resources; and
- participation in joint air quality, operational noise and regional groundwater monitoring schemes with the adjoining Boggabri Coal Mine and the Maules Creek Coal Project.

These are described further below.

Low Permeability Barrier

A low permeability barrier will be constructed in the alluvium to the east and south-east of the open cut. Construction of the low permeability barrier will be completed before the Project open cut intersects the alluvium (approximately Year 12).

The design objectives of the low permeability barrier include minimising the potential for drainage of alluvial groundwater into the open cut during operations and post-mining, and maintaining the hydraulic character of Goonbri Creek.

Table SOC-1
Summary of Project Management, Monitoring and Reporting

Proposed Management, Monitoring and Reporting	Key EA Sections and Appendices
Management and Monitoring	
Environmental Management Strategy	Section 2.1.8
Water Management Plan	Sections 4.4, 4.5 and Appendices A and B
• Site Water Balance	Section 4.5 and Appendix B
• Erosion and Sediment Control Plan	Sections 4.3, 4.5 and 5 and Appendix B
• Surface Water Monitoring Program	Section 4.5 and Appendix B
• Groundwater Monitoring Program	Section 4.4 and Appendix A
• Surface and Groundwater Response Plan	Sections 4.4 and 4.5 and Appendices A and B
Goonbri Creek Management Plan [#]	Section 4.5
Noise Management Plan	Section 4.6 and Appendix C
Blast Management Plan	Section 4.6 and Appendix C
Air Quality and Greenhouse Gas Management Plan	Section 4.7 and Appendix D
Biodiversity Offset Strategy	Sections 4.9 and 4.10 and Appendices E and F
Biodiversity Management Plan [#]	Sections 4.9 and 4.10
Offset Area Management Plan [#]	Sections 4.9 and 4.10 and Appendix E
Farm Management Plan [#]	Sections 4.3, 4.10 and Appendices E and I
Aboriginal Heritage Management Plan	Section 4.13 and Appendix K
Waste Management Plan	Section 4.3
Rehabilitation Strategy	Appendix I
Rehabilitation Management Plan	Sections 4.9, 4.10, 5 and Appendix I
Bushfire Management Plan	Sections 4.3, 4.9 and 4.10
Reporting Requirements	
Annual Environmental Management Report and Mining Operations Plan or Rehabilitation and Environmental Management Plan	Section 6.4.1
Licences and Approvals	Section 6.4.1
Greenhouse Gas Reporting	Sections 4.8.2 and 4.8.3

[#] New management plan to be prepared.

TCPL Commitment

TCPL commits to construction of the low permeability barrier to meet the following design objectives:

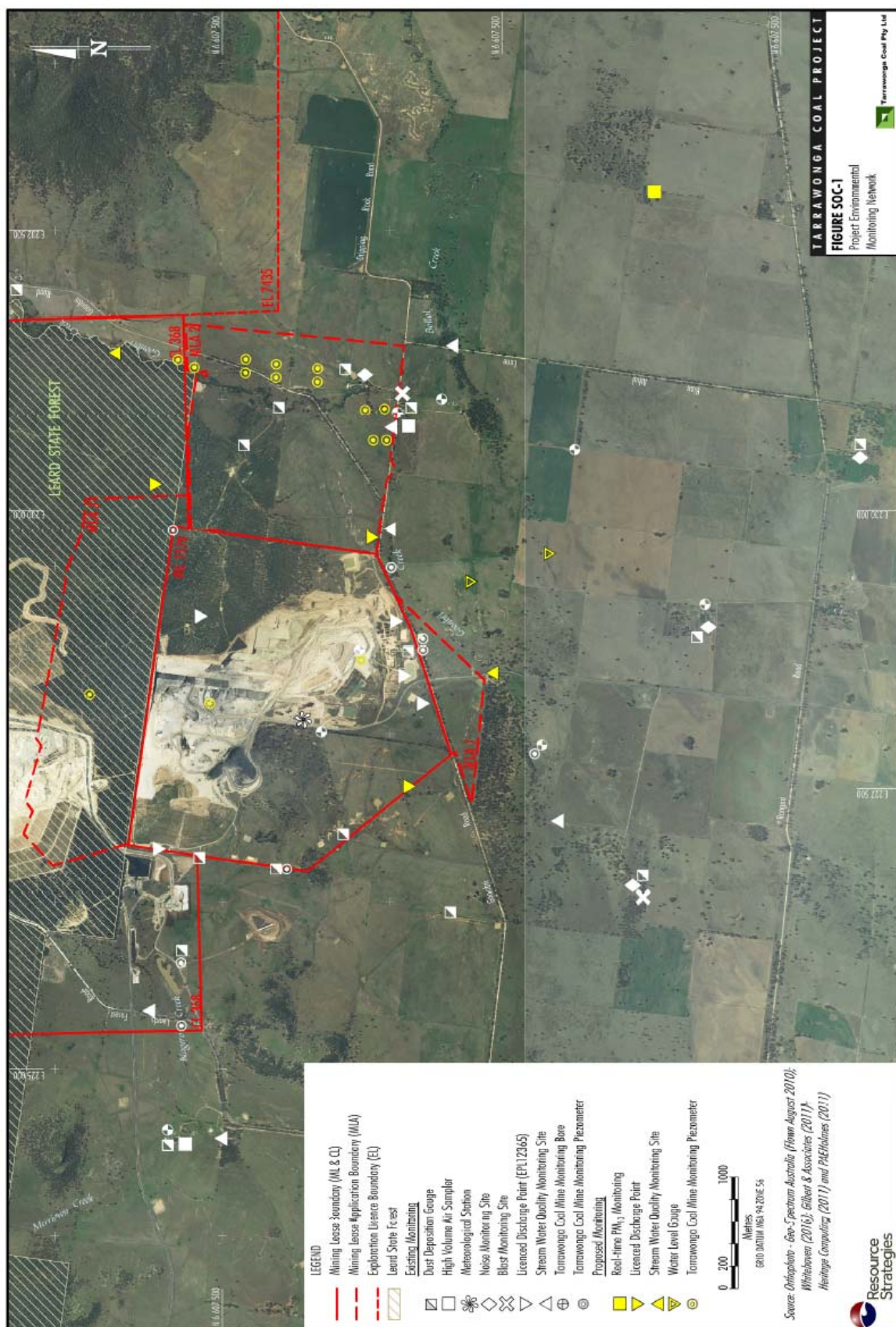
- minimise the potential for local drainage of alluvial groundwater into the open cut during operations and post-mining;
- minimise the potential for future instability of the open cut batters formed in the alluvium;
- maintain the hydraulic character of Goonbri Creek by minimising the potential loss of baseflow; and
- maintain the value of alluvial groundwater, by minimising potential interactions with the mine final void, post-mining.

In addition, TCPL will augment the existing piezometer network with additional sites to validate the performance of the low permeability barrier.

Permanent Goonbri Creek Alignment and Associated Flood Bund

In approximately Year 15, open cut mining would remove a 3 kilometre (km) section of Goonbri Creek. Prior to the open cut advancing into this section of the creek, the permanent Goonbri Creek alignment will be established.

A permanent flood bund will also be constructed to prevent inundation of the open cut during operations and post-mining. The permanent flood bund will generally coincide with the alignment of the low permeability barrier.



TCPL Commitment

TCPL commits to the design, construction and implementation of the permanent Goonbri Creek alignment to meet the following design objectives:

- construct a low flow channel that approximates the existing section of Goonbri Creek upstream of the Project in terms of stream geometry, hydrology and geomorphology;
- mimic the meandering path of the existing alignment of Goonbri Creek, such that the length of the permanent Goonbri Creek alignment is approximately the same length as the section of Goonbri Creek being removed;
- minimise the disturbance to the reaches of Goonbri Creek upstream of the permanent Goonbri Creek alignment; and
- provide a stable transition back to the existing Goonbri Creek alignment which results in no detectable change to the hydraulic conditions in the reaches of Goonbri Creek or the Bollol Creek floodplain area downstream.

In addition, TCPL commits to the design and construction of the permanent flood bund to a height that will provide protection against the peak flood height associated with a Probable Maximum Precipitation rainfall event.

TCPL will develop and implement a Goonbri Creek Management Plan prior to the commencement of construction activities associated with the low permeability barrier, permanent Goonbri Creek alignment and flood bund.

The Goonbri Creek Management Plan will describe:

- the design and construction details of the permanent Goonbri Creek alignment and flood bund;
- revegetation objectives and activities;
- water quality, ecological, hydrological and geomorphic performance and completion criteria for the permanent Goonbri Creek alignment based on baseline conditions; and
- a monitoring/maintenance program for water quality, ecological, hydrological and geomorphic integrity of the permanent Goonbri Creek alignment.

Integration with the Boggabri Coal Mine

Whitehaven Coal Mining Pty Ltd (Whitehaven) and Boggabri Coal Pty Limited have entered into an agreement that enables the handling, processing and transportation of Project coal at the upgraded Boggabri Coal Mine Infrastructure Facilities and private rail spur.

Under this agreement Boggabri Coal Pty Limited will handle and process Project ROM coal at the upgraded Boggabri Coal Mine Infrastructure Facilities on a campaign basis.

In addition, the Project Northern Emplacement will be integrated with the southern extent of the Boggabri Coal Mine waste rock emplacement to facilitate an integrated waste emplacement landform, avoiding the formation of a new valley between the two mine landforms and reducing the Project disturbance area.

Cessation of Sized ROM Coal Haulage to Whitehaven Coal Handling and Preparation Plant

Once approvals and upgrades are in place for the transfer of Project ROM coal to the Boggabri Coal Mine Infrastructure Facilities, Project sized ROM coal will no longer be trucked to the Whitehaven Coal Handling and Preparation Plant for train loading and associated processing.

Management of Operational Noise

Due to the extensions to the open cut, increased mobile fleet and alteration to operating hours (i.e. change from 20.5 to 24 hours per day) the Project has the potential to result in additional noise emissions at nearby privately-owned residences.

A number of iterative steps were undertaken to develop noise mitigation measures for the Project, including preliminary noise modelling, evaluation of potential noise management and mitigation measures and assessment of their effectiveness and feasibility by TCPL.

TCPL Commitment

TCPL will implement the following noise management and mitigation measures to appreciably reduce noise emissions associated with the Project:

- installation of an earth bund on the southern side of exposed sections of the services corridor (i.e. ROM coal haul road to the Boggabri Coal Mine);
- modified alignment of haul routes to reduce their exposure relative to nearby receivers; and
- a reduction in the number of mobile fleet items operating during the evening and night-time periods.

Rehabilitation Objectives and Final Landform

The Project would require the progressive removal of approximately 334 hectares (ha) of woodland and forest habitat and approximately 223 ha of grassland habitat.

This includes approximately 145 ha of native vegetation in the Leard State Forest, and approximately 13 ha of Box-Gum Woodland, which is an endangered ecological community.

The Project Northern Emplacement will be integrated with the southern extent of the Boggabri Coal Mine waste rock emplacement.

TCPL Commitment

The Project final landform and revegetation program will provide for a combination of approximately 752 ha of native woodland/forest and some 210 ha of Class 3 agricultural suitability land.

The agricultural land will be capable of being used for pasture production for grazing and occasional cropping. Revegetation of woodland/forest areas will include the planting of species characteristic of the local vegetation communities, including species from the Box-Gum Woodland endangered ecological community.

In addition, TCPL commits to a riparian vegetation enhancement program on a 3.2 km section of Goonbri Creek downstream of the Project open cut, through measures such as revegetation and stock exclusion.

A Rehabilitation Management Plan will be developed and implemented for the Project, including a rehabilitation monitoring program designed to track the progress of rehabilitation and revegetation.

Biodiversity Offset Measures

TCPL Commitment

TCPL commits to the provision of an area to offset the residual impacts of the Project on flora and fauna and maintain or improve the biodiversity values of the region in the medium to long-term.

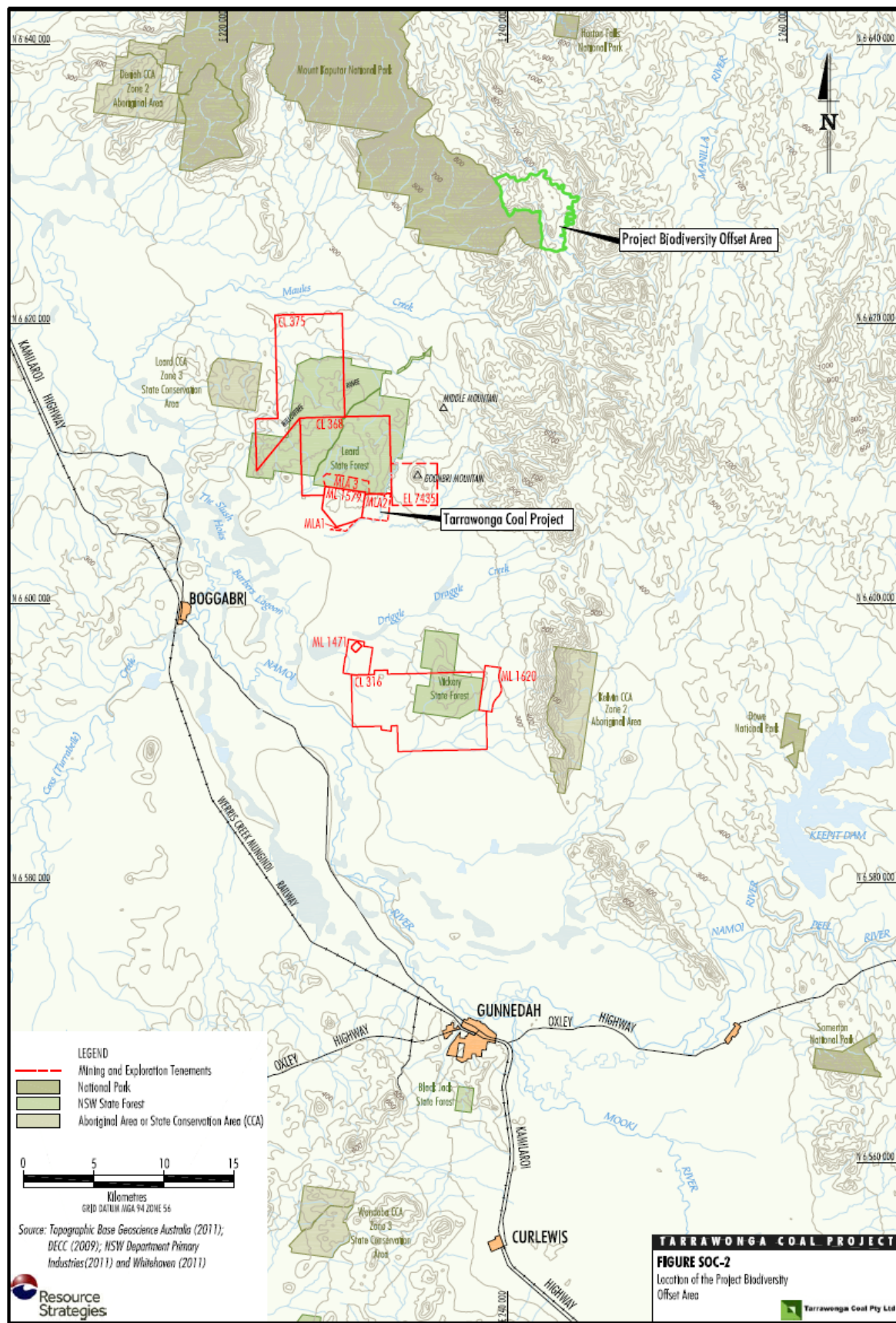
The biodiversity offset for the Project comprises approximately 1,600 ha of freehold land that has been purchased by Whitehaven.

The offset is situated approximately 20 km to the north-east of the Project and adjoins Mount Kaputar National Park (Figure SOC-2). Prior to its recent purchase by Whitehaven the offset area was part of a larger agricultural property.

Ecological gains from the biodiversity offset include:

- Similar vegetation communities/fauna habitats, compared to the Project area, will be conserved/enhanced in the biodiversity offset area.
- The biodiversity offset area is suitably located to benefit flora and fauna populations (biodiversity values) potentially impacted by the Project.
- The biodiversity offset area is located adjacent to Mount Kaputar National Park.
- Ephemeral creeks occur within the biodiversity offset area, providing a diversity of habitats.
- Substantial areas of Box-Gum Woodland (232 ha) occur in the biodiversity offset area.

Through active management, particularly of areas previously cleared for agriculture, the ecological values of the biodiversity offset area can be further improved. TCPL commits to a number of management measures to enhance the offset area's flora and fauna values. These measures will be detailed in the Offset Area Management Plan to be prepared for the Project.



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The Offset Area Management Plan will also include a program to monitor and audit the effectiveness of the management measures and to evaluate performance against specified completion criteria.

TCPL intends to reach an agreement with the New South Wales (NSW) Government so that the biodiversity offset area can be permanently added to the adjoining Mount Kaputar National Park.

In the interim, TCPL will enter into a conservation arrangement with the NSW Government to ensure the protection and management of the offset area (e.g. a voluntary conservation agreement with the NSW Minister for the Environment).

Management of the Project Final Void

At the cessation of mining, a final void would remain at the eastern extent of the open cut.

One of the rehabilitation and mine closure goals for the Project is to minimise the long-term drawdown and potential water quality effects on local groundwater aquifers, so that their beneficial use is not adversely impacted.

TCPL Commitment

TCPL commits to installing permanent perimeter bunds and/or diversion channels to limit the catchment area of the final void.

In addition, TCPL will design and construct the final void to minimise the long-term drawdown and potential water quality effects on local groundwater aquifers. This will be achieved by adjusting the final void batter angles and/or placing additional waste rock backfill in the final void such that a permanent waterbody will form and reach an equilibrium level close to, but below, the local pre-mining groundwater level in the coal measures.

TCPL will adopt an adaptive management approach to the final void design and mine closure planning for the Project. Final void design and mine planning will be undertaken by TCPL in consultation with relevant government agencies as a component of the Rehabilitation Management Plan.

Participation in Joint Air Quality, Operational Noise and Regional Groundwater Monitoring

The Air Quality and Greenhouse Gas Management Plan will be revised and updated to address the construction and operation of the Project, including additional best-practice dust suppression measures on Project haul roads (i.e. additional haul road watering and/or the use of chemical dust suppressants).

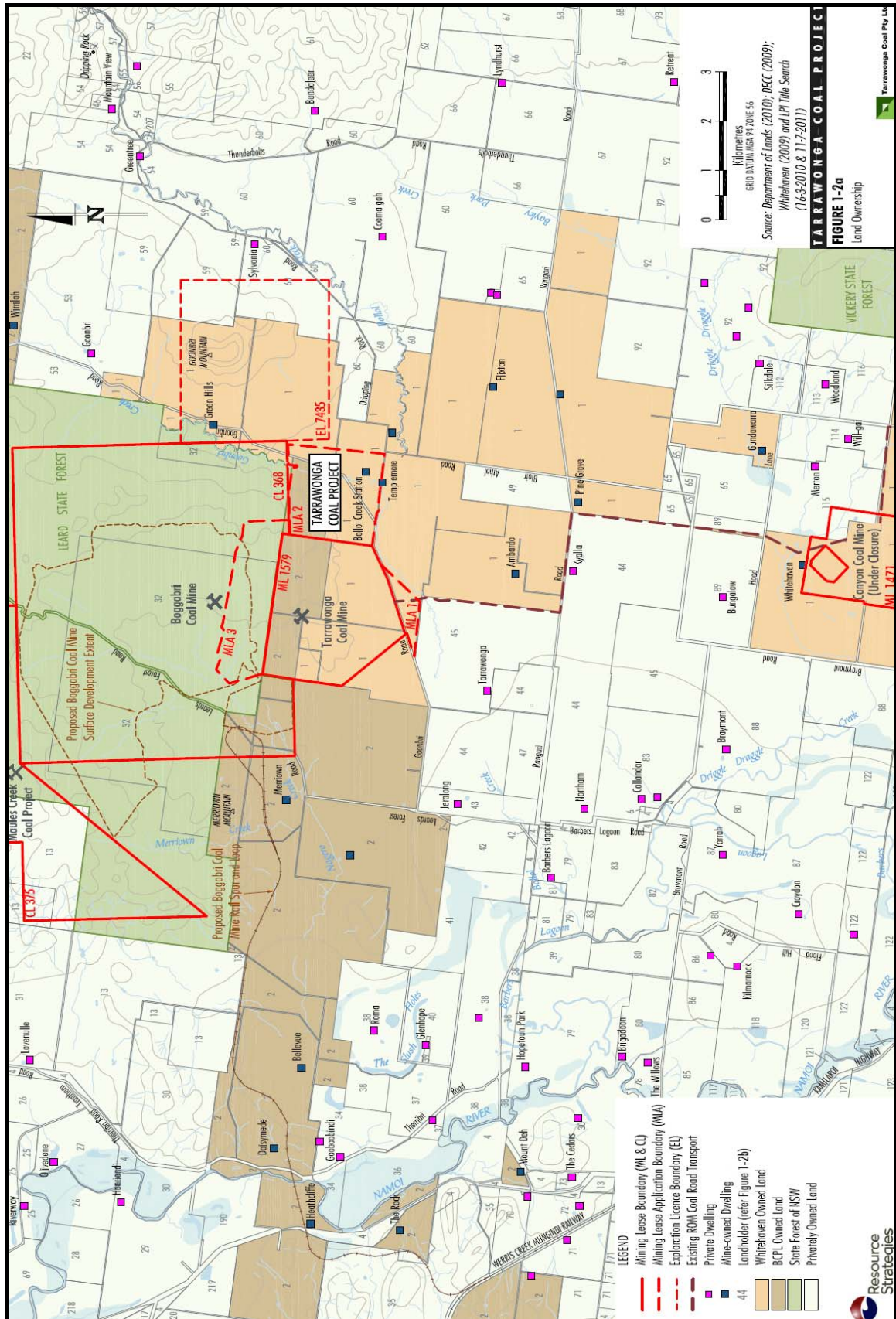
The Noise Management Plan will be revised to include details of the mitigation and management measures for noise and methodology for measuring temperature inversions.

The Groundwater Monitoring Program (which is included in the Water Management Plan) will be updated to address the Project and associated extensions to the piezometer network.

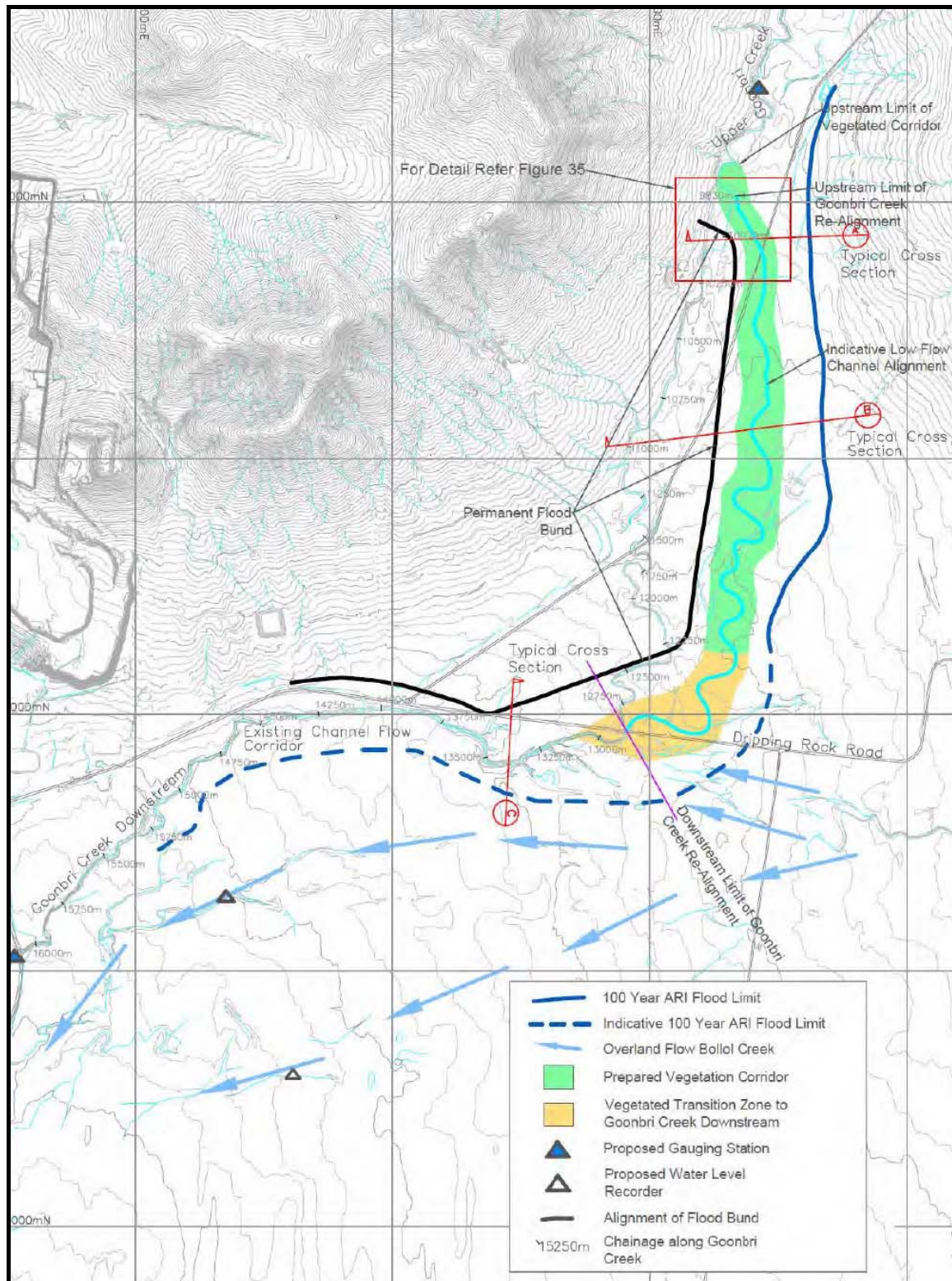
TCPL Commitment

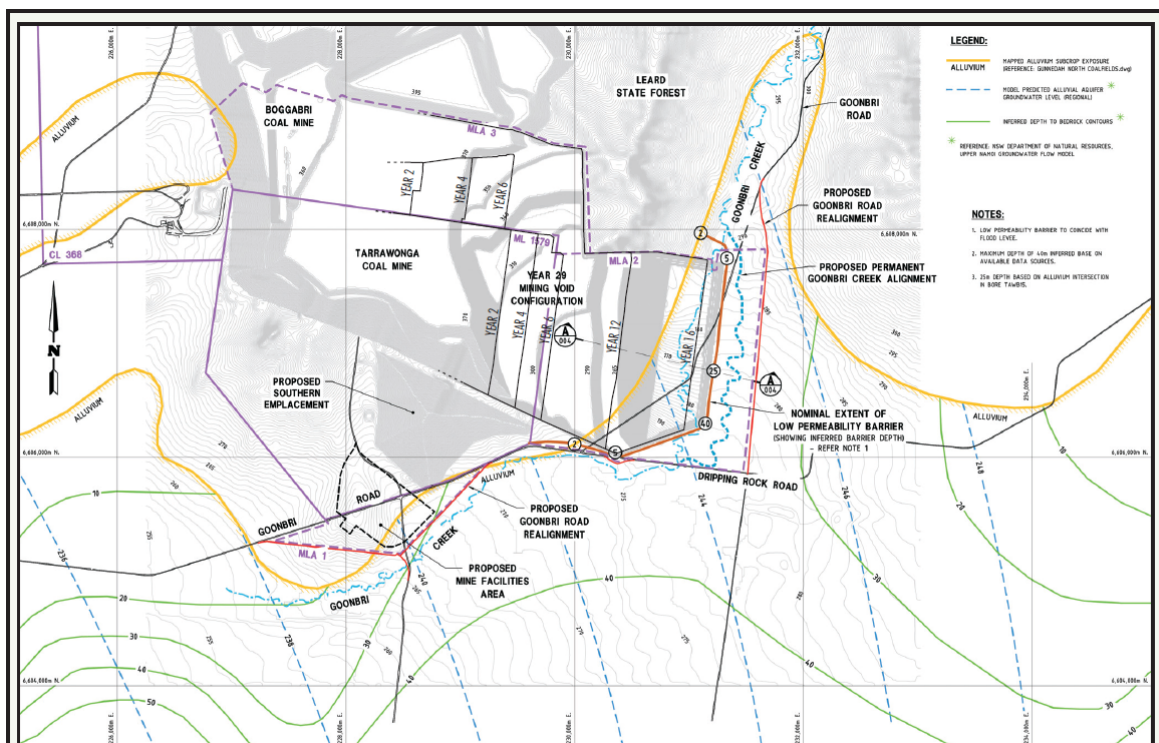
TCPL will work with the proponents of the Boggabri Coal Mine and Maules Creek Coal Project to develop and implement a joint network of real-time particulate matter monitors, operational noise monitors and regional groundwater monitoring in the vicinity of the Project. The details of the joint network will be provided in the revised Air Quality and Greenhouse Gas Management Plan, Noise Management Plan and Water Management Plan.

APPENDIX 5 LAND OWNERSHIP PLAN



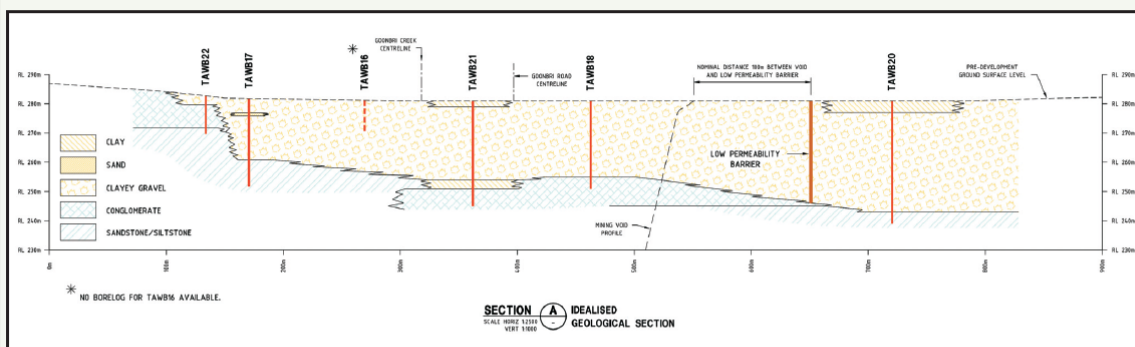
APPENDIX 6 GOONBRI CREEK REALIGNMENT CONCEPT





Source: Drawing 003 in Allan Watson Associates, 2011 (Appendix R of the EA)

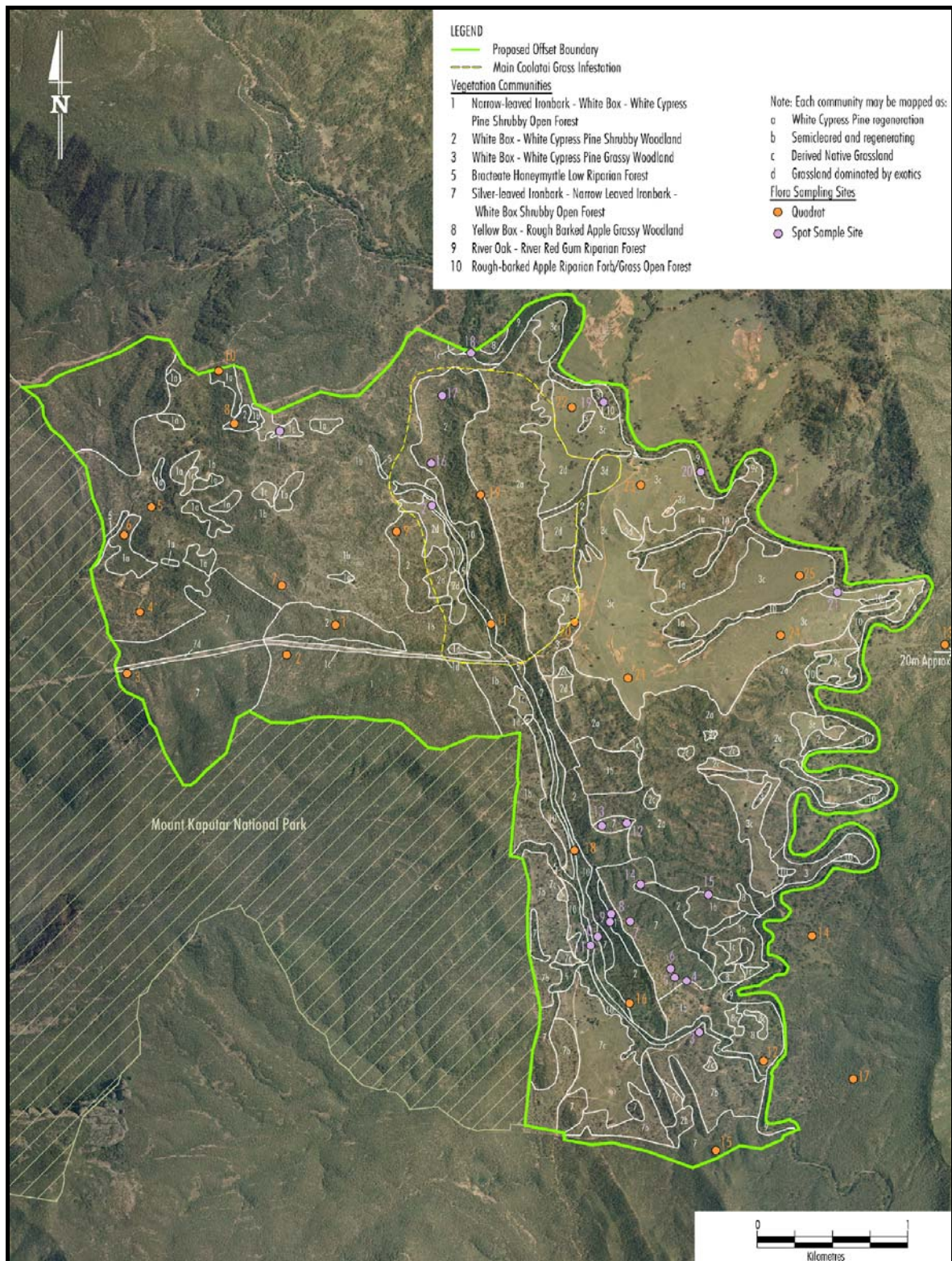
Upper Namoi Alluvium - Plan View



Source: Drawing A1 in Allan Watson Associates, 2011 (Appendix R of the EA)

Upper Namoi Alluvium - Section

APPENDIX 7 BIODIVERSITY OFFSET STRATEGY



TARRAWONGA COAL PROJECT

FIGURE 5-2
Conceptual Final
Landform Rehabilitation

LEGEND

- Mining Lease Boundary (ML & CL)
- Mining Lease Application Boundary (MLA)
- Exploration Licence Boundary (EL)
- Leard State Forest

Scale: 0 200 1000 Meters

GRID DATUM: MGA 94 ZONE 56

Source: Orthophoto - Geo-Spectrum Australia (from August 2010) and Whithaven (2010)

Resource Strategies

TARRAWONGA COAL Pty Ltd