

Project Approval

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

As delegate of the Minister for Planning and Infrastructure, I approve 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.

Richard Pearson
Deputy Director-General
Development Assessment and Systems Performance

Sydney

2011

Blue Type represents 2014 modification

Red Type represents 2015 modification

Green Type represents 2017 modification

Orange Type represents October 2018 modification

SCHEDULE 1

Application Number: 10_0015
Proponent: Whitehaven Coal Mining Limited
Approval Authority: Minister for Planning and Infrastructure
Land: See Appendix 1
Project: Rocglen Extension Project

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DEFINITIONS

Annual review	The review required by condition 3 of schedule 5
Approved haulage route	The route used to transport coal from the Project and the Tarrawonga and Vickery coal mines to the Whitehaven CHPP, including the use of sections of the public road network, as shown in Figure 3 of Appendix 2
BCA	Building Code of Australia
BOS	Biodiversity offset strategy
CCC	Community Consultative Committee
CHPP	Coal Handling and Preparation Plant
Conditions of this approval	Conditions contained in schedules 2 to 5 inclusive
Council	Gunnedah Shire Council
Cumulative haulage	The total amount of ROM coal transported from the Project and the Tarrawonga and Vickery coal mines
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Dol Lands & Water	NSW Department of Industry – Lands and Water Division
DRG	Division of Resources and Geosciences within the Department
EA	The <i>Rocglen Coal Extension Project Environmental Assessment</i> dated February 2011, and associated response to submissions titled <i>Whitehaven Coal Limited Rocglen Coal Mine Extension Project – Response to Submissions</i> , dated June 2011, as modified by: <ul style="list-style-type: none"> • <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 – Gunnedah CHPP and Rocglen Rejects Management Modifications and Environmental Assessment</i>, dated May 2015; and • <i>Whitehaven Temporary Road Haulage Increase ROM Coal Haulage Modification (MOD3)</i>, dated October 2016, and associated response to submissions titled <i>Whitehaven ROM Coal Haulage Modification – Response to Submissions</i>, dated November 2016 and <i>Kamilaroi Highway Review</i>, Reference #N106011, GTA Consultants, dated 24 November 2016. • <i>Whitehaven Temporary Road Haulage Modification Environmental Assessment</i>, dated September 2018
EEC	Endangered Ecological Community as defined under the <i>Threatened Species Conservation Act 1995</i>
EPA	Environmental Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence issued under <i>POEO Act</i>
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build or carry out
Incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval
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	In general, the definition of land is consistent with the definition in the EP&A Act. However, in relation to the noise and air quality conditions in Schedules 3 and 4, it means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Mining Operations	Includes the removal of overburden and the extraction, processing, handling, storage and transportation of coal as well as the receipt and disposal of coarse and fine reject material from the Whitehaven CHPP
Minister	Minister for Planning, or delegate
Minor	Small in quantity, size and degree
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

Offset strategy	The biodiversity conservation and enhancement program described in the EA, and depicted generally in Appendix 4
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 development described in the EA
Proponent	Whitehaven Coal Mining Limited, or its successors
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The treatment or management of land disturbed by the project for the purpose of establishing a safe, stable and non-polluting environment, and includes remediation
RMS	Roads and Maritime Services
ROM	Run-of-mine
Secretary	Secretary of the Department, or nominee
Site	The land listed in Appendix 1
Statement of commitments	The Proponent's commitments in Appendix 7
Tarrawonga coal mine	The Tarrawonga Extension Project (MP 11_0047)
Vickery coal mine	The Vickery Coal Project (SSD 5000)
Whitehaven CHPP	Whitehaven Coal Handling and Preparation Plant near Gunnedah
Whitehaven Regional Biobank Site	The Proponent's offset site off Wean Road, Gunnedah on Lot 36 DP 754950, Lot 1 DP 247949, Lot A DP 405391 and Lot 2 DP 728391 and located as shown in Figure 1 of Appendix 2 and Figure 1 of Appendix 4

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation or rehabilitation of the 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 7.

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; and
 - (b) 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 2022.

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 1.5 million tonnes of ROM coal from the site in a calendar year.

Coal Transport

- 6A. For the period up until the commissioning of the Kamilaroi Highway overpass, the Proponent:
 - (a) may not transport more than 1.5 million tonnes of ROM coal from the site in any calendar year;
 - (b) shall transport all coal from the site to the Whitehaven CHPP via the approved haulage route;
 - (c) shall, together with the owners of the Tarrawonga 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
 - (d) shall, together with the owners of the Tarrawonga 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.
- 6B. For the period following the commissioning of the Kamilaroi Highway overpass, the Proponent:
 - (a) may not transport more than 1.5 million tonnes of ROM coal from the site in any calendar year;
 - (b) shall transport all coal from the site to the Whitehaven CHPP via the approved haulage route and the Kamilaroi Highway overpass; and
 - (c) shall, together with the owners of the Tarrawonga and Vickery coal mines, ensure that the cumulative haulage of coal along the approved haulage route does not exceed 4.5 million tonnes.

Coal Rejects

- 6C. The proponent shall not receive more than 700,000 tonnes of coarse and/or fine rejects on the site in any calendar year.

SURRENDER OF EXISTING PROJECT APPROVAL

7. By the end of September 2012, or as otherwise agreed by the [Secretary](#), the Proponent shall surrender the existing project approval for the Rocglen Coal Mine (06_0198) in accordance with section 75YA of the EP&A Act.

8. Prior to the surrender of project approval 06_0198, the conditions of this approval shall prevail to the extent of any inconsistency between the two approvals.

STRUCTURAL ADEQUACY

9. 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 (where necessary) for the proposed building works; and
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.

DEMOLITION

10. 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.

OPERATION OF PLANT AND EQUIPMENT

11. 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

12. 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.

13. The Proponent shall continue to implement the existing strategies, plans or programs that apply to any development on site under project approval 06_0198 until they are replaced by an equivalent strategy, plan or program approved under this approval.

PROTECTION OF PUBLIC INFRASTRUCTURE

14. 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.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

NOISE

Noise Criteria

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

Table 1: Noise criteria dB(A)

Location	Day	Evening	Night	
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)
All privately-owned land	35	35	35	45

Note: Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

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.

Road Traffic Noise Criteria

2. The Proponent, together with the owners of the Tarrawonga 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 2 at any existing residence on privately-owned land.

Table 2: 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.

Operating Conditions

3. The Proponent shall:
 - (a) implement best practice noise management to minimise the operational, low frequency, and road traffic noise generated by the project;
 - (b) minimise the noise impacts of the project during temperature inversions; and
 - (c) regularly assess the real-time noise monitoring and meteorological forecasting data and relocate, modify, and/or stop operations on site to ensure compliance with the relevant conditions of this approval,
 to the satisfaction of the [Secretary](#).

Noise Management Plan

4. 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 submitted to the [Secretary](#) for approval by the end of December 2011;
 - (b) describe the noise mitigation measures that would be implemented to ensure compliance with the relevant conditions of this approval;
 - (c) describe the measures that would be implemented to ensure the noise impacts generated by project-related traffic on the Kamilaroi Highway overpass are minimised as far as practicable; and
 - (d) include a noise monitoring program that:
 - uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the project; and
 - includes a protocol for determining exceedances of the relevant conditions of this approval.

BLASTING

Blasting Criteria

5. The Proponent shall ensure that the blasting on site does not cause exceedances of the criteria in Table 3.

Table 3: Blasting criteria

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Residence on privately-owned land	115	5	5% of the total number of blasts over a period of 12 months
	120	10	0%

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.

Blasting Hours

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

Blasting Frequency

7. The Proponent shall not carry out more than one blast a day on site, unless an additional blast is required following a blast misfire.

Note: A blast may involve a number of explosions within a short period, typically less than two minutes.

Property Inspections

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

Property Investigations

9. If the owner of any privately-owned land claims that the buildings and/or structures on their land have been damaged as a result of blasting on site, then within 2 months of receiving this claim the Proponent shall:
- commission a suitably qualified, experienced and independent person, whose appointment has been approved by the [Secretary](#), 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 the Proponent or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the [Secretary](#) for resolution.

Operating Conditions

10. The Proponent shall
- implement best blasting management practice on site to:
 - protect the safety of people and livestock in the surrounding area;
 - protect public or private property in the surrounding area; and
 - minimise the dust and fume emissions of the blasting; 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](#).

11. The Proponent shall not carry out any blasting on site that is within 500 metres of:
- (a) a public road without the approval of Council; and
 - (b) any land outside the site that is 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 [Secretary](#) in writing of the terms of this agreement; or
 - the Proponent has:
 - demonstrated to the satisfaction of the [Secretary](#) that the blasting can be carried out closer to the land, without compromising the safety of people or livestock, or damaging the buildings and/or structures on the land; and
 - updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the land.

Blast Management Plan

12. The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the [Secretary](#). This plan must:
- (a) be prepared in consultation with the [EPA](#), and submitted to the [Secretary](#) for approval by the end of December 2011;
 - (b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval; and
 - (c) include a blast monitoring program to evaluate the performance of the project.

AIR QUALITY & GREENHOUSE GAS

Odour

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

Greenhouse Gas Emissions

14. The Proponent shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site.

Air Quality Criteria

15. The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the particulate emissions generated by the project do not exceed the criteria listed in Tables 4, 5 and 6 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 4: Long-term criteria for particulate matter

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

Table 5: Short-term criterion for particulate matter

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

Table 6: Long-term criteria for deposited dust

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total¹ deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Notes:

- ^aTotal impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to other sources);
- ^b Incremental impact (i.e. incremental increase in concentrations due to the project on its own);
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and

- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed to by the [Secretary](#) in consultation with [the EPA](#).

Operating Conditions

16. The Proponent shall:
- implement best practice air quality management on site, including all reasonable and feasible measures to minimise odour, fume and dust emissions generated by the project, including those generated by any spontaneous combustion on site,
 - minimise any visible air pollution generated by the project;
 - minimise the surface disturbance on site; and
 - regularly assess the real-time air quality monitoring and meteorological forecasting data, and relocate, modify and/or stop operations on site to ensure compliance with the relevant conditions of this approval,
- to the satisfaction of the [Secretary](#).

Air Quality & Greenhouse Gas Management Plan

17. The Proponent shall prepare and implement an Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the [Secretary](#). This plan must:
- be prepared in consultation with [the EPA](#), and submitted to the [Secretary](#) for approval by the end of December 2011;
 - describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval, including a real-time air quality management system that employs reactive and proactive mitigation measures; and
 - include an air quality monitoring program that:
 - uses a combination of real-time monitors, high volume samplers and dust deposition gauges to evaluate the performance of the project; and
 - includes a protocol for determining exceedances of the relevant conditions of this approval.

METEOROLOGICAL MONITORING

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

AUGER MINING

19. The Proponent shall ensure that the auger mining carried out on site:
- is restricted to the areas approved for auger mining;
 - is designed to remain safe and stable in the long term; and
 - does not result in vertical subsidence of greater than 20 mm.

SOIL & WATER

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

Water Supply

20. 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](#).

Surface Water Discharges

21. 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.

Water Management Plan

22. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the [Secretary](#). This plan must be prepared in consultation with [the EPA](#), [DoI Lands & Water](#) and [DRG](#) by suitably qualified and experienced persons whose appointment has been approved by the [Secretary](#), and submitted to the [Secretary](#) for approval by the end of February 2012. In addition to the standard requirements for management plans (see condition 2 of schedule 5), this plan must include:
- a Site Water Balance that:
 - includes details of:
 - sources and security of water supply;

- water use on site;
 - water management on site;
 - any off-site water transfers;
 - describes what measures would be implemented to minimise water use on site; and
 - is to be updated each year during the annual review;
- (b) a Surface Water Management Plan, that includes:
- a detailed description of the water management system on site, including the:
 - clean water diversion systems;
 - erosion and sediment controls; and
 - water storages;
 - detailed plans, including design objectives and performance criteria, for:
 - design and management of the final void;
 - reinstatement of drainage lines on the rehabilitated areas of the site; and
 - 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:
 - the water management system;
 - surface water quality in Driggle Draggie Creek or the unnamed creek to the south of the site;
 - the health of any riparian vegetation in Driggle Draggie Creek or the unnamed creek to the south of the site;
 - a program to monitor:
 - the effectiveness of the water management system;
 - surface water flows and quality in Driggle Draggie Creek and the unnamed creek to the south of the site;
 - the health of any riparian vegetation in Driggle Draggie Creek or the unnamed creek to the south of the site; and
 - a plan to respond to any exceedances of the performance criteria, and mitigate and/or offset any adverse surface water impacts of the project;
- (c) a Groundwater Management Plan, which includes:
- performance criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
 - a program to monitor:
 - groundwater inflows to the mining operations;
 - the impacts of the project on any alluvial aquifers;
 - the seepage/leachate from water storages, backfilled voids, and the final void on site;
 - a program to validate the groundwater model for the project, and calibrate it to site specific conditions; and
 - a plan to respond to any exceedances of the performance criteria, and mitigate and/or offset any adverse groundwater impacts.

BIODIVERSITY

Biodiversity Offset

23. By the end of June 2012, unless the [Secretary](#) agrees otherwise, the Proponent shall enter into a Biobanking agreement with the Minister for Environment and Heritage, in accordance with Part 7A of the *Threatened Species Conservation Act 1995*, to implement the Biodiversity Offset Strategy described in the EA (for the Whitehaven Regional Biobank Site), and summarised in Table 7;

Table 7: Biodiversity Offset Strategy to be implemented at the Whitehaven Regional Biobank Site

Total Vegetation Clearing	Minimum Offset to be provided
Total of 95.44 ha of vegetation to be cleared	<ul style="list-style-type: none"> • Retirement of 4,859 Ecosystem Credits (including 478 Ecosystem Credits for the clearing of 47.9 ha of the BOS area approved under 06_0198); • Conservation of the residual BOS area approved under 06_0198 (60 ha), at the existing location within the Whitehaven Regional Biobank Site; • Conservation of 0.62 ha of White box Grassy Woodland; • Conservation of 231.42 ha of suitable foraging habitat for the Regent Honeyeater and Swift Parrot; and • Restoration of 118.33 ha of derived grassland to woodland.

Note: The Whitehaven Regional Biobank Site is shown in Figure 1 in Appendix 4.

HERITAGE

Heritage Management Plan

24. The Proponent shall prepare and implement a Heritage Management Plan for the project to the satisfaction of the [Secretary](#). This plan must:
- be prepared in consultation with OEH and Aboriginal stakeholders;
 - be submitted to the [Secretary](#) for approval by the end of December 2011;
 - describe the measures that would be implemented:
 - record and salvage the Aboriginal sites within the project disturbance area, including RPS Rocglen IF1, RPS Rocglen AS1 and RPS Rocglen AS2 at locations as shown in Appendix 6 and any potential archaeological deposits;
 - store the Aboriginal objects salvaged, both during construction and in the long term;
 - protect, monitor and/or manage the Aboriginal sites on site that are outside the project disturbance area on site, including measures to protect scarred trees (NPWS # 20-4-0194 and # 20-4-0195 at locations as shown in Appendix 6);
 - manage the discovery of any human remains or previously unidentified Aboriginal objects;
 - enable Aboriginal stakeholders to get reasonable access to the site during the project;
 - ensure Aboriginal stakeholders are consulted about the conservation and management of Aboriginal cultural heritage on site; and
 - ensure workers on site receive suitable heritage inductions, and that suitable records are kept of these inductions.

TRANSPORT

Road Works

25. By the end of December 2012, unless the [Secretary](#) agrees otherwise, the proponent shall upgrade and tar seal Wean Road to the satisfaction of Council from the northern end of the existing tar seal to the point of the Gunnedah/Narrabri Shire Council boundary, in general accordance with Council's Rural Local Roads Standard.

Road Maintenance

26. During the project, the Proponent shall contribute towards the maintenance of the public roads used by the project, in accordance with the existing road maintenance agreement between the Proponent and Council, [as may be modified from time to time through the agreement of both parties. If there is a dispute in relation to this agreement, then either party may refer the matter to the Secretary for resolution.](#)

Traffic Management Plan

27. The Proponent shall prepare a Traffic Management Plan for the Project, to the satisfaction of the [Secretary](#). This plan must:
- be prepared in consultation with RMS, Gunnedah Shire Council, and the owners of the Tarrawonga and Vickery coal mines;
 - be submitted to the [Secretary](#) for approval by 31 March 2017;
 - include a program for implementing Whitehaven's commitments in the EA;
 - 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.
 - 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;
 - describe measures to minimise dust from roads that may be used for access to the mine site;
 - arrangements to comply with cumulative coal haulage limits from the project and the Tarrawonga and Vickery coal mines; and
 - a monitoring program to audit vehicle movements, including the origin and destination of employees, against predictions in the EA.

Operating Conditions

28. [The Proponent shall ensure all coarse and fine rejects are transported from the Whitehaven CHPP to the site by road, using only the designated transport route shown in Figure 3 of Appendix 2.](#)
- 28A [The Proponent shall maximise the backfilling of haul trucks with coarse and/or fine rejects from the Whitehaven CHPP to minimise the number of heavy vehicles on the designated transport route.](#)
29. [The Proponent shall only dispatch coal from the site by road or receive coarse and/or fine rejects on the site between the hours of:](#)

- (a) 7 am to 9.15 pm, Monday to Friday;
- (b) 7 am to 5.15 pm Saturday; and
- (c) at no time on Sundays and public holidays.

29A. **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 haulage vehicles is minimised and promptly managed.

Monitoring of Coal Transport

30. The Proponent shall:
- (a) keep accurate records of the amount of coal transported (on a monthly basis) from the site, as well as the number of coal truck movements generated by the project; and
 - (b) make these records publicly available on its website at the end of each calendar year.

VISUAL

Visual Amenity and Lighting

31. The Proponent shall:
- (a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project;
 - (b) establish and maintain an effective vegetative screen along the boundary of the site that adjoins public roads;
 - (c) ensure that no outdoor lights shine above the horizontal; and
 - (d) ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting*, or its latest version.

WASTE

32. The Proponent shall:
- (a) minimise the waste generated by the project; and
 - (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of in a lawful manner.

BUSHFIRE MANAGEMENT

33. The Proponent shall:
- (a) ensure that the project is suitably equipped to respond to any fires on site; and
 - (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the surrounding area.

REHABILITATION

Rehabilitation Objectives

34. 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 Figure 1 in Appendix 5), and comply with the objectives in Table 8.

Table 8: Rehabilitation Objectives

Feature	Objective
Mine site (as a whole)	Safe, stable and non-polluting
Final void	<ul style="list-style-type: none"> • Minimise the size and depth of the final void as far as is reasonable and feasible; and • The final void is to be safe, stable and non-polluting
Surface infrastructure	To be decommissioned and removed, unless the Secretary agrees otherwise
Other land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining eco-systems comprised of: <ul style="list-style-type: none"> • local native plant species; • at least 206 hectares of woodland (see Figure 1 in Appendix 5); and • a landform consistent with the surrounding environment
Community	Minimise the adverse socio-economic effects associated with mine closure

Progressive Rehabilitation

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

Rehabilitation Management Plan

36. 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, **Dol Lands & Water**, OEH, Council and the CCC;
 - (b) be submitted to DRG by the end of February 2012;
 - (c) be prepared in accordance with any relevant DRG guideline;
 - (d) describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval;
 - (e) address all aspects of rehabilitation including mine closure, final landform, and final land use; and
 - (f) build to the maximum extent practicable on the other management plans required under this approval.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. By the end of December 2011, the Proponent shall notify in writing the owners of "Brolga", "Surrey" and any privately-owned land within 2 kilometres of the proposed footprint of the open-cut pit that they are entitled to ask for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated.
2. As soon as practicable after obtaining monitoring results showing:
 - (a) an exceedance of the relevant criteria in Schedule 3, the Proponent shall notify the affected landowner and/or tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the project is complying with the relevant criteria again; and
 - (b) an exceedance of the relevant air quality criteria in Schedule 3, the Proponent shall send a copy of the NSW Health fact sheet entitled "*Mine Dust and You*" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including tenants of any mine-owned land).

INDEPENDENT REVIEW

3. If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 3, then they may ask the [Secretary](#) in writing for an independent review of the impacts of the project on their 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 person, whose appointment has been approved by the [Secretary](#), to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and
 - if the project is not complying with these criteria then 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.
4. 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 impact assessment criteria in Schedule 3, then the Proponent shall:

- (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until 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](#).

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](#). This strategy must:
 - (a) be submitted to the [Secretary](#) for approval by the end of December 2011;
 - (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, handle, respond to, and record 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 required to be carried out under the conditions of this approval.

Management Plan Requirements

2. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria;
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;
 - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - impacts and environmental performance of the project;
 - 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
 - exceedances of the impact assessment criteria and/or performance criteria; and
 - (h) a protocol for periodic review of the plan.

Note: The [Secretary](#) may waive any of these requirements if they are unnecessary or unwarranted for particular management plans.

Annual Review

3. By the end of each December, the Proponent shall review the environmental performance of the project to the satisfaction of the [Secretary](#). This review must:
 - (a) describe the development (including any rehabilitation) that was carried out in the past year, and the development that is proposed to be carried out over the next year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the 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 past year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the 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

4. Within 3 months of:
- the submission of an annual review under condition 3 above;
 - the submission of an incident report under condition 6 below;
 - the submission of an audit report under condition 8 below; and
 - any modification to the conditions of this approval (unless the conditions require otherwise),
- the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the [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.

Community Consultative Committee

5. The Proponent shall operate a Community Consultative Committee (CCC) for the project in general accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version), and to the satisfaction of the [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; and*
- In accordance with the guideline, the Committee should be comprised of an independent chair and appropriate representation from the Proponent, Council and the local community.*

REPORTING

Incident Reporting

6. As soon as is practicable after the Proponent becomes aware of any incident associated with the project, the Proponent shall notify the [Secretary](#) and any other relevant agencies 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.

Regular Reporting

7. 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.

INDEPENDENT ENVIRONMENTAL AUDIT

8. By the end of March 2013, 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:
- be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the [Secretary](#);
 - include consultation with the relevant agencies;
 - assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);
 - review the adequacy of strategies, plans or programs required under the abovementioned approvals; and
 - recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.

Note: This audit team must be led by a suitably qualified auditor and include experts in any field specified by the [Secretary](#).

9. Within six weeks of the completion of 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

10. The Proponent shall:
- make copies of the following publicly available on its website:

- the documents referred to in Condition 2 of Schedule 2;
 - all current statutory approvals for the project;
 - all 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 conditions of this approval, or any approved plans and programs;
 - a complaints register, updated on a monthly basis;
 - minutes of CCC meetings;
 - the annual reviews of the project;
 - any independent environmental audit of the project, 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](#).
-

**APPENDIX 1
SCHEDULE OF LAND**

Area	Land Title Reference
<i>Mine Site Area including the proposed Wean Road diversion</i>	<i>Lots 1 and 4 DP 1120601 Lot 1 DP 787417</i>
<i>Coal Haulage Route</i>	<i>Lots 23 and 28 DP 754929 Council roads and road reserve, including:</i> <ul style="list-style-type: none"> <i>• Shannon Harbour road (SR 93);</i> <i>• Hoad Lane (SR 95);</i> <i>• Blue Vale Road (SR 7); and</i> <i>• Kamilaroi Highway (SH 29).</i>
<i>Wean Road</i>	<i>Wean Road (SR 6)</i>

**APPENDIX 2
PROJECT LAYOUT PLANS**

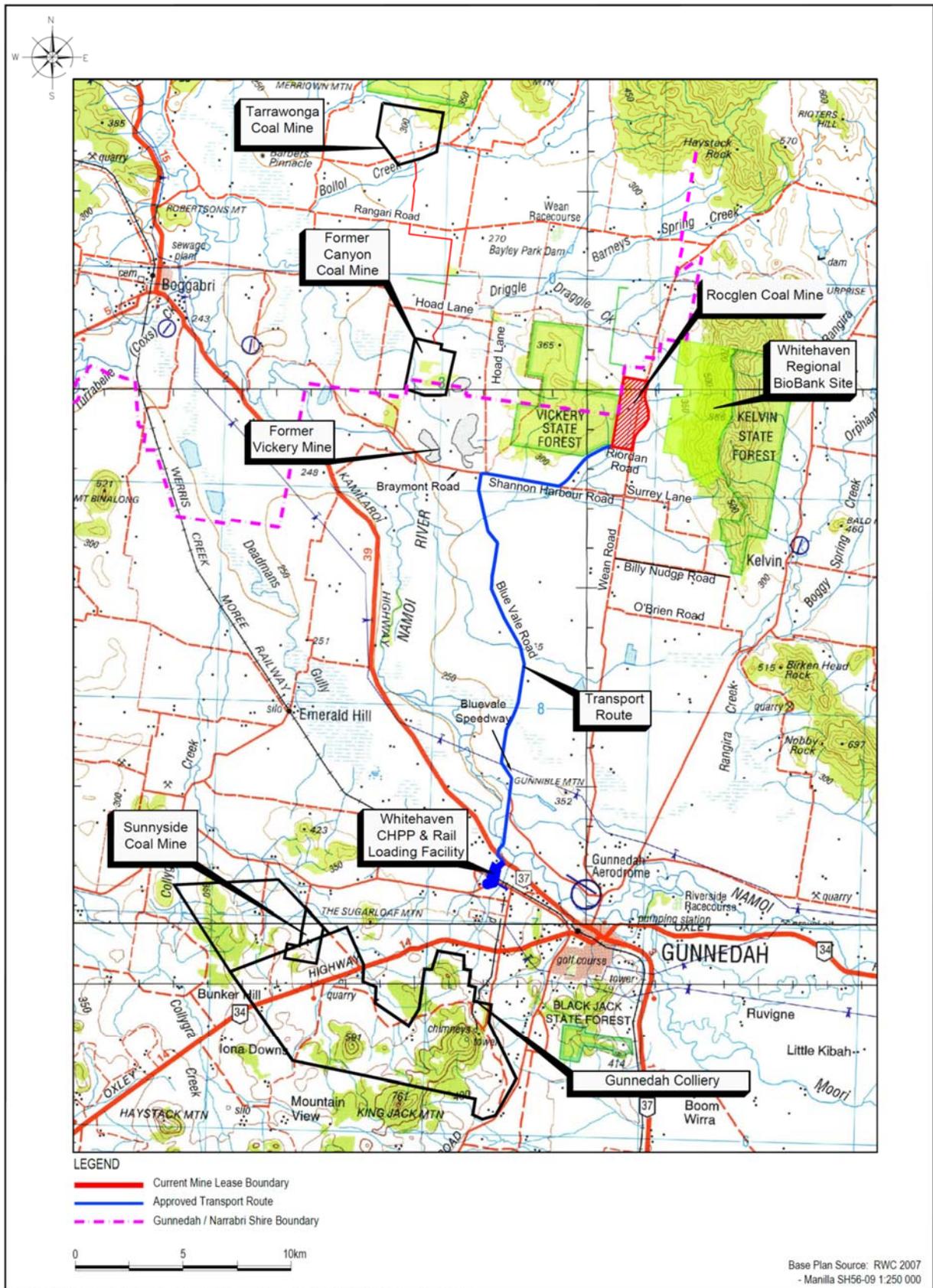


Figure 1: Regional setting of Rocglen Extension and Whitehaven Regional Biobank Site

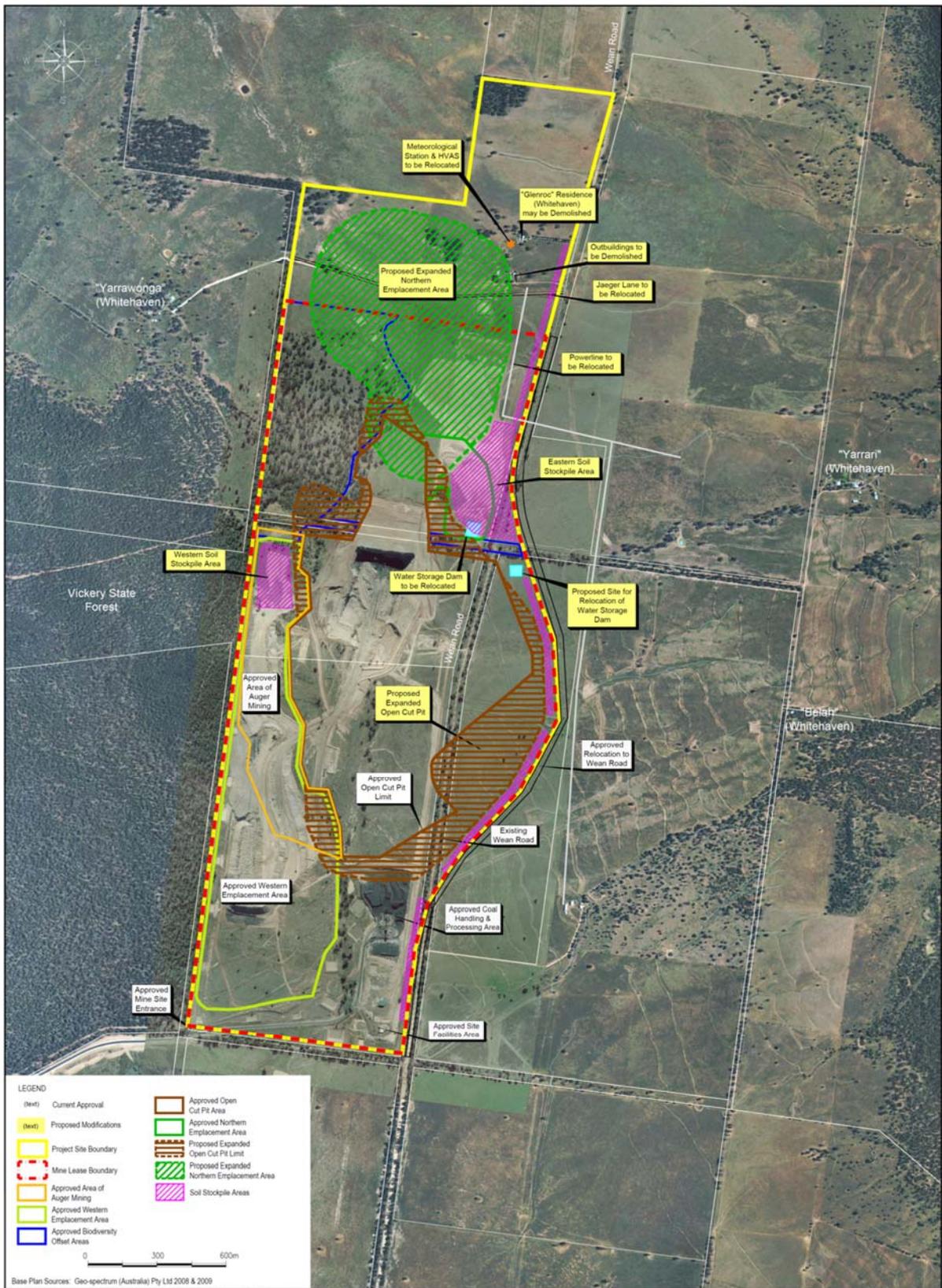


Figure 2: Rocglen Extension Project Layout

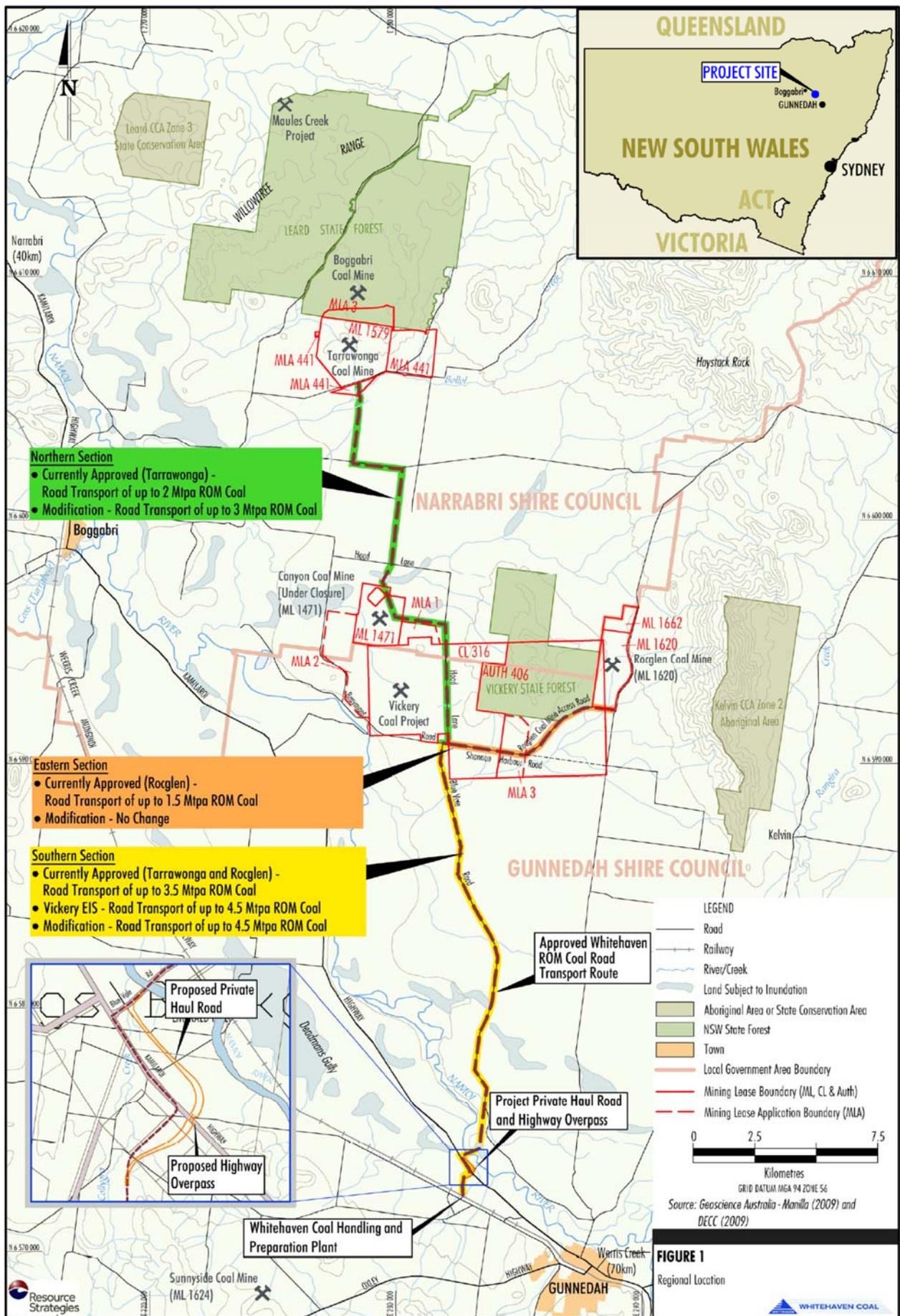


Figure 3: Approved Road Haulage Route

APPENDIX 3 LAND OWNERSHIP PLAN

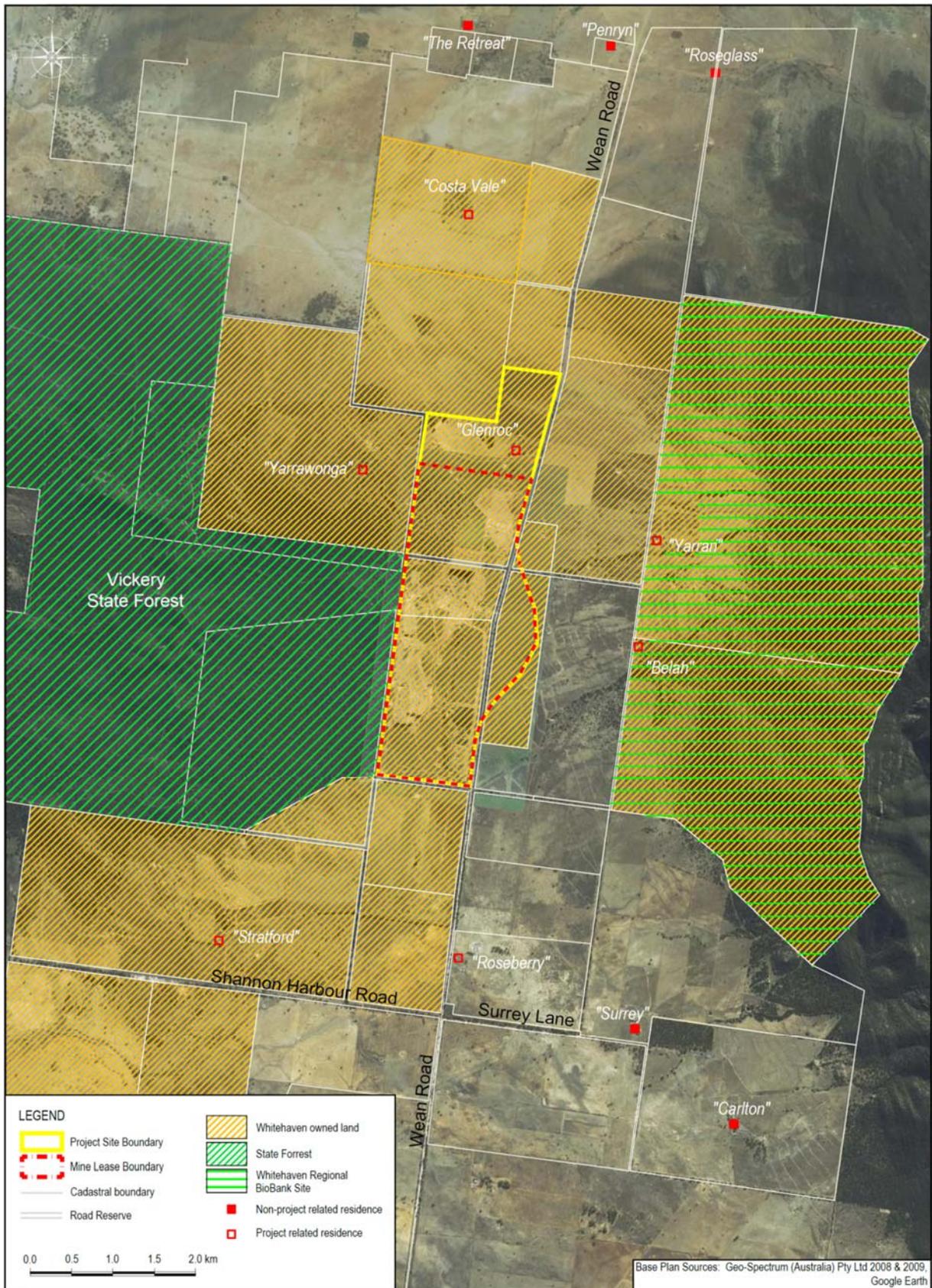


Figure 1: Land ownership and neighbouring residences

**APPENDIX 4
WHITEHAVEN REGIONAL BIOBANK SITE**

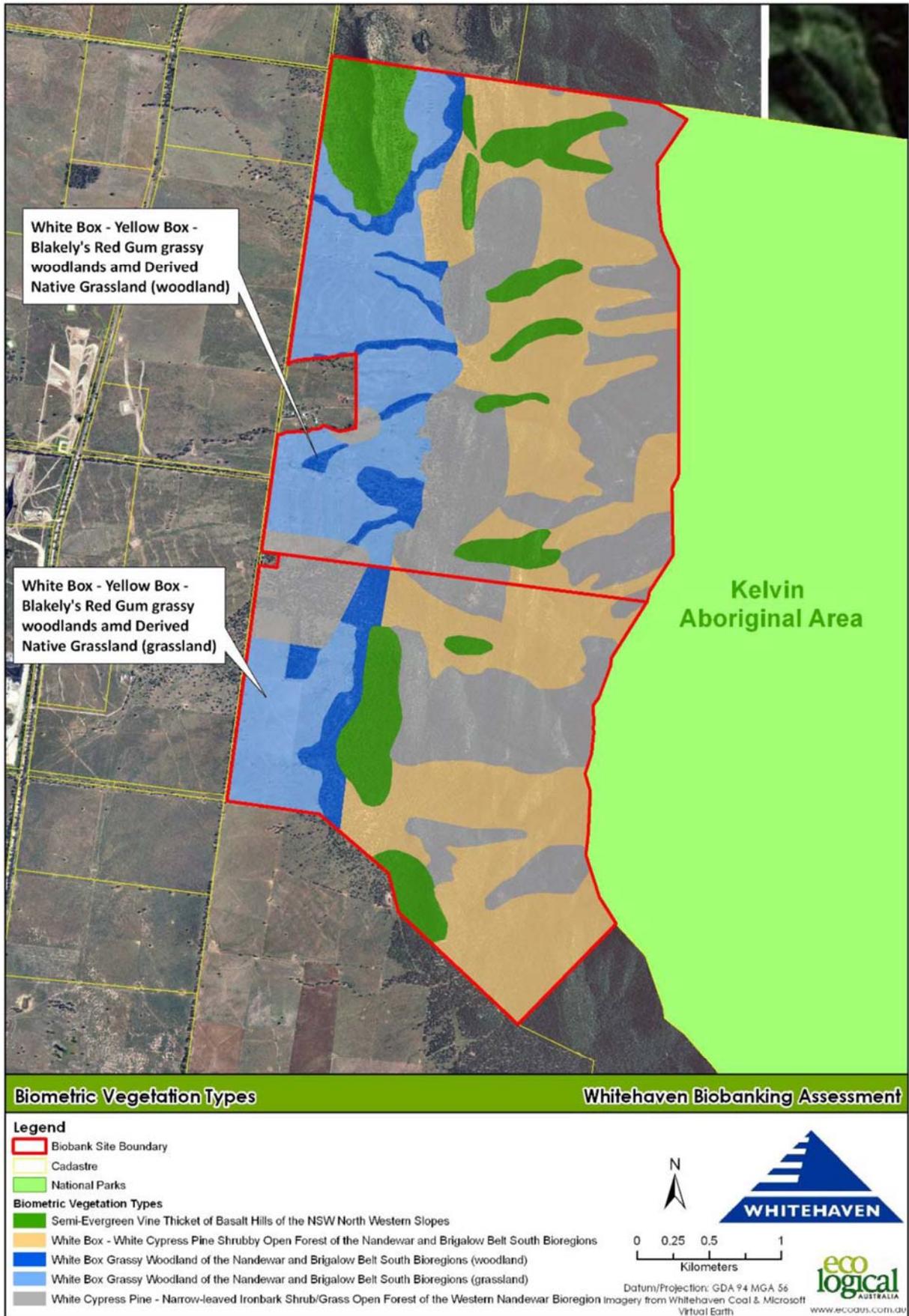


Figure 2: Whitehaven Regional Biobank Site (showing locations of EPBC Act listed ecological communities to be utilised as offsets for the Rocglen Extension Project)

**APPENDIX 5
CONCEPTUAL REHABILITATION PLAN**

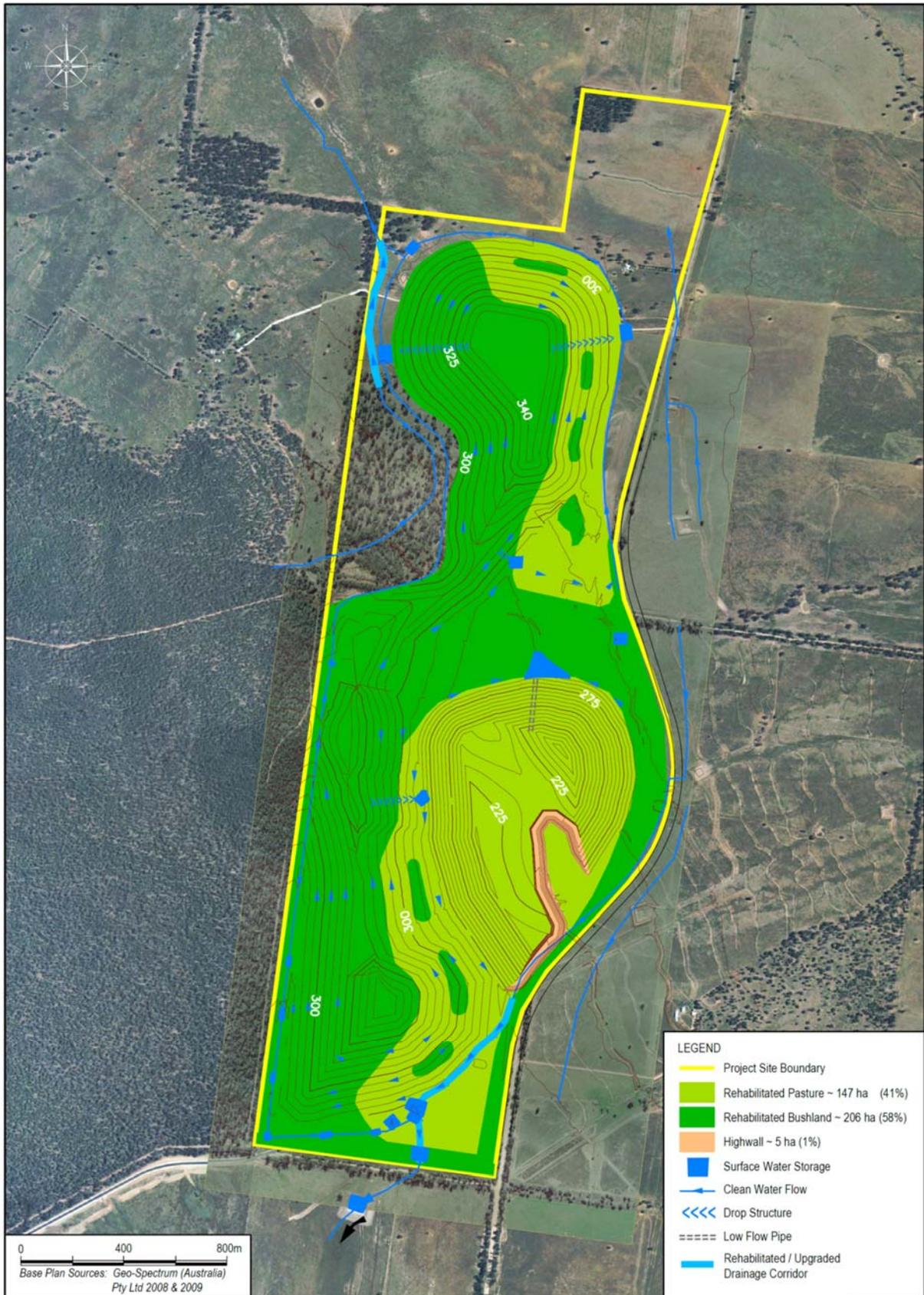


Figure 1: Conceptual Rehabilitation Plan (note that configuration of the final void must be consistent with the Rehabilitation Management Plan)

APPENDIX 6 ABORIGINAL HERITAGE SITES

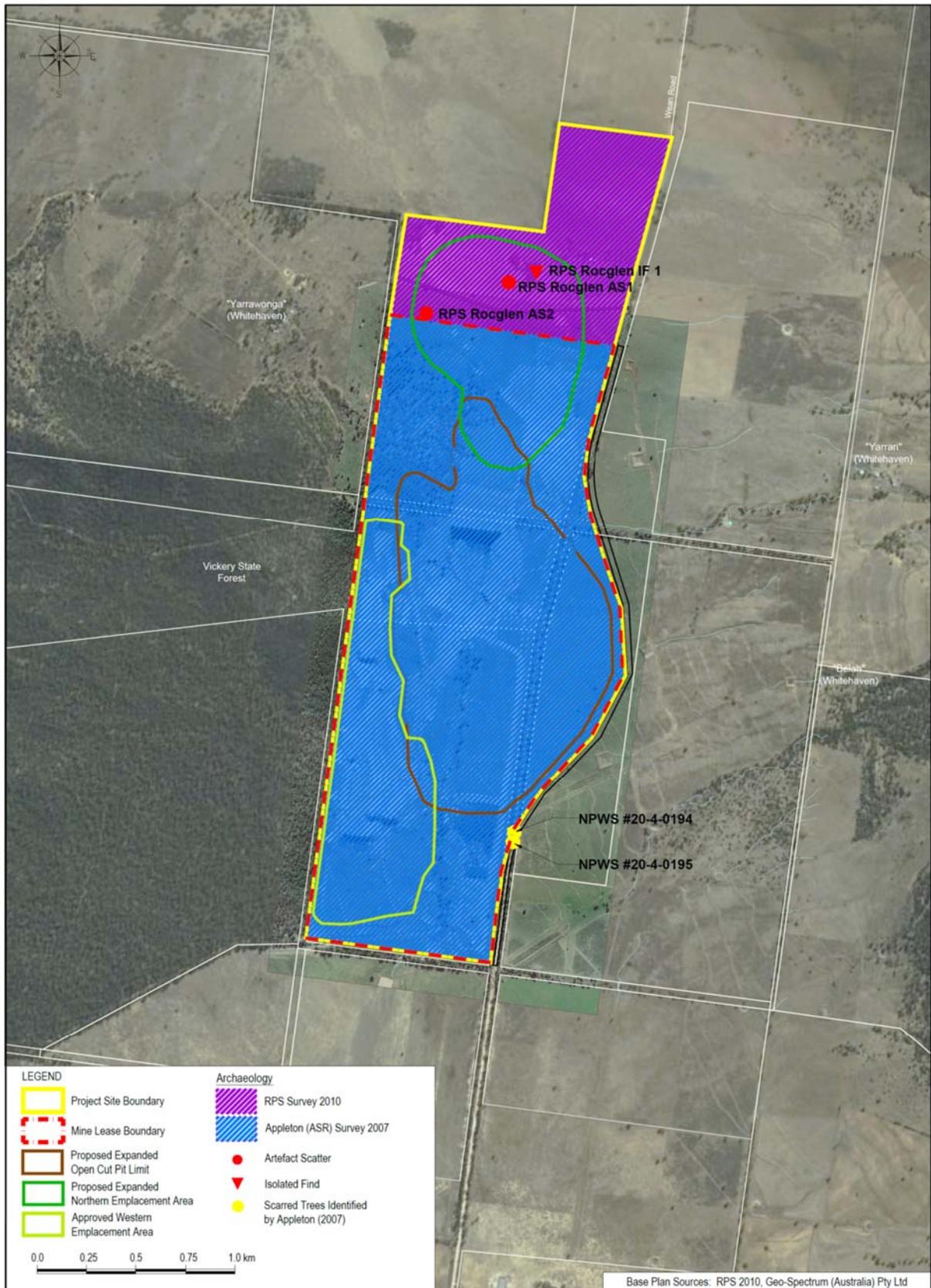


Figure 1: Aboriginal heritage sites

APPENDIX 7 STATEMENT OF COMMITMENTS

Compliance with the EA

- (a) Whitehaven will carry out the development for the Project generally in accordance with the Project Application and this EA report.

General Operation

Production Limit

- (a) Whitehaven will not extract more than 1.5 Mtpa of ROM coal from the Project Site

Hours of Operation

- (b) Mining operations may be undertaken 24 hours a day, Monday to Saturday, with the exception of public holidays.
- (c) Coal transport will be undertaken between 7am and 9:15pm Monday to Friday, and between 7am and 5:15pm on Saturdays.

Refinement of Mine Plan

- (d) Any refinements to the concept mine plan outlined in this EA report will be detailed and assessed as part of the MOP process managed by the I&I NSW.

Consultation

- (e) Routine consultation will be undertaken with residents surrounding the Project Site and along the coal transport route, as well as with the CCC, to ensure any concerns relating to mine operations are identified and appropriately addressed.

Environmental Monitoring and Reporting

Revision of Environmental Management Plans and Monitoring Programs

- (a) Within 12 months of approval, Whitehaven will review, update and integrate relevant aspects of the environmental management of the Project in the existing set of environmental management plans for the Rocglen Coal Mine. This will be undertaken in consultation with the relevant government agencies.
- (b) Within 12 months of approval, Whitehaven will review, update and integrate relevant aspects of the environmental monitoring of the Project in the existing set of environmental monitoring programs for the Rocglen Coal Mine. This will be undertaken in consultation with the relevant government agencies.

Annual Environmental Management Plan

- (c) Whitehaven will prepare an AEMR for the Project for submission to the Secretary and relevant government agencies.

Soil Stripping, Stockpiling and Re-Spreading

- (a) Soil materials within the Project Site will be stripped, handled and stockpiled in a manner that minimises the potential for soil loss and structural deterioration.
- (b) Topsoil stockpiles will be established to a maximum height of 3 metres.
- (c) Soil material will be maintained in a slightly moist condition during stripping, and will not be stripped in either an excessively dry or wet condition.
- (d) If mining sequencing, equipment scheduling and weather conditions permit, stripped material will be placed directly onto reshaped emplacement areas and spread immediately to avoid the requirement for stockpiling.

- (e) The surface of soil stockpiles will be left coarsely textured in order to promote infiltration and minimise erosion until vegetation is established, as well as to prevent anaerobic zones forming.
- (f) Where long-term stockpiling is planned (that is, greater than 3 months) the stockpiles will be seeded and fertilised as soon as possible. An annual cover crop that produces sterile florets or seeds will be sown.
- (g) Prior to re-spreading stockpiled material onto completed mining or overburden emplacement areas, an assessment of weed infestation on stockpiles will be undertaken to determine if individual stockpiles require herbicide application and/or 'scalping' of weed species prior to spreading.
- (h) A soil inventory will be maintained to ensure adequate material is available for planned rehabilitation activities.
- (i) Where natural protection from surface runoff flows is not available or achievable, protective earthworks, such as contour banks, and/or straw bale protection will be installed. Silt fencing (or similar) will be installed immediately downslope of any stockpile area potentially susceptible to erosion and maintained until the stockpile is considered stable with an effective vegetation cover.
- (j) Whitehaven will adopt the general practice, where appropriate subsoil is available and targeting areas being rehabilitated to pasture, of including an intermediate layer of subsoil between the overburden material and the topdressing to improve the water holding capacity of the rehabilitated landform and reinstate a more natural soil profile. For areas being rehabilitated to bushland, Whitehaven may preferentially reduce the subsoil replacement depth and/or exclude subsoil replacement in selected areas to establish trial areas to monitor bushland development in different soil profiles.
- (k) Where resources allow, topsoil and subsoil will each be spread to a nominal depth of between 100 to 150 mm, giving a combined depth of soil material on the rehabilitated landform of between 200 and 300 mm.
- (l) The subsoil layer will be spread on an even but roughened surface that has been ripped along the line of the contour to break any compacted and/or smooth surfaces. Ripping will also assist the keying of subsoil into the overburden, which will, in turn, assist in the prevention of land slip and can help vegetation penetrate deep into the soil profile, encourage ingress of water and minimise erosion.
- (m) Stripped soil material will be spread, treated with fertiliser and seeded in one consecutive operation in order to reduce the potential for soil loss to wind and water erosion.

Geotechnical Stability – Open Cut Pit and Highwall

- (a) Progressive stability reviews and monitoring of geological conditions will be undertaken once the pit moves within 250 metres of the realigned Wean Road to ensure geotechnical stability and safe conditions. If any unfavourable conditions are observed or detected, a detailed assessment will be undertaken by a suitably qualified geotechnical engineer before mining is allowed to continue towards Wean Road.
- (b) When the Belmont Fault (or fault zone) is more than 150 metres from Wean Road, operations will mine through the Belmont Fault. The uppermost alluvial material and weathered rock on the eastern side of the fault will have individual face angles no steeper than 45 degrees.
- (c) Benching will be adopted at a maximum interval of 25 metres in alluvial, weathered rock and brecciated rock.
- (d) In fresh strata face angles will be designed at 75 degrees to pit bottom. If in following the upturned Belmont Seam down to pit bottom the floor rock is strong and competent, then the face will be developed on the dip slope without the need for benches in rock beneath the Belmont Seam.
- (e) When the top of the stable highwall reaches 50 metres from Wean Road (i.e. when the eastern limit of the Belmont Fault zone reaches 150 metres from Wean Road), the eastern end wall will be turned at right angles to the west. Once the turned highwall encounters sound rock, as it continues to the west, it can be turned again to develop parallel to the Belmont Fault until it reaches the planned pit limit.
- (f) The turned highwall in the fault zone will be notched to achieve a stable face. This notch will not approach Wean Road any closer than 150 metres without geotechnical advice.
- (g) A block of unmined ground will be left to contain the Belmont Fault zone and prevent it causing collapse back towards Wean Road. The size of this block of unmined ground will be determined by geotechnical investigation by the time a change in highwall direction is required.
- (h) If the highwall is free of faulting mining will resume southeast towards the currently planned pit limit. Such mining will cease when the pit crest reaches 50 metres from Wean Road. If additional faulting is detected

in this advancing face then the relevance of such structure on highwall stability will be investigated before continuation of highwall development.

Rehabilitation and Mine Closure

Progressive Rehabilitation

- (a) Whitehaven will adopt a progressive approach to the rehabilitation of disturbed areas within the Project Site to ensure that, where practicable, completed mining and overburden emplacement areas are quickly shaped, topdressed and vegetated to provide a stable landform. Early reshaping and revegetation of the external batter slopes of the emplacement areas is particularly important and will be targeted as a priority.
- (b) Disturbed areas will generally undergo rehabilitation within one year of overburden emplacement and reshaping.

Overburden Placement and Shaping

- (c) Placement and shaping of overburden will be undertaken to achieve stable slopes.
- (d) Placement and shaping of overburden will be undertaken in a manner which, wherever practicable, ensures that any friable or weathered materials are placed below the subsoil and topsoil layers in order to provide a cover of more competent material and avoid the exposure of large rocks on the final surface.
- (e) Any coarse coal rejects placed in the mine void will be covered with at least 3 metres of overburden material.

Subsoil and Topsoil Replacement

- (f) Refer to commitments listed above in **Section 8.4**.

Drainage and Surface Water Structure Installation

- (g) Surface water management structures will be progressively installed on the rehabilitated landform. The heights (effective depths) and cross-sectional areas of the individual banks will be determined on the basis of individual sub-catchment areas, but will typically be less than 0.7 metres and 3 square metres (m²), respectively. Rock-lined drains will be used, where required, to convey water safely from the rehabilitated landform into the surface water management system that takes water from the site.

Revegetation

- (h) The topdressed surfaces of those areas designated to be restored to rehabilitated pasture will be sown with a mixture of pasture species appropriate for the season. The seed mixture will include fast growing, short-lived species and perennial grasses and legumes.
- (i) The topdressed surfaces of those areas designated to be restored as rehabilitated bushland will be initially stabilised with a non-persistent cover crop followed by planting of a selection of locally occurring tree and shrub species that will encourage the re-establishment of the pre-mining vegetation communities and, in the medium to longer term, create habitat and corridors for native fauna.
- (j) All areas identified for bushland and pasture re-establishment will be fenced and have stock excluded until it can be demonstrated that the vegetation is stable and self-sustaining, and that grazing will not impact upon its establishment.

Rehabilitation Monitoring and Maintenance

- (k) Areas being rehabilitated will be regularly inspected and assessed against the long and short-term rehabilitation objectives. During regular inspections, aspects of rehabilitation to be monitored will include:
 - Evidence of any erosion or sedimentation from areas with establishing vegetation cover;
 - Success of initial grass cover establishment;
 - Success of tree and shrub plantings;
 - Adequacy of drainage controls;
 - Presence/absence of weeds; and
 - General stability of the rehabilitation site.
- (l) Where the rehabilitation success appears limited, maintenance activities will be initiated. These may include re-seeding and where necessary, re-topdressing and/or the application of specialised treatments

such as composted mulch to areas with poor vegetation establishment. Tree guards will be placed around planted tube stock if grazing by native animals is found to be excessive.

- (m) If drainage controls are found to be inadequate for their intended purpose or compromised by grazing stock or wildlife, these will be repaired and/or temporary fences installed to exclude animals. Should areas of excessive erosion and sedimentation be identified, remedial works such as importation of additional fill, soil material and/or the redesigning of water management structures to address erosion will be undertaken.
- (n) Monitoring will be conducted periodically by independent, suitably skilled and qualified persons at locations that are representative of the range of conditions on the rehabilitating areas. Annual reviews will be conducted of monitoring data to assess trends and monitoring program effectiveness.

Conceptual Post-Mining Land Use

- (o) The disturbed area within the Project Site will be restored to either rehabilitated bushland or rehabilitated pasture, with approximately 5 hectares (1 percent) remaining as a stabilised highwall of the final void.
- (p) Along the eastern boundary of the Project Site, adjacent to the realigned Wean Road, a strip of rehabilitated bushland will be established to screen the view of the final void and generally improve the visual amenity from Wean Road, as well as provide vegetation connectivity north-south on the eastern side of the void.
- (q) In addition to the large area to be rehabilitated to bushland, strategically placed tree lots will be established within rehabilitated pasture areas to break-up the landform and act as wildlife refuges and linkages.
- (r) Tree trunks and branches less than 300 mm diameter and other smaller vegetative debris removed during clearing activities will be spread over those areas to be restored as rehabilitated bushland where practical.

Final Void Management

- (s) The final void will be designed and managed as a stable landform. Appropriate long-term land use options for the void will be considered and adequately assessed in consultation with relevant stakeholders as the mine approaches closure.

Final Void Stability – Low Walls

- (t) The low walls will be battered back from the angle of repose to ensure the long term geotechnical stability of the face, with the determination of geotechnical stability and recommendations as to the final slope undertaken by a qualified geotechnical engineer on the basis of an assessment of the overburden material, the likely degree of settlement, and the degree of weathering expected in the long term. It is expected that the low wall sides of the final void will be battered back to a maximum of 18 degrees with a goal of 10 degrees being optimal.
- (u) Surface water drainage on and over the low wall will be minimised through the construction of drainage control structures, the construction of Dam F, and the aim of diverting as much of the catchment as possible away from the final void and back into the surface water system.
- (v) Erosion of the low wall will be controlled by limiting the length of slope through the use of contour and graded drains, minimising the slope, and by the establishment of suitable vegetation.

Final Void Stability – Highwall

- (w) To ensure the safety of the final void, the surrounding final slopes will be left in a condition where the risk of slope failure is minimised. The highwall of the final void will be left at 45 degrees to ensure long term geotechnical stability. This will be assessed by a suitably qualified geotechnical engineer.
- (x) Whitehaven will undertake progressive stability reviews and monitoring of the highwall once it moves to within 250 metres of the Wean Road deviation to ensure safe working conditions. If any failures are observed, or additional faulting is detected, then a detailed assessment will be undertaken by a suitably qualified geotechnical engineer before mining is allowed to continue towards Wean Road.

- (y) Whitehaven will adopt the geotechnical stability commitments listed above in **Section 8.5** as the open cut pit progresses and the final landform is being formed.

Biodiversity Offset Strategy

- (a) The revised *Biodiversity Offset Strategy* described in **Section 5.8**, which has been prepared on the basis of the BioBanking Methodology to 'inform' the 'improve or maintain' assessment, will be implemented. This *Strategy*, in summary, comprises the retirement of 4,859 credits (for the impact to 95.44ha as a consequence of the project) from the Whitehaven Regional BioBank Site, which is in the final stages of registration by the DECCW as a BioBank Site under Part 7A of the TSC Act.
- (b) The Whitehaven Regional BioBank Site will be actively managed via a BioBanking Management Plan with in-perpetuity management funding, and will have the highest level of conservation status outside of National Parks via a BioBanking Agreement registered on the land title in-perpetuity.

Air Quality

Vegetation Clearing and Soil Stripping

- (c) Cleared trees and branches will be retained for use in stabilising slopes identified for restoration of rehabilitated woodland. No burning of vegetation is permitted or occurs on-site.
- (d) Where practicable, soil stripping will be undertaken when there is sufficient soil moisture to prevent lift-off dust and at times that avoid periods of high winds. Where this is not possible, dust suppression by water application will be undertaken to increase soil moisture.
- (e) Land disturbance, including groundcover removal, will be limited in advance of mining activities consistent with operational requirements. Under normal circumstances, a maximum of 100 metres will be prepared in advance of mining.
- (f) Groundcover will be removed with the topsoil, as opposed to prior to topsoil removal.
- (g) Where long-term stockpiling of soil materials is planned (typically greater than 3 months) the stockpiles will be seeded and fertilised as soon as possible.

Drilling and Blasting Activities

- (h) Water injection will be used on the drilling rig.
- (i) Coarse aggregates will be used for blasthole stemming at all times.
- (j) Where practicable, blasting will be restricted during unfavourable weather conditions.
- (k) When necessary, dust aprons will be lowered during on-site drilling.

Overburden Ripping and Placement

- (l) Where practicable, ripping of softer overburden material will be avoided during periods of high winds.

Coal Mining

- (m) When necessary, low moisture coal will be sprayed with water prior to excavation.

Crushing and Screening

- (n) Notwithstanding the generally moist nature of the ROM coal pad, when necessary, water will be applied to the coal at the feed hopper, crusher and at all conveyor transfer and discharge points.
- (o) When necessary, some flexibility does exist to enable cessation of coal processing activities during periods of concurrent high winds and temperatures that have the potential to cause coal dust dispersal independent of water applications.

Internal Transport

- (p) As required, internal roads will be watered, with emphasis on those subject to frequent trafficking.
- (q) The speed of all on-site vehicles and equipment will be restricted.
- (r) All internal roads will be clearly defined to control their locations.

- (s) As roads within the Project Site become obsolete, they will be promptly ripped and revegetated.

External Transport

- (t) All trucks hauling product coal and coal rejects between Rocglen and the Whitehaven CHPP will be required to be fitted with roll-over tarpaulins.
- (u) All trucks transporting coal will be well maintained to ensure optimal operation, which will minimise the potential for noise emissions.

Rehabilitation

- (v) As per the commitments listed in **Section 8.6**, Whitehaven will adopt a progressive approach to the rehabilitation of disturbed areas within the Project Site to ensure that, where practicable, completed mining and overburden emplacement areas are quickly shaped, topdressed and vegetated to provide a stable landform.

Monitoring

- (w) The existing *Air Quality Monitoring Program* (Whitehaven 2009a) will be reviewed and, as necessary, updated to integrate relevant aspects of the Project.
- (x) A real-time PM₁₀ monitor will be installed and operated. As recommended by PAEHolmes (2011), it is proposed to locate this monitor at the “Roseberry” residence, co-located within one of the existing HVAS.
- (y) The existing weather station and HVAS within the “Glenroc” property will be relocated. As recommended by PAEHolmes (2011), it is proposed to move these items to “Costa Vale”, which is along the axis of prevailing winds.

Noise

Project Design

- (a) The external batter slopes of the expanded Northern Emplacement Area will be re-shaped and revegetated in Years 1 and 2 of the Project to, amongst other things, minimise the projection of noise from overburden transportation and emplacement activities towards privately owned residences located to the north and north-east later in the mine life.

General Operation

- (b) Contractors, including all personnel and sub-contractors, will be advised of noise compliance limits prior to their work commencing. Contractors will be expected to take practical measures to limit noise generation during their activities where possible.
- (c) Prior to being brought on-site, all earthmoving equipment will be tested to ensure sound power levels are consistent with the previous assessments undertaken by Spectrum Acoustics.
- (d) Site personnel will be required to pay due attention to site weather conditions and modify or stand down from operational activities if directed by mine management.
- (e) Where possible, equipment with lower sound power levels will be used in preference to more noisy equipment.
- (f) All equipment used on-site will be regularly serviced to ensure the sound power levels remain at or below the levels used in the modelling undertaken by Spectrum Acoustics.
- (g) Mid-high frequency broadband reverse beepers are fitted to on-site mobile mining equipment.
- (h) The on-site road network will be maintained to limit vehicle body noise.

External Transport

- (i) All transport activities, including the haul route used between Rocglen and the Whitehaven CHPP and the hours of coal haulage, will continue to be undertaken strictly in accordance with that approved under PA 06_0198.
- (j) The haul route between Rocglen and the Whitehaven CHPP is fully sealed and will continue to be maintained under an existing contribution plan with Council.

- (k) Drivers will be instructed to operate in accordance with an existing Transport Policy and Code of Conduct, which identify aspects such as travelling speeds, general behaviour, avoidance of exhaust brakes, load coverage, complaints and disciplinary procedures. The Policy and Code apply to all employee and contractor-owned vehicles.
- (l) The trucks will be speed limited to 93 km per hour to, amongst other things, minimise engine noise.
- (m) All trucks transporting coal will be well maintained to ensure optimal operation, which will minimise the potential for noise emissions.

Monitoring

- (n) As per the commitments listed in **Section 8.3**, the existing *Noise Monitoring Program* (Whitehaven 2008d) will be reviewed and, as necessary, updated to integrate relevant aspects of the Project. Specifically, "Retreat" or "Penryn" will be included as a noise monitoring location in the revised Program in place of "Costa Vale" (which is now owned by Whitehaven).
- (o) Traffic noise monitoring will continue to be conducted at the "Brooklyn" and "Werona" residences on Blue Vale Road in accordance with the existing *Road Noise Management Plan* (Spectrum Acoustics 2008).

Blasting and Vibration

Blast Design

- (a) Blast design and implementation will be undertaken by a suitably qualified blasting engineer and/or experienced and appropriately certified shot-firer.
- (b) Burden distances and stemming lengths will be designed to ensure that explosion gases are almost completely without energy by the time they emerge into the atmosphere.
- (c) Blast design will ensure charges consistently detonate in carefully designed sequences.
- (d) Meteorological conditions will be analysed prior to blasting to avoid times when the potential for impact is heightened, and also endeavours will be made to blast at around midday over the winter period to avoid temperature inversions.

Air Vibrations (Noise and Airblasts)

- (e) Noise and airblast generation will be controlled to ensure that all, or the majority of, explosion energy is consumed in fragmenting and displacing the overburden by the time the gases vent (via the broken burden rock and/or ejected stemming material) into the atmosphere. This will be achieved via:
 - Ensuring blasthole spacing is implemented in accordance with blast design;
 - Careful selection and implementation of burden distance and stemming length;
 - Using appropriate materials (for example, 20 mm aggregates) for stemming;
 - Ensuring that charges detonate in the correct sequence and with inter-row delays that provide good progressive release of burden;
 - Limited the maximum weight of explosive detonated in a given delay period (the maximum instantaneous charge (MIC)) to conservative and proven levels; and
 - Refining these controls on the basis of the blast monitoring program.

Ground Vibrations

- (f) Blast design will ensure the minimum practicable weight of explosive detonates at an instant (minimising the MIC) by using the maximum number of delay periods in each blast.
- (g) Blast design will ensure that most of the energy liberated by the charge(s) on a given delay number is consumed in providing good fragmentation, adequate displacement and/or a loose, highly diggable muckpile.

Dust and Other Post-Blast Emissions

- (h) Stemming columns will be designed to ensure ejection velocities are low.
- (i) Appropriate aggregates for blasthole stemming and nonel delay-type or electronic detonators will be used to initiate charges.

Road Closures

- (j) For all blasts within 500 metres of Wean Road, the road will be closed with blast notice boards updated at least 24 hours prior to each blast. Road closures typically occur for a period of up to 10 minutes.
- (k) Whitehaven will inspect the road following the blast and any rock fragments removed from the road surface prior to re-opening.
- (l) Whitehaven will monitor the distance flyrock travels (if any) beyond the designed blast envelope and identify if further safeguards are required.

Consultation

- (m) The proposed blasting schedule will be provided to all residents within a 3 km radius of the blast providing advance notice of the date and time of each proposed blast. A verbal confirmation on the day of the blast will also be undertaken.
- (n) Whitehaven will erect a blast notice board near the mine entrance on Wean Road notifying passing motorists when the next blast is scheduled.

Monitoring

- (o) As per the commitments listed in **Section 8.3**, the existing *Blasting Monitoring Program* (Whitehaven 2008a) will be reviewed and, as necessary, updated to integrate relevant aspects of the Project. Specifically, "Retreat", as the nearest privately-owned residence to the north of the Project Site, will be included as a blast monitoring location in the revised Program in place of "Costa Vale" (which is now owned by Whitehaven).

Surface Water

General

- (a) All hydrocarbon products will be securely stored.
- (b) All of the mining fleet will be refuelled within designated areas of the Project Site.
- (c) With the exception of some maintenance activities on mobile equipment, all maintenance works requiring the use of oils, greases and lubricants would be undertaken within designated areas of the Project Site.
- (d) All water from wash-down areas and workshops would be directed to oil/water separators and containment systems.
- (e) All storage tanks will be either self-bunded tanks or bunded with an impermeable surface with a capacity to contain a minimum of 110% of the largest storage tank capacity.
- (f) Chemical flocculation to help increase the settling times of the sediment (TSS) in the water column will also be employed as required.
- (g) As required, appropriate drainage structures and erosion and sediment controls will be installed and maintained.
- (h) All efforts will be undertaken to ensure that any water discharged from the Project Site via the LDPs meets the quality limits imposed by the DECCW on the site's EPL.
- (i) Key changes, as detailed in **Appendix M**, to be integrated into the existing surface water management system are:
 - Additional water management controls to deal with water from the increased disturbance footprint in the northern area of the site;
 - Additional water management controls to address TSS issues during wet weather discharge;
 - Relocation of the Mine Water Dam; and
 - More effective diversion of clean water from off-site catchments to the east.
- (j) Dirty water generated from disturbed areas to be captured and diverted using contour banks and drop structures in a manner that minimises the potential for concentrated overland flow and subsequent erosion. This water will be channelled through a series of sediment basins to reduce sediment loads prior to discharge.
- (k) Water generated within the open cut pit, primarily as a result of rainfall/runoff and some groundwater seepage, to be managed within the open cut via in-pit sumps. This water will be directed to and contained within these in-pit sumps until it is necessary to pump the water to the new Mine Water Dam, which will be constructed as a 'turkeys nest' to receive mine water only.

- (l) Clean water diversions will be constructed wherever possible upstream of disturbance areas to minimise the amount of dirty water to be contained and treated within the dirty water management system.
- (m) Progressive rehabilitation of all re-shaped surfaces to assist in reducing the level of TSS (and possible high pH and salinity) in runoff from disturbed areas. This will also reduce the dependence on sediment controls and generally assist in improving water quality.
- (n) Water collected in the open cut extraction pit and/or dirty water dams will be used, as much as possible, for dust suppression purposes. This is the preferential use of water on-site to minimise the chance of pollution to downstream waterways.
- (o) Sediment control structures will be maintained to ensure the design capacities are preserved for optimum settling rates. This will be most critical for those 'end-of-line' sediment basins that discharge from the Project Site.
- (p) Implementation of an effective revegetation, maintenance and monitoring program.

Site Water Management Plan

- (q) Within 12 months of Project Approval, a new *Site Water Management Plan* will be prepared in accordance with regulatory requirements and the *Blue Book (Volume 1 and Volume 2E)*.

Site Water Balance and Discharge

- (r) Whitehaven will consider and, where appropriate, adopt the following to improve site water balance and minimise uncontrolled overflow discharge:
 - The proposed dams will be built to at least the specified sizes, and made larger where practical to provide additional storage in order to further reduce the chance of uncontrolled overflow discharge. Increasing the total storage will provide opportunity to retain and treat water prior to controlled discharge;
 - Water will be promptly transferred amongst sediment basins to ensure the maximum available on-site storage capacity of rainfall events is maintained; and
 - That controlled discharge of treated (settled and/or flocculated) water will be undertaken to draw down the water storage within all the dirty water dams on-site, which will provide the capacity to contain the majority rainfall events and reduce uncontrolled overflow discharge.

Drainage Lines

- (s) Sections of drainage lines that are or will be impacted upon by the mining operation will be rehabilitated post-mining generally in accordance with Section 5.3.3 of the *Blue Book (Volume 1)* and the *Guidelines for Controlled Activities – In-Stream Works* (DWE 2008, as cited in GSSE 2010c) for watercourse rehabilitation and riparian zone rehabilitation.

Licensed Discharge Points

- (t) While LDP 11 will continue to be used at the southern end of the Project Site, LDP 12 will be superseded and relocated in consultation with the EPA.

Monitoring

- (u) As per the commitments listed in **Section 8.3**, the existing surface water monitoring program will be reviewed and, as necessary, updated to integrate relevant aspects of the Project. **Table 47** presents a summary of the proposed surface water monitoring.

Groundwater Monitoring

- (a) All hydrocarbon products will be securely stored.
- (b) All of the mining fleet will be refuelled within designated areas of the Project Site
- (c) With the exception of some maintenance activities on mobile equipment, all maintenance works requiring the use of oils, greases and lubricants would be undertaken within designated areas of the Project Site.
- (d) All water from wash-down areas and workshops would be directed to oil/water separators and containment systems.
- (e) All storage tanks will be either self-bunded tanks or bunded with an impermeable surface with a capacity to contain a minimum of 110% of the largest storage tank capacity.

- (f) As per the commitments listed in **Section 8.3**, the existing groundwater monitoring program will be reviewed, updated and implemented to integrate relevant aspects of the Project.
- (g) Bores will be cleaned out (air-lift developed) and depth checked with a weighted tape. Bores will then be geophysically wireline logged (SP/SPR and Gamma) to confirm slotted intervals and the nature of the strata over slotted intervals.
- (h) All monitoring bores will be surveyed for location and level (both ground level and the level of the RP from which groundwater levels are measured).
- (i) Monitoring of groundwater levels will initially be undertaken on a monthly basis for the first year of the Project, after which the interval may potentially be relaxed subject to review of the results. In the longer term a monitoring interval of three months is anticipated. Samples will be analysed for all major ions, including carbonate.
- (j) Pressure transducers/dataloggers will be installed in monitoring bores MP-01 to MP-05 for the continual recording of groundwater levels. These instruments will be downloaded every 2 months. MP-04 and MP-05 will be deepened to at least 10 metres below the water table.
- (k) In order to address the concerns of the NOW in regard to the potential for impact on alluvial aquifers of the Namoi River and associated tributaries, the following program of investigations will be undertaken:
 - Bores MP-04 and WB-01 are nominally located within the alluvium south and north of the mine, respectively. Once this is confirmed through the above commitments, a second bore will be drilled adjacent to each of them, to a depth at which the base of the alluvium is intersected. This adjacent bore will be completed as a monitoring bore in the Maules Creek Formation and have a pressure transducer/datalogger installed for continuous water level monitoring. Such actions will need to be agreed to by the relevant landowners; and
 - There is some uncertainty regarding the nature of the interface between the southern alluvium and the weathered conglomerate profile of the Maules Creek Formation at the southern end of the proposed pit. On this basis, a pair of piezometers will be installed immediately to the south of the proposed pit, one in the Belmont Seam and one in the alluvium/weathered conglomerate. Also, hydraulic testing will be undertaken on the bore in the alluvium/weathered conglomerate to allow refinement of the groundwater model in this regard.

Flora and Fauna

- (a) All efforts will be made by Whitehaven to avoid disturbance of the vegetation communities within the Project Site and to maintain and enhance as much of the existing remnant vegetation on-site, in addition to the proposed biodiversity offset areas (see **Section 5.8**), as possible.
- (b) A high level of hygiene will be adopted in respect to vehicle and machinery to help prevent soil-borne disease transmission and weed seed dispersal.
- (c) Strict erosion and sediment control measures will be installed, monitored and maintained to prevent the erosion and sedimentation impact on adjacent areas.
- (d) Dust control measures will be implemented to protect adjacent retained vegetation communities.
- (e) The minimal practicable amount of clearing will be undertaken as a general objective, particularly within those areas that currently contain identified threatened species or ecological communities.
- (f) Where possible disturbance areas will be marked to protect adjoining vegetation prior to disturbance activities in order to reduce potential damage from uncontrolled or accidental access.
- (g) Stockpiling of materials will occur within already disturbed areas.
- (h) Weed management, monitoring and control practices will be implemented to minimise the spread of exotic species into natural areas within the site.
- (i) A tree felling protocol will be developed, by a suitably qualified and licensed ecologist with previous experience supervising the felling of trees, in order to minimise harm to fauna species during clearing activities.
- (j) Where possible, tree felling will be supervised by the ecologist that developed the tree felling protocol or by another suitably qualified and licensed ecologist.
- (k) Where trees are to be removed an assessment of the surrounding level of tree hollow provision will be undertaken by a suitably qualified ecologist in order to determine the need for local supplementing of tree hollows (using salvaged tree hollows or nest boxes).

- (l) Mature and hollow-bearing trees will be retained wherever feasible within the site.
- (m) Vegetation to be removed will be clearly marked in the field using temporary fencing (flagging tape or similar) so that the boundaries are clearly established and to minimise the potential for equipment to accidentally enter areas to be retained.
- (n) Where possible, the timing of clearing activities will be undertaken at such times to avoid removal of hollow-bearing trees during breeding season of threatened species.
- (o) Regular monitoring of the vegetation within the Project Site and offset areas will be undertaken in order to enable effective management with regards to rehabilitation (planting), regeneration, watering, fencing and weed control.

Aboriginal Heritage

- (a) As per the commitments listed in **Section 8.3**, the existing ACHMP (Whitehaven 2008c) will be reviewed and, as necessary, updated to integrate relevant aspects of the Project.
- (b) All efforts will be made by Whitehaven to minimise disturbance within the Project Site.
- (c) Liaisons will continue to be undertaken with the registered Aboriginal stakeholders and other interested parties until all issues in relation to the management of Aboriginal cultural heritage have been resolved.
- (d) If impact to the Aboriginal sites identified with the Project Site (RPS Rocglen IF1, RPS Rocglen AS1 and RPS Rocglen AS2) is unavoidable, a surface salvage will be undertaken in accordance with Section 3 of the ACHMP (Whitehaven 2008c). Artefacts salvaged will be transferred to relevant Aboriginal groups under a Care and Control Permit under Section 85A of the NP&W Act.
- (e) Protective measures designed to prevent damage to the scarred trees (NPWS # 20-4-0194 and NPWS #20-4-0195) will be enacted upon as per recommendations in Appleton (2007) and the ACHMP (Whitehaven 2008c).
- (f) In areas where surface excavation might occur in the future within 25 metres of the east-west oriented drainage line, Whitehaven will follow protocols in Section 4.1(iii) of the ACHMP (Whitehaven 2008c).
- (g) In general during the course of the Project, if it is suspected Aboriginal cultural heritage material has been encountered, work will cease immediately in that locale. The OEH, along with the RCLALC, BBGTP, GGAC and MMAC, will be notified. Works will only recommence when an appropriate and approved management strategy has been agreed to by all of the relevant stakeholders.
- (h) In the event that skeletal remains are uncovered during operations, work will stop in the vicinity immediately and the NSW Coroner's Office and NSW Police contacted. If skeletal remains are deemed to be of Aboriginal origin, a representative of the local Aboriginal Community and the OEH will be consulted.

European Heritage

- (a) If significant European cultural heritage material is uncovered during site works, work will cease in that area immediately. An archaeologist will be contacted to assess the significance of the remains and works will only recommence when an appropriate and approved management strategy is instigated.

Visual Amenity

- (a) All efforts will be made by Whitehaven to minimise the visual impact of the mine during and post-operation.
- (b) As per the commitments listed above in **Section 8.6**, Whitehaven will adopt a progressive approach to the rehabilitation of disturbed areas within the Project Site to ensure that, where practicable, completed mining and overburden emplacement areas are quickly shaped, topdressed and vegetated. Early reshaping and revegetation of the external batter slopes of the emplacement areas will be targeted as a priority.
- (c) In addition to retaining areas of existing remnant vegetation, it is proposed to restore approximately 206 hectares (58 percent) of the disturbed area within the Project Site as rehabilitated bushland. This large area, which includes the western slopes of the Northern and Western Emplacement Areas, will blend in well with the retained remnant vegetation areas within the Project Site and within the adjacent Vickery State Forest and "Yarrowonga" property.

- (d) Strategically placed bushland tree lots will be integrated into the post-mining landform to break-up the landform and provide visual texture. This will be complimented by the establishment of pasture grass areas that will provide short-term visual impact mitigation prior to the trees becoming established.
- (e) An earthen bund of appropriate height will be established between the realigned Wean Road and the active pit area. This bund will be vegetated immediately following construction. The bund will provide an effective visual screen of the site from Wean Road. In addition to the bund, a strip of bushland will be established to screen the view of the final void and generally improve the visual amenity from Wean Road.
- (f) The requirements of the Australian Standard *AS 4282 1997 – Control of Obtrusive Effects of Outdoor Lighting* will be taken into consideration when placing lights required when working outside of daylight hours. In particular, lighting plant will be positioned and directed away from surrounding residences and aimed downwards to avoid light spill onto adjoining lands and public roads.

Greenhouse Gas Emissions

- (a) The *Greenhouse and Energy Efficiency Plan* prepared by Denis Cooke & Associates in June 2009 in accordance with PA 06_0198 will continue to be implemented at Rocglen in order to promote continuous change and sustainable improvement in energy management and efficiency.

Traffic and Transport

- (a) Coal transportation will be undertaken via the approval haulage route between Rocglen and the Whitehaven CHPP.
- (b) Coal transport will be undertaken between the approved times of 7am and 9:15pm Monday to Friday, and between 7am and 5:15pm on Saturdays.
- (c) On school days, Whitehaven will maintain the communication system between the truck drivers and the local school bus driver. The system has been negotiated between Whitehaven and the local bus drivers and involves two-way radio communication to ensure that trucks do not exceed 40 km per hour when travelling in the vicinity of the school bus.
- (d) All trucks transporting coal from the mine and backloading reject from the Whitehaven CHPP will be covered with fitted roll-over tarpaulins.
- (e) All trucks transporting coal will be well maintained to ensure optimal operation.
- (f) Drivers will be instructed to operate in accordance with a Transport Policy and Code of Conduct, which identify aspects such as travelling speeds, general behaviour, avoidance of exhaust brakes, load coverage, complaints and disciplinary procedures. The Policy and Code apply to all employee and contractor-owned vehicles.
- (g) The on-going use of the road network will be covered under the arrangements of the existing road maintenance agreement with Gunnedah Shire Council to ensure the subject roads continue to be adequately maintained.

Waste Management

- (a) All production wastes and non-production wastes will be managed in accordance with current approved waste management strategies (see **Section 4.12**).
- (b) Whitehaven will approach waste generation and management according to the following principles – (a) waste avoidance; (b) waste re-use; (c) waste recycling; and (d) waste removal and disposal.

Bushfire Hazard

- (a) Vegetation will be cleared away from around blast sites for a distance of greater than 20 metres.
- (b) All coal will be removed from open cut around blast sites.
- (c) Blast design and implementation will be undertaken by a suitably qualified blasting engineer and/or experienced and appropriately certified shot-firer.
- (d) An inspection of blast sites will be undertaken prior to blast.

- (e) Water truck/cart will be available to douse any fire ignited or smouldering vegetation.
- (f) Refuelling will be undertaken within designated fuel bays or within cleared area of the Project Site and vehicles will be turned off while refuelling.
- (g) No smoking policy will be enforced in designated areas of the Project Site.
- (h) Fire extinguishers will be maintained within site vehicles.
- (i) Coal stockpiles will be regularly inspected and, as required, watered.
- (j) The height and volume of coal stockpiles will be controlled to limit the duration coal is retained in stockpiles.
- (k) Whitehaven will regularly liaise with the NSW Forests and NSW Rural Fire Service in relation to the bushfire hazard presented by the Vickery State Forest and to a lesser extent the nearby CCC Zone 2 Kelvin.

Socio-Economic

- (a) Whitehaven will continue to engage the community in consultation for the purposes of providing information relating to the Project and company operations in general. It is anticipated that consultation will include:
 - Circulation of information and newsletters, as required, relating to mining activities (for example, blasting schedule); and
 - Continuation of the Rocglen CCC established under PA 06_0198 for the existing Rocglen operation.
- (b) Whitehaven will respond to any community complaints within 24 hours of receipt. All complaints will be investigated and the results of the investigation reported to the complainant in a timely manner.