

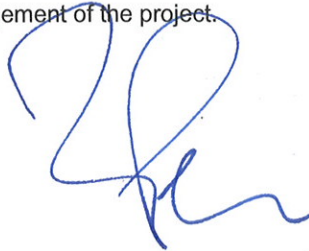
Project Approval

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

I approve the project referred to in schedule 1, subject to the conditions in schedules 2 to 7.

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, DASP
as delegate for the Minister for Planning

Sydney

26th July

2010

SCHEDULE 1

Application No:	08_0144
Proponent:	Narrabri Coal Operations Pty Limited
Approval Authority:	Minister for Planning
Land:	See Appendix 1
Project:	Narrabri Coal Project – Stage 2

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DEFINITIONS

Approved mine plan	The mine plan depicted in Figures 1 and 3 of Appendix 2
BCA	Building Code of Australia
Brine	Very salty water
Built features	Includes any building or work erected or constructed on land, and includes dwellings and infrastructure such as any formed road, any pipeline, water sewer, telephone, gas or other service main and communication towers
CCC	Community Consultative Committee
CMA	Catchment Management Authority
Conditions of this approval	Conditions contained in schedules 2 to 7 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this approval
CPI	Consumer Price Index, as published by the Australian Bureau of Statistics
Day	The period from 7 am to 6 pm on Monday to Saturday, and 8 am to 6 pm on Sundays and Public Holidays
DECCW	Department of Environment, Climate Change and Water
Department	Department of Planning
Director-General	Director-General of the Department, or delegate
Dispute resolution process	The independent dispute resolution process as described in Appendix 5
EA	Environmental Assessment prepared for Narrabri Coal Pty Limited entitled <i>Stage 2 Narrabri Coal Project Environmental Assessment and Specialist Consultant Studies Compendium</i> , Volumes 1&2 (October 2009), including the <i>Response to Public and Government Agency Submissions</i> (May 2010)
Environmental consequences	The environmental consequences of subsidence impacts, including: damage to built features; loss of surface flows to the subsurface; loss of standing pools; adverse water quality impacts; development of iron bacterial mats; cliff falls; rock falls; damage to Aboriginal heritage sites; impacts to aquatic ecology; ponding
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence issued under the POEO Act
Evening	The period from 6 pm to 10 pm
Feasible	Feasible relates to engineering considerations and what is practical to build
First workings	Development of the main headings and gate roads to establish access to the coal in the mining area
GSC	Gunnedah Shire Council
I&I NSW	Industry and Investment NSW
Incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits of performance measures/criteria in this approval
km	Kilometre
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 Schedule 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	Harm to the environment is material if it involves actual or potential harm to the health or safety of human beings or ecosystems that is not trivial
Mining area	The area outlined by a dashed purple line on the figures in Appendix 2
Mining operations	The extraction, processing and transportation of coal on the site, including the formation of mine access drifts and associated surface infrastructure such as gas and water drainage facilities
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the project
Mtpa	Million tonnes per annum
Negligible	Small and unimportant, such as not worth considering
Night	The period from 10 pm to 7 am on Monday to Saturday, and 10 pm to 8 am on Sundays and Public Holidays
NOW	DECCW's NSW Office of Water
NSC	Narrabri Shire Council
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 Stage 2 Narrabri Coal Project described in the EA
Proponent	Narrabri Coal Operations Pty Limited or any other person or persons who rely on this approval to carry out the project that is subject to this approval
Raffinate	Good quality water produced by a water conditioning plant, lower in salinity than the water fed to the plant. The "waste" produced by the plant is brine.
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
Reasonable costs	The costs agreed between the Department and the Proponent for obtaining independent experts to review the adequacy of any aspects of the extraction plan, or where such costs cannot be agreed, the costs determined by the Dispute Resolution Process
Rehabilitation	The treatment or management of land disturbed by the project for the purpose of establishing a safe, stable and non-polluting environment
Remediation	Activities associated with partially or fully repairing or rehabilitating the impacts of the project or controlling the environmental consequences of this impact
ROM	Run-of-mine
RTA	Roads and Traffic Authority
Second workings	Extraction of coal from longwall panels, mini-wall panels or pillar extraction
Site	All the land to which the project application applies, comprising the mining area and surface facilities area, as listed in Appendix 1 and shown in Appendix 2
Stage 1 Approval	The project approval granted by the Minister Planning for the Narrabri Coal Project, dated 14 November 2007
Stage 2 Approval	This project approval, for Stage 2 of the Narrabri Coal Project which includes the introduction of longwall mining operations and increasing ROM coal production to 8.0 Mtpa
Statement of Commitments	The Proponent's revised commitments in Appendix 3, dated May 2010
Steep slopes	An area of land having a natural gradient of between 33° and 66°
Subsidence	The totality of subsidence effects, subsidence impacts and environmental consequences of subsidence impacts
Subsidence effects	Deformation of the ground mass due to mining, including all mining-induced ground movements, including both vertical and horizontal displacement, tilt, strain and curvature
Subsidence impacts	Physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Proponent shall implement all practicable measures to prevent and/or minimise any 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 generally in accordance with the:
 - (a) EA;
 - (b) statement of commitments (see Appendix 3); and
 - (c) conditions of this approval.

Note: The general layout of the project is shown in Figures 1 to 3 of Appendix 2.

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 and feasible requirements of the Director-General arising from the Department's assessment of:
 - (a) any reports, plans, programs, strategies or correspondence that are submitted in accordance with the conditions of this approval; and
 - (b) the implementation of any actions or measures contained in these reports, plans, programs, strategies or correspondence.

LIMITS ON APPROVAL

5. The Proponent may undertake mining operations on the site for 21 years from the date of this approval.

Note: Under this Approval, the Proponent is required to rehabilitate the site and to perform additional undertakings to the satisfaction of the Director-General. Consequently, this approval will continue to apply in all other respects other than the right to conduct mining operations until the site has been rehabilitated to a satisfactory standard.

6. The Proponent shall not extract more than 8.0 million tonnes of ROM coal from the site per calendar year.
7. The Proponent shall transport all coal from the site by rail.
8. The Proponent shall not transport any coal reject from the site.

PLANNING AGREEMENTS

9. Within 6 months of this approval, the Proponent shall enter into planning agreements with Narrabri Shire Council (NSC), Gunnedah Shire Council (GSC) and the Minister in accordance with:
 - (a) Division 6 of Part 4 of the EP&A Act; and
 - (b) the terms of the Proponent's offers accepted at NSC's meeting of 16 February 2010, and GSC's meeting of 16 February 2010, which includes the matters set out in Appendix 4.

If there is any dispute between the Proponent and either NSC or GSC during the formal drafting of the planning agreements, then any of the parties involved may refer the matter to the Director-General for resolution.

SURRENDER OF STAGE 1 APPROVAL

10. Within 12 months of the date of this approval, the Proponent shall surrender its previous project approval for the Narrabri Coal Mine to the satisfaction of the Director-General, in accordance with section 75YA of the EP&A Act. Prior to the surrender of the Stage 1 approval, if there is any inconsistency between the Stage 1 and Stage 2 approvals, the conditions of the Stage 2 approval shall prevail to the extent of any inconsistency.

MANAGEMENT PLANS / MONITORING PROGRAMS

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

Note: The conditions of this approval require certain strategies, plans, and programs to be prepared for the project. They also require these documents to be reviewed and audited on a regular basis to ensure they remain effective. However, in some instances, it will not be necessary or practicable to prepare these documents for the whole project at any one time, particularly as these documents are intended to be dynamic and improved over time. Consequently, the documents may be prepared and implemented on a progressive basis, subject to the conditions of this approval. In doing this however, the Proponent will need to demonstrate that it has suitable documents in place to manage the existing operations of the project.

12. Stage 1 strategies, plans or programs continue to have effect until replaced by an equivalent approved strategy, plan or program prepared and approved under this approval.

STRUCTURAL ADEQUACY

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

Notes:

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

DEMOLITION

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

OPERATION OF PLANT AND EQUIPMENT

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

SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS – MINING AREA

Note: These conditions should be read in conjunction with section 5 of the revised Statement of Commitments.

SUBSIDENCE IMPACT PERFORMANCE MEASURES

1. The Proponent shall ensure that mine subsidence does not cause any exceedances of the performance measures in Table 1.

Table 1: Subsidence Impact Performance Measures

Water Resources	
Great Artesian Basin	The Proponent shall ensure that, within 5 years of the date of this approval, any loss of water flow into the Great Artesian Basin aquifers (equal to the maximum predicted impact, or the measured impact of the project, whichever is the greater), is managed, licensed or offset (including the possibility of injection of raffinate) to the satisfaction of NOW.
Biodiversity	
Flora and Fauna	The Proponent shall ensure that clearing and disturbance of vegetation above the mining area is minimised, to the satisfaction of the Director-General.

Note: The Proponent may be required to define other performance measures and performance indicators in management plans required under this approval (see eg condition 3 below).

FIRST WORKINGS

2. The Proponent shall not carry out first workings in the project area that are not consistent with the approved mine plan without the written approval of the Director-General.

SECOND WORKINGS

Extraction Plans

3. The Proponent shall prepare and implement Extraction Plans for all second workings in the project area to the satisfaction of the Director-General. These plans must:
 - (a) be prepared by a team of suitably qualified and experienced experts whose appointment has been endorsed by the Director-General and in consultation with DII;
 - (b) be approved by the Director-General before the Proponent carries out second workings covered by the Plan;
 - (c) include:
 - detailed plans for second workings;
 - detailed plans of any associated surface construction works;
 - revised predictions of subsidence effects, subsidence impacts and environmental consequences, incorporating any relevant information obtained since this approval;
 - a Subsidence Monitoring Program to calibrate and validate subsidence predictions; and analyse the relationship between subsidence effects and subsidence impacts and any ensuing environmental consequences;
 - a program to collect sufficient environmental baseline data for future Extraction Plans; and
 - a Public Safety Management Plan to ensure public safety in the project area.

Note: In accordance with condition 11 of schedule 2, the preparation and implementation of Extraction Plans for second workings may be staged, provided that no less than 3 longwall panels are included in each plan, unless otherwise agreed to in writing by the Director-General. In addition, these plans are only required to contain management plans that are relevant to the specific second workings that are being carried out.

Payment of Reasonable Costs

4. The Proponent shall pay all reasonable costs incurred by the Department to engage independent experts to review the adequacy of any aspect of the Extraction Plan.

SCHEDULE 4 SPECIFIC ENVIRONMENTAL CONDITIONS – SURFACE FACILITIES AREA AND GENERAL

NOISE

Note: These conditions should be read in conjunction with section 10 of the revised Statement of Commitments.

Impact Assessment Criteria

- The Proponent shall ensure that the noise generated by the project does not exceed the levels set out in Table 1 at any privately-owned residence.

Table 1: Impact assessment criteria dB(A)

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

Notes:

- To determine compliance with the L_{Aeq}(15 minute) limit, noise from the project is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECCW may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.
- These noise limits apply to applicable receivers under all meteorological conditions except for any one of the following:
 - wind speeds greater than 3 metres/second at 10 metres above ground level; or
 - temperature inversions of 1.5 - 4°C/100 metres and a source-to-receiver wind speed greater than 2 metres/second at 10 metres above ground level; or
 - temperature inversions of greater than 4°C/100 metres.
- The meteorological data to be used for determining meteorological conditions are the data recorded by the meteorological weather station to be determined in consultation with the DECCW.
- To determine compliance with the L_{A1}(1 minute) noise limits, noise from the project is to be measured at 1 metre from the dwelling façade. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECCW may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy).
- These limits do not apply if the Proponent has an agreement with the relevant owner/s of these residences to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

Noise Acquisition Criteria

- If the noise generated by the project exceeds the criteria in Table 2 at any residence on privately-owned land, or on more than 25% of any privately-owned land, then the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 5-7 of schedule 7.

Table 2: Noise acquisition criteria dB(A)

Location	Day	Evening	Night
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)
All privately-owned residences	40	40	40

Note: Noise generated by the project is to be measured in accordance with the notes presented below Table 1. For this condition to apply, the exceedances of the criteria must be systemic.

Additional Noise Mitigation Measures

3. If the noise generated by the project is equal to or exceeds the criteria in Table 3 at any residence on privately-owned land, then the Proponent shall, upon receiving a written request from the landowner, implement reasonable and feasible noise mitigation measures (such as double-glazing, insulation, and/or air conditioning) at the residence in consultation with the landowner. If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.

Table 3: Additional noise mitigation criteria

Location	Day L _{Aeq} (15 minute)	Evening L _{Aeq} (15 minute)	Night L _{Aeq} (15 minute)
All privately-owned residences	38	38	38

Note: Noise generated by the project is to be measured in accordance with the notes presented below Table 1. For this condition to apply, the exceedances of the criteria must be systemic.

Noise Management Plan

4. The Proponent shall revise the Noise Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with noise management (Stages 1 and 2) and subsequently implement this revised version of the Noise Management Plan to the satisfaction of the Director-General. This Plan shall:
- (a) be prepared in consultation with DECCW by a suitably qualified expert whose appointment has been approved by the Director-General;
 - (b) be submitted to the Director-General for approval by 30 June 2011;
 - (c) include a Noise Monitoring Program incorporating:
 - real-time noise and temperature inversion monitoring; and
 - attended noise monitoringto monitor the performance of the project;
 - (d) include reactive noise control measures to manage noise impacts for sensitive receivers; and
 - (e) include a protocol to establish whether the project is complying with the noise impact assessment criteria in Table 1.

Continuous Improvement

5. The Proponent shall:
- (a) implement all reasonable and feasible best practice noise mitigation measures;
 - (b) investigate ways to reduce the noise generated by the project, including off-site road and rail noise and maximum noise levels which may result in sleep disturbance; and
 - (c) report on these investigations and the implementation and effectiveness of these measures in the AEMR, to the satisfaction of the Director-General.

AIR QUALITY

Note: These conditions should be read in conjunction with section 11 of the revised Statement of Commitments.

Impact Assessment Criteria

6. The Proponent shall ensure that dust emissions generated by the project do not cause additional exceedances of the criteria listed in Tables 4 to 6 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.

Table 4: Long term impact assessment criteria for particulate matter

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

Table 5: Short term impact assessment criteria for particulate matter

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

Table 6: Long term impact assessment criteria for deposited dust

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

Note: Deposited dust is 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 Particulates - Deposited Matter - Gravimetric Method.

Air Quality Monitoring

7. The Proponent shall revise the Air Quality Monitoring Program for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with air quality (Stages 1 and 2) and subsequently implement this revised version of the Air Quality Monitoring Program to the satisfaction of the Director-General. This program must:
 - (a) be submitted to the Director-General for approval prior to 30 June 2011;
 - (b) be prepared in consultation with DECCW; and
 - (c) use a combination of high volume samplers and dust deposition gauges to monitor the performance of the project.

METEOROLOGICAL MONITORING

8. During the project, the Proponent shall ensure there is a suitable meteorological station on site that complies with the requirements in *Approved Methods for Sampling of Air Pollutants in New South Wales* (DECC, 2007), or its latest version.

WATER MANAGEMENT

Note: These conditions should be read in conjunction with sections 6 and 7 of the revised Statement of Commitments.

Groundwater Model

9. Within 2 years of the commencement of longwall coal extraction, and every 5 years thereafter, the Proponent shall undertake a transient calibration of the groundwater model presented in the EA, in consultation with NOW, and to the satisfaction of the Director-General. This re-calibration of the groundwater model must include forward impact predictions of brine re-injection to the mine's goaf at the conclusion of mining operations.

Discharges

10. Except as may be expressly provided for by an EPL, the Proponent shall not discharge any waters from the disturbed areas of the site. However, raffinate from the water conditioning plant may be transferred to water users in accordance with an approved Water Management Plan (see below).

11. Any raffinate from the water conditioning plant discharged to the Namoi River must be discharged in accordance with the conditions of an EPL and meet the following criteria:
 - (a) 50 percentile of all samples (volume based) are below 250 mg/l of Total Dissolved Solids;
 - (b) 100 percentile of all samples (volume based) are below 350 mg/l of Total Dissolved Solids; and
 - (c) pH values of all sampled water to be between 6.5 and 8.5.
12. Within 3 years of the date of this approval, or otherwise agreed by the Director-General, the Proponent must commission the water conditioning plant identified in the EA, to the satisfaction of the Director-General.

Water Management Plan

13. Prior to 30 June 2011, the Proponent shall revise the Water Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with water management (Stages 1 and 2) and subsequently implement this revised version of the Water Management Plan to the satisfaction of the Director-General. This revised plan must be produced in consultation with DECCW and NOW by suitably qualified expert/s whose appointment/s have been approved by the Director-General and include a:
 - (a) Site Water Balance;
 - (b) Erosion and Sediment Control Plan;
 - (c) Surface Water Monitoring Plan;
 - (d) Raffinate Discharge and Transfer Control and Monitoring Plan;
 - (e) Groundwater Monitoring Program; and
 - (f) Surface and Groundwater Response Plan, setting out the procedures for:
 - investigating, and if necessary mitigating, any exceedances of the surface or groundwater assessment criteria (see conditions 16(b) and 18(c)); and
 - responding to any unforeseen impacts of the project.

Note: The Raffinate Discharge and Transfer Control and Monitoring Plan does not need to be produced and approved until 3 months prior to the planned discharge or transfer of raffinate from the site.

Site Water Balance

14. The Site Water Balance must:
 - (a) include details of:
 - sources and security of water supply;
 - underground water make;
 - water use on site;
 - water management on site;
 - off-site water transfers;
 - reporting procedures;
 - (b) describe measures to minimise water use by the project; and
 - (c) be reviewed and recalculated each year in the light of the most recent water monitoring data.

Erosion and Sediment Control

15. The Erosion and Sediment Control Plan must:
 - (a) be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction* manual (Landcom, 2004), or its latest version;
 - (b) identify activities that could cause soil erosion and generate sediment;
 - (c) describe measures to minimise soil erosion and the potential for transport of sediment to downstream waters;
 - (d) describe the location, function, and capacity of erosion and sediment control structures; and
 - (e) describe what measures would be implemented to monitor and maintain the structures over time.

Surface Water Monitoring Program

16. The Surface Water Monitoring Plan must include:
 - (a) detailed baseline data on surface water flows and quality in creeks and other water bodies that could be affected by the project;
 - (b) surface water impact assessment criteria;
 - (c) a program to monitor the impact of the project on surface water flows and quality;
 - (d) procedures for reporting the results of this monitoring.

Raffinate Discharge and Transfer Control and Monitoring Plan

17. The Raffinate Discharge Control and Monitoring Plan must:
- (a) be approved by the Director-General prior to any raffinate discharge to the Namoi River;
 - (b) include measures for the continuous monitoring and recording of volumes of water discharged to the Namoi River;
 - (c) contain an ambient water quality monitoring program upstream and downstream of the discharge point; and
 - (d) contain a water quality monitoring program for discharged waters.

Groundwater Monitoring Program

18. The Groundwater Monitoring Program must include:
- (a) further development of the regional and local groundwater model;
 - (b) detailed baseline data to benchmark the natural variation in groundwater levels, yield and quality (including at any privately owned bores in the vicinity of the site);
 - (c) groundwater impact assessment criteria;
 - (d) a program to monitor the impact of the project on groundwater levels, yield and quality;
 - (e) a program to monitor any impacts of the project on the Namoi River Alluvium;
 - (f) a program to monitor (by the use of shallow piezometers/lysimeters), detect, and quantify any leakage/leachate from the site's evaporation/storage ponds, brine storage area or coal reject emplacement area; and
 - (g) procedures for reporting the results of this monitoring.

Evaporation/Storage Ponds

19. The Proponent shall ensure that the integrity of the low permeability layers lining the evaporation/storage ponds is maintained and achieves a permeability of less than 1×10^{-14} m/s whenever these ponds are in use for the storage of saline waters and less than 1×10^{-9} m/s when being used to store raffinate or captured surface waters.

Brine Storage Ponds

20. The Proponent shall ensure that the integrity of the low permeability layers lining the brine storage ponds is maintained and achieves a permeability of less than 1×10^{-14} m/s whenever these storage ponds are in use.

Review of Brine Management and Beneficial Use of Water and Brine

21. Within 2 years of commissioning the water conditioning plant, and every 5 years thereafter, unless otherwise directed by the Director-General, the Proponent shall engage suitably qualified experts approved by the Director-General to review brine management and beneficial use options for raffinate, brine and minewater produced by the project. The Proponent shall implement all reasonable and feasible recommendations of these reviews, to the satisfaction of the Director-General.

HERITAGE

Note: These conditions should be read in conjunction with section 9 of the revised Statement of Commitments.

Aboriginal Cultural Heritage Management Plan

22. The Proponent shall not destroy damage or deface any known Aboriginal objects (as defined in the *National Parks and Wildlife Act 1974*) without the written approval of the Director-General.
23. The Proponent shall revise the Aboriginal Cultural Heritage Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with Aboriginal cultural heritage management for the site (Stages 1 and 2) and subsequently implement this revised version of the Aboriginal Cultural Heritage Management Plan to the satisfaction of the Director-General. This plan must:
- (a) be submitted the Director-General by 30 June 2011;
 - (b) be prepared in consultation with the DECCW, the Narrabri Local Aboriginal Land Council and the Narrabri Goomeroi Aboriginal Corporation;
 - (c) include a protocol for the ongoing consultation and involvement of Aboriginal communities in the conservation and management of Aboriginal heritage on site; and

- (d) describe the measures that would be implemented to protect Aboriginal sites on the mine site, (in particular all known Aboriginal sites on lands overlying Longwalls 1-3 and sites 10b, 38, 39 and 106-112), or any new Aboriginal objects or skeletal remains that are identified during the project.
24. Prior to undertaking any activities involving surface disturbance or vegetation removal for the lands overlying Longwalls 8-26, the Proponent shall undertake a detailed Aboriginal cultural heritage survey in consultation with the local Aboriginal community and DECCW, and to the satisfaction of the Director-General. The Director-General may approve this survey being undertaken in several stages, as mining progresses.

TRANSPORT

Note: These conditions should be read in conjunction with section 13 of the revised Statement of Commitments.

Mine Access Road Intersection

25. The Proponent shall maintain the Mine Access Road Intersection with Kurrajong Creek Road and the Kamilaroi Highway in consultation with NSC and to the satisfaction of RTA.

Greylands and Scratch Roads

26. Prior to using Greylands and Scratch Roads to construct mine-related infrastructure, the Proponent shall enter into an agreement with NSC to:
- (a) construct watercourse crossings (either culverts or concrete causeways) on those sections of these roads that it uses in a manner that does not restrict fish passage, in consultation with I&I NSW (Fisheries) and to the satisfaction of NSC; and
 - (b) fund the maintenance of those sections of these roads that it uses to an all-weather unsealed road standard.

Gunnedah Traffic Management Study

27. The Proponent shall contribute, on an equitable basis with other coal project rail users, to the costs of an independent Traffic Management Study analysing the impacts of increased rail traffic on road safety and congestion due to increased closure of rail level crossings within Gunnedah, prepared to the satisfaction of GSC.

Note: This study should examine funding mechanisms to implement any recommendations to improve road safety and reduce traffic congestion associated with rail level crossings and be completed by 30 June 2011.

VISUAL

Note: These conditions should be read in conjunction with section 14 of the Statement of Commitments.

Visual Amenity

28. The Proponent shall minimise the visual impacts of the project to the satisfaction of the Director-General.

Lighting Emissions

29. The Proponent shall ensure that:
- (a) no outdoor lights shine above the horizontal; and
 - (b) all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*.

ENERGY EFFICIENCY AND GREENHOUSE GAS

Note: These conditions should be read in conjunction with section 11 of the revised Statement of Commitments.

Energy Savings Action Plan

30. The Proponent shall revise the Energy Savings Action Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with energy management for the site (Stages 1

and 2) and subsequently implement this revised version of the Energy Savings Action Plan to the satisfaction of the Director-General. This plan must:

- (a) be prepared in consultation with DECCW;
- (b) be prepared in accordance with the *Guidelines for Energy Savings Action Plans* (DEUS, 2005), or its latest version;
- (c) be submitted to the Director-General for approval prior to 30 June 2011; and
- (d) include a program to monitor the effectiveness of measures to reduce energy use on site.

Gas Drainage

- 31. The Proponent shall implement all reasonable and feasible measures to minimise the greenhouse gas emissions from the underground mining operations to the satisfaction of the Director-General.
- 32. Prior to carrying out longwall coal mining operations, the Proponent shall submit a Greenhouse Gas Minimisation Plan for the approval of the Director-General. This plan must:
 - (a) be prepared in consultation with DECCW;
 - (b) identify options for minimising greenhouse gas emissions from underground mining operations, with a particular focus on capturing and/or using these emissions;
 - (c) investigate the feasibility of implementing each option;
 - (d) propose the measures that would be implemented in the short to medium term on site; and
 - (e) include a research program to inform the continuous improvement of the greenhouse gas minimisation measures on site.

WASTE

Note: These conditions should be read in conjunction with section 3 of the revised Statement of Commitments.

Waste Minimisation

- 33. The Proponent shall revise the Waste Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with waste management for the site (Stages 1 and 2) and subsequently implement this revised version of the Waste Management Plan to the satisfaction of the Director-General. This plan must:
 - (a) be submitted to the Director-General for approval prior to 30 June 2011;
 - (b) identify the various waste streams of the project;
 - (c) describe what measures would be implemented to reuse, recycle, or minimise the waste generated by the project;
 - (d) ensure irrigation of treated wastewater is undertaken in accordance with *Environmental Guidelines: Use of Effluent by Irrigation* (DEC, 2004), or its latest version; and
 - (e) include a program to monitor the effectiveness of these measures.

SCHEDULE 5 REHABILITATION AND OFFSETS

REHABILITATION

Note: These conditions should be read in conjunction with sections 4, 8 and 12 of the revised Statement of Commitments and condition 3(c) of schedule 3.

Rehabilitation Objectives

1. The Proponent shall rehabilitate the site to the satisfaction of the Director-General and DII in accordance with the rehabilitation objectives in Table 1.

Table 1: Rehabilitation Objectives

Domain	Rehabilitation objective
Surface Facilities Area	Set through condition 4 below
Other land affected by the project	Restore ecosystem function, including maintaining or establishing self-sustaining native ecosystems: • comprised of local native plant species; with • a landform consistent with the surrounding environment
Built features	Repair/restore to pre-mining condition or equivalent
Community	Minimise the adverse socio-economic effects associated with mine closure including the reduction in local and regional employment
	Ensure public safety

Note: The Proponent may be required to define other rehabilitation objectives in management plans or strategy required under this schedule.

Progressive Rehabilitation

2. To the extent that mining operations permit, the Proponent shall carry out rehabilitation progressively, that is, as soon as reasonably practicable following the disturbance.

Landscape Management Plan

3. The Proponent shall revise the Landscape Management Plan for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with landscape management for the site (Stages 1 and 2) and subsequently implement this revised version of the Landscape Management Plan to the satisfaction of the Director-General and I&I NSW. This plan must:
 - (a) be submitted to the Director-General for approval by 30 June 2011;
 - (b) be prepared by suitably qualified expert/s whose appointment/s have been endorsed by the Director-General;
 - (c) be prepared in consultation with NOW, DECCW and NSC; and
 - (d) include a:
 - Rehabilitation Management Plan; and
 - Mine Closure Plan.

Rehabilitation Management Plan

4. The Rehabilitation Management Plan must include:
 - (a) the rehabilitation objectives for the site;
 - (b) a strategic description of how the rehabilitation of the site would be integrated with surrounding land use;
 - (c) a general description of the short and long term measures that would be implemented to rehabilitate the site;
 - (d) a detailed description of the measures that would be implemented to remediate predicted subsidence impacts under individual Extraction Plans;
 - (e) a detailed description of the measures that would be implemented to minimise environmental impacts of mining operations and to rehabilitate the site, including measures to be implemented for:
 - managing remnant vegetation and habitat on site;
 - minimising impacts on fauna;
 - minimising visual impacts;
 - conserving and reusing topsoil;

- controlling weeds, feral pests, and access;
 - managing bushfires; and
 - managing any potential conflicts between rehabilitation works and Aboriginal cultural heritage.
- (f) detailed performance and completion criteria for the rehabilitation of the site;
- (g) a detailed description of how the performance of the rehabilitation works would be monitored over time to achieve the stated objectives and against the relevant performance and completion criteria; and
- (h) details of who is responsible for monitoring, reviewing and implementing the plan.

Note: In accordance with condition 11 of schedule 2, the preparation and implementation of Rehabilitation Management Plans is likely to be staged, with each plan covering a defined area (or domain) for rehabilitation. In addition, while mining operations are being carried out, some of the proposed remediation or rehabilitation measures may be included in the detailed management plans that form part of the Extraction Plan. If this is the case, however, then the Proponent will be required to ensure that there is good cross-referencing between the various management plans.

Mine Closure Plan

5. The Mine Closure Plan must:
- (a) define the objectives and criteria for mine closure;
 - (b) investigate options for the future use of the site;
 - (c) provide a detailed methodology for decommissioning the site's evaporation/storage ponds and the treatment of any accumulated salt within or around those ponds;
 - (d) investigate ways to minimise the adverse socio-economic effects associated with mine closure, including reduction in local and regional employment levels;
 - (e) describe the measures that would be implemented to minimise or manage the on-going environmental effects of the project; and
 - (f) describe how the performance of these measures would be monitored over time.

OFFSETS

Biodiversity Offset Strategy

6. The Proponent shall provide a suitable biodiversity offset strategy to compensate for the impacts of Stages 1 and 2 of the project. This offset strategy must:
- (a) be prepared in consultation with DECCW;
 - (b) be submitted to the Director-General for approval by 31 December 2010, or as otherwise agreed by the Director-General;
 - (c) provide a detailed assessment of offset proposal/s involving the property/ies (agreed to by DECCW) adjoining Mt Kaputar National Park to confirm the ability of either of these property/ies to meet "like for like or better" and "maintain or improve" conservation outcomes;
 - (d) include and assess proposals to offset impacts to the Inland Grey Box EEC, *Bertya opposens*, and foraging habitat for the Superb Parrot;
 - (e) include proposals on offsetting both direct and indirect impacts (ie edge effects) of the project; and
 - (f) determine the best overall combination of lands to provide a suitable offset.
7. The Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas by 31 December 2011, or other date agreed by the Director-General, to the satisfaction of the Director-General.

SCHEDULE 6

ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING

Note: This schedule should be read in conjunction with sections 15, 16 and 17 of the revised Statement of Commitments.

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Proponent shall revise the Environmental Management Strategy for the Stage 1 project to encompass all proposed mine activities and potential impacts associated with environmental management for the site (Stages 1 and 2) and subsequently implement this revised version of the Environmental Management Strategy to the satisfaction of the Director-General. This strategy must:
 - (a) be submitted to the Director-General for approval prior to 30 June 2011;
 - (b) provide the strategic context for environmental management of the project;
 - (c) identify the statutory requirements that apply to the project;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the project;
 - respond to any non-compliance; and
 - respond to emergencies; and
 - (f) include a clear plan depicting all the monitoring currently being carried out in the project area.

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.

Revision of Strategies, Plans and Programs

3. Within 3 months of the submission of an:
 - (a) audit under condition 7 of schedule 6;
 - (b) incident report under condition 4 of schedule 6; and
 - (c) annual review under condition 5 of schedule 6,the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Director-General.

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

REPORTING

Incident

4. The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.

Regular

5. 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, and to the satisfaction of the Director-General.

Annual Review

6. Within 12 months of this approval, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Director-General. This review must:
 - (a) describe the works that were carried out in the past year, and the works that are 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
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the EA and Extraction Plan;
 - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the project;
 - (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measure will be implemented over the next year to improve the environmental performance of the project.

INDEPENDENT ENVIRONMENTAL AUDIT

7. Prior to 13 September 2010, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project (Stages 1 and 2). This audit must:
 - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
 - (b) include consultation with the relevant agencies
 - (c) assess the environmental performance of the project and assess whether it is complying with the relevant requirements of this approval and any relevant mining lease or EPL (including any strategy, plan or program required under these approvals);
 - (d) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate,
 - (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals.

Note: This audit team must be led by a suitably qualified auditor and include experts in the fields of subsidence, water and noise management (other than for the 2010 audit which is not required to include a subsidence expert in the audit team).

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

COMMUNITY CONSULTATIVE COMMITTEE

9. The Proponent shall maintain a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General, in general accordance with the *Guideline for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007)*, or its latest version.

Note: The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.

ACCESS TO INFORMATION

10. The Proponent shall make the following information publicly available on its website:
- (a) a copy of all current statutory approvals;
 - (b) a copy of the current environmental management strategy and associated plans and programs;
 - (c) a summary of the monitoring results of the project, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
 - (d) a complaints register, which is to be updated on a monthly basis;
 - (e) a copy of the minutes of CCC meetings;
 - (f) a copy of any Annual Reviews (over the last 5 years);
 - (g) a copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; and
 - (h) any other matter required by the Director-General.

SCHEDULE 7

ADDITIONAL PROCEDURES FOR AIR QUALITY AND NOISE MANAGEMENT

NOTIFICATION OF LANDOWNERS

1. If the results of the monitoring required in schedule 4 identify that impacts generated by the project are greater than the relevant impact assessment criteria, except where a negotiated agreement has been entered into in relation to that impact, then the Proponent shall, within 2 weeks of obtaining the monitoring results, notify the Director-General, the affected landowners and tenants (including tenants of mine-owned properties) accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the criteria in schedule 4.
2. If the results of monitoring required in schedule 4 identify that impacts generated by the project are greater than the relevant air quality impact assessment criteria in schedule 4, then the Proponent shall send the relevant landowners and tenants (including tenants of mine-owned properties) a copy of the NSW Health fact sheet entitled "Mine Dust and You" (and associated updates) in conjunction with the notification required in condition 1.

INDEPENDENT REVIEW

3. If a landowner considers the project to be exceeding the impact assessment criteria in schedule 4, then he/she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land.

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

- (a) consult with the landowner to determine his/her concerns;
 - (b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to:
 - determine whether the project is complying with the relevant impact assessment criteria in schedule 4; and
 - identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and
 - (c) give the Director-General and landowner a copy of the independent review.
4. If the independent review determines that the project is complying with the relevant impact assessment criteria in schedule 4, then the Proponent may discontinue the independent review with the approval of the Director-General.

If the independent review determines that the project is not complying with the relevant impact assessment criteria in schedule 4, and that the project is primarily responsible for this non-compliance, then the Proponent shall:

- (a) take all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria and conduct further monitoring to determine whether these measures ensure compliance; or
- (b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Director-General.

If further monitoring under paragraph (a) determines that the project is complying with the relevant criteria, then the Proponent may discontinue the independent review with the approval of the Director-General.

If the independent review determines that the project is not complying with the relevant land acquisition criteria in schedule 4, then the Proponent shall offer to acquire all or part of the landowner's land in accordance with the procedures in conditions 5-7 below, to the satisfaction of the Director-General.

LAND ACQUISITION

5. Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:
 - (a) the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the project the subject of the project application, having regard to the:
 - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and

- presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of 'reasonable and feasible measures' under schedule 4 or condition 4(a) of this schedule;
- (b) the reasonable costs associated with:
 - relocating within the Narrabri or Gunnedah local government areas, or to any other local government area determined by the Director-General;
 - obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and
- (c) reasonable compensation for any disturbance caused by the land acquisition process.

However, if following this period, the Proponent and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.

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

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

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

However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to the Director-General for review. Any request for a review must be accompanied by a detailed report setting out the reasons why the party disputes the independent valuer's determination. Following consultation with the independent valuer and both parties, the Director-General shall determine a fair and reasonable acquisition price for the land, having regard to the matters referred to in paragraphs (a)-(c) above and the independent valuer's report. Within 14 days of this determination, the Proponent shall make a binding written offer to the landowner to purchase the land at a price not less than the Director-General's determination.

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

6. The Proponent shall pay all reasonable costs associated with the land acquisition process described in condition 5 above.
7. If the Proponent and landowner agree that only part of the land shall be acquired, then the Proponent shall also pay all reasonable costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of the plan at the Office of the Registrar-General.

**APPENDIX 1
SCHEDULE OF PROJECT LAND**

Area	Land Title Reference
<i>Pit Top Area</i>	<i>Lot 60 DP 757124, Part Lot 115 DP757124</i> <i>Lot 152 DP816020, Part Lots 151 & 152 DP816020</i> <i>Lots 381 & 382 DP1028753</i> <i>Various Crown and Council roads.</i>
<i>Underground Mining Area</i>	<i>Lot 7 DP 757104, Part Lots 3, 7, 8, 10, 25, 67 & 68 DP757104</i> <i>Part Lots 57, 58, 63 to 65 DP757114</i> <i>Lot 61 DP 757124, Part Lots 81 & 83 DP757124</i> <i>Lot 2 DP 811171, Part Lot 1 DP811171</i> <i>Lot 1 DP254253</i> <i>Lot 1 DP659899</i> <i>Part Lot 152 DP 816020</i> <i>Part Lot 3 DP1005608</i> <i>Part Lot 2 DP1124652</i> <i>Part Lot 842 DP1134385</i> <i>Part Jacks Creek State Forest (Part Lot 58 DP 757114)</i> <i>Part Pilliga East State Forest</i> <i>Various Crown and Council roads.</i>
<i>Remainder of Mine Site</i>	<i>Lot 1 DP1124652, Part Lot 2 DP1124652</i> <i>Lot 841 DP1134385, Part Lot 842 DP1134385</i> <i>Part Lots 3, 8, 10, 25, 67 & 68 DP 757104</i> <i>Part Lots 57, 63 to 65 DP 757114</i> <i>Part Lots 81 & 83 DP 757124</i> <i>Part Lot 1 DP798487</i> <i>Part Lot 1 DP811171</i> <i>Part Lots 151 & 152 DP816020</i> <i>Part Lot 3 DP1005608</i> <i>Part Jacks Creek State Forest (Part Lot 58 DP 757114 & Part Lot 60 DP757114)</i> <i>Part Pilliga East State Forest (undefined)</i> <i>Various Crown and Council roads.</i>
<i>Water Pipeline Route</i>	<i>Lots 60 & 89 DP757124</i> <i>Lot 151 DP816020</i> <i>Lots 381 & 382 DP1028753</i> <i>Lot 1 DP1124652</i> <i>Various Crown and Council roads.</i>

APPENDIX 2 PROJECT MAPS

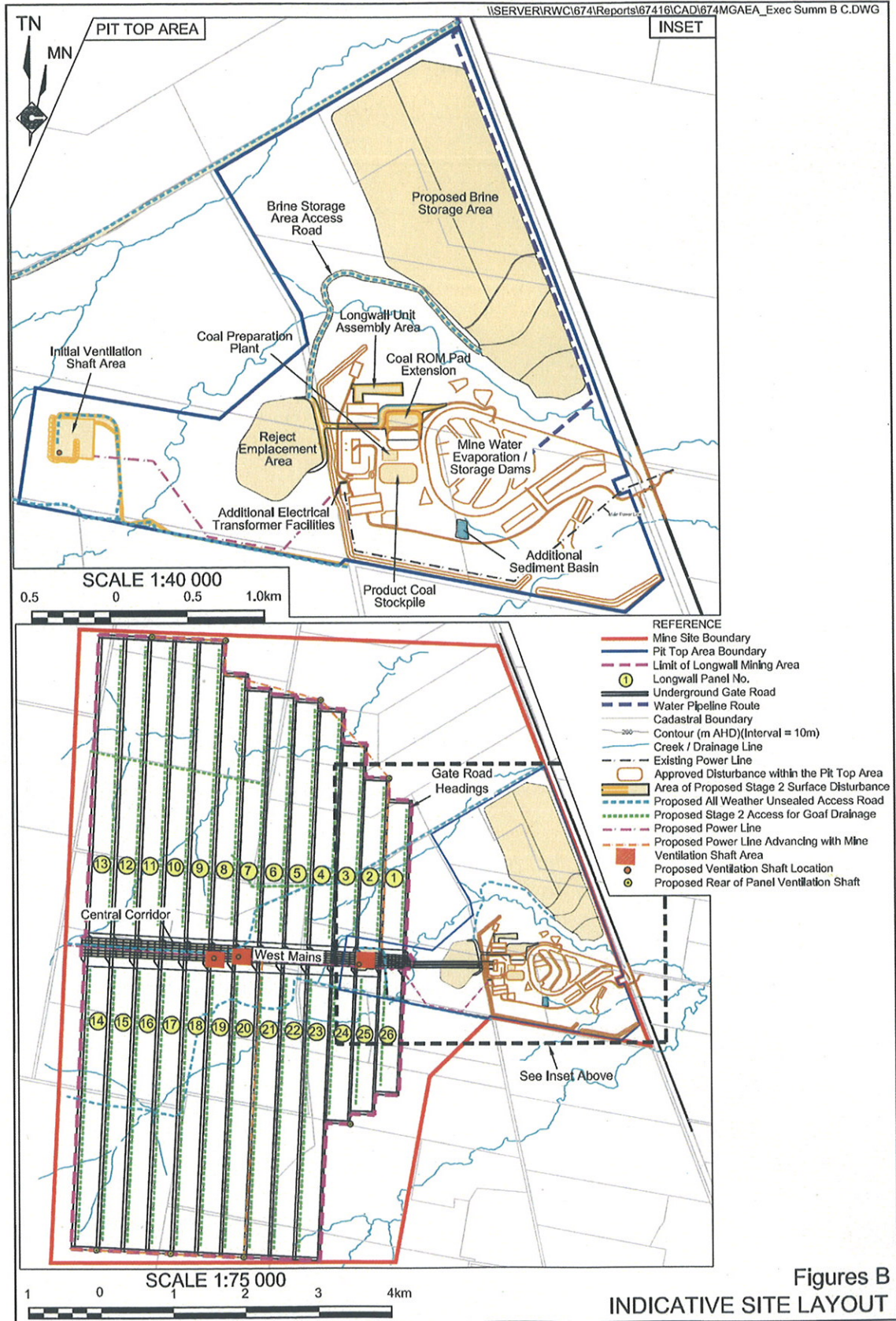


Figure 1: Project Layout

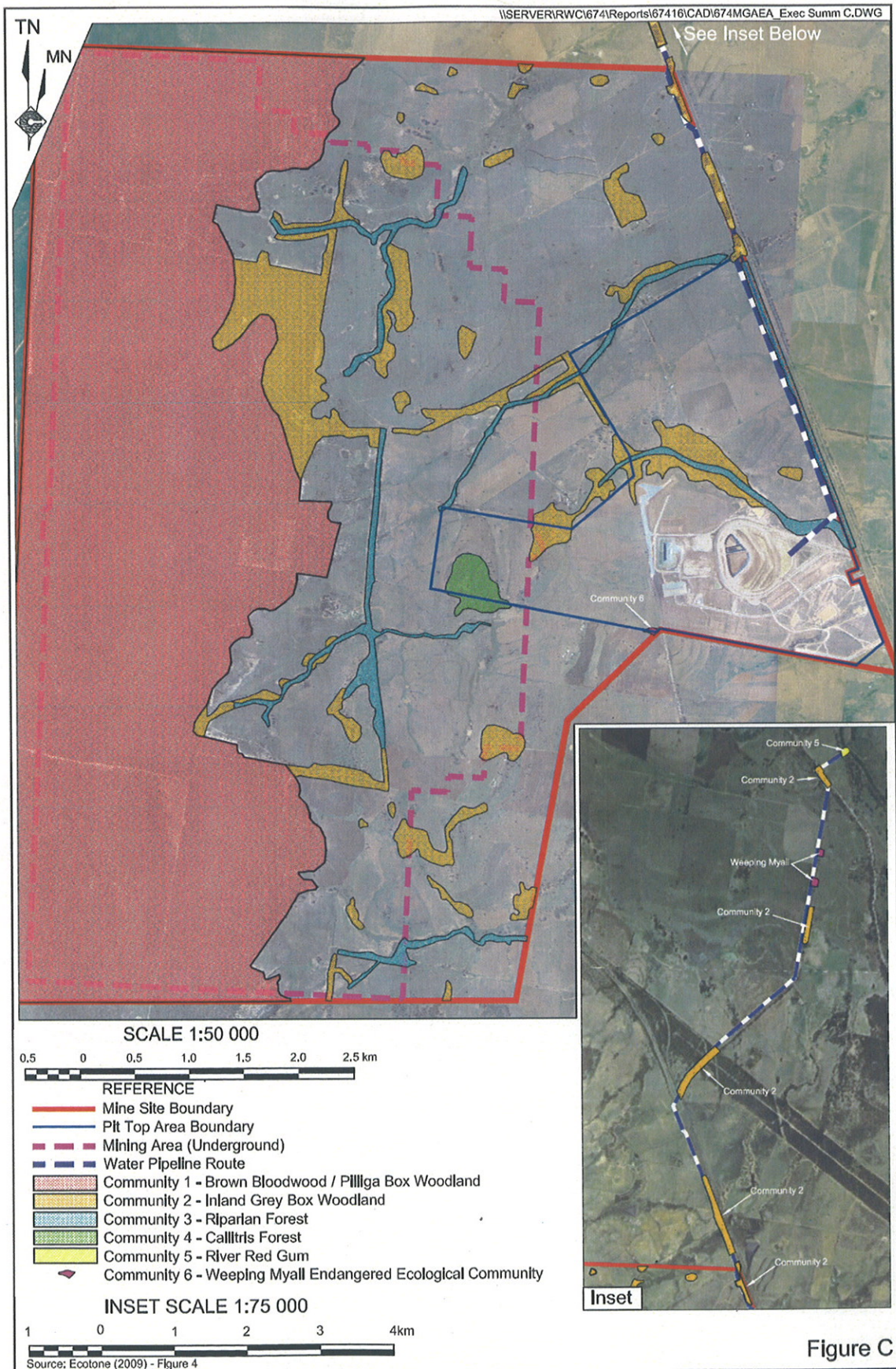


Figure 2: Vegetation communities and pipeline route



Figure 3: Surface Facilities Layout

Figure 4B.29
INDICATIVE SURFACE DISTURBANCE
FOR THE LONGWALL PROJECT

APPENDIX 3
PROPONENT'S STATEMENT OF COMMITMENTS

**APPENDIX 3
STATEMENT OF COMMITMENTS**

Desired Outcome	Action	Timing
1. Area of Activities		
All approved activities are undertaken in the area(s) nominated on the approved plans and figures (unless moved slightly to avoid individual trees).	1.1 Survey and mark the boundaries of the areas of disturbance on the ground.	Prior to surface disturbance in nominated areas.
	1.2 (If not already surveyed), commission an ecologist and/or archaeologist (along with representatives of the Aboriginal community) to advise of any constraints posed by threatened flora or fauna, or archaeological sites.	Prior to surface disturbance in nominated areas.
	1.3 Relocate or redesign the area of disturbance (if mine safety is not compromised) to avoid sites of ecological or heritage significance.	Prior to surface disturbance in nominated areas.
	1.4 Align access to sites of surface disturbance following advice from ecologist and/or archaeologist.	Prior to surface disturbance in nominated areas.
	1.5 Advise relevant personnel on restrictions placed on activities by identification of sites of ecological or heritage significance and management requirements.	Prior to surface disturbance in nominated areas.
2. Operating Hours		
Management of site activities in accordance with the approved operating hours.	2.1 Undertake vegetation clearing/soil removal within the hours of: 7:00am to 10:00pm / 7 days.	Continuous, as required.
	2.2 Undertake construction within the Pit Top Area within the hours of: 7:00am to 10:00pm / 7days.	Continuous.
	2.3 Undertake construction of the Reject Emplacement Area and Brine Storage Ponds within the hours of: 7:00am to 10:00pm / 7days.	Continuous
	2.4 Undertake ventilation shaft construction and gas drainage installation within the hours of: 24 hours / 7 days.	As required
	2.5 Undertake ventilation and gas drainage operations within the hours of: 24 hours / 7 days.	Continuous
	2.6 Undertake mining operations within the hours of: 24 hours / 7 days.	Continuous.
	2.7 Undertake coal crushing screening and processing operations within the hours of: 24 hours / 7 days.	Continuous.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
2. Operating Hours (Cont'd)		
Management of site activities in accordance with the approved operating hours. (cont'd)	2.8 Undertake CPP reject disposal within the hours of: 7:00am to 10:00pm / 7 days. Contingent hours of operation will be 24 hours / 7 days to account for those periods of elevated reject production.	Continuous.
	2.9 Undertake rail loading and transportation within the hours of: 24 hours / 7 days.	Continuous.
	2.10 Undertake raw materials / supply delivery within the hours: 7:00am to 10:00pm / 7 days	Continuous.
3. Waste Management		
Minimisation of the potential risk of environmental impact due to general waste creation, storage and/or disposal.	3.1 Dispose all paper and general waste in suitable waste receptacles.	Ongoing.
	3.2 Collect general waste bins as required to eliminate potential for environmental harm and place contents in large, lidded waste storage receptacles or dumpsters to await removal by licensed contractor.	Ongoing.
	3.3 Collect industrial waste fortnightly, or more frequently if required.	At least fortnightly.
	3.4 Install separate containers for the collection of recyclable items and despatch off site at appropriate intervals.	Ongoing.
	3.5 Employ a licensed waste collection contractor for all general waste / garbage at least on a weekly basis.	Ongoing.
	3.6 Collect waste oils and grease and pump to bulk storage tanks.	As required.
	3.7 Collect all parts/packaging and transfer to the site workshop for disposal or recycling.	As required.
	3.8 Install adequate toilet and ablution facilities within the mine facilities area for the site workforce and visitors.	Initial activities of site establishment phase.
	3.9 Install a self irrigating septic sewage system approved by Narrabri Shire Council.	Initial activities of site establishment phase.
	3.10 Service facilities by a licensed sewage collection / disposal contractor.	As required.
Minimisation of the potential risk of environmental impact due to coal reject storage and/or disposal.	3.11 Characterise coal rejects to establish whether any deleterious products would be produced by leachate during emplacement.	Within initial month of production of CPP reject and annually thereafter, if relevant.
	3.12 Dispose of coal rejects within the nominated Reject Emplacement Area, constructed immediately to the west of the Pit Top Area.	Continuous.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
3. Waste Management (Cont'd)		
Minimisation of the potential risk of environmental impact due to coal reject storage and/or disposal. (cont'd)	3.13 Construct the Reject Emplacement Area as a series of 20m wide, elongated (north-south oriented) cells commencing on the eastern side (with a compacted base with a permeability $<1 \times 10^{-9}$ m/sec if elevated salinity or other deleterious contaminant is identified as likely to be present within the leachate – see <i>Commitment 3.11</i>)	Continuous.
	3.14 Construct drainage features for each cell to divert clean water around and capture and store sediment-laden water generated by run-off from the disturbed areas.	Prior to the commencement of each cell.
	3.15 Strip and store topsoil from each cell for future re-spreading over the final landform or re-spread immediately following stripping.	Prior to the commencement of each cell.
	3.16 Paddock-dump, spread by bulldozer and then compact the coal reject to form typical lifts of about 1.5m thick. The maximum height of the reject emplacement will be restricted to 15m, ie. 10 lifts with final side slopes not exceeding 14°.	Continuous.
	3.17 Install up to four lysimeters on the downslope side of the Reject Emplacement Area. (If saline leachate is generated by CPP reject)	As the structure is constructed, if required
Minimisation of the potential risk of environmental impact due to saline waste creation, storage and/or disposal.	3.18 Line each dam or pond designed to hold either raw groundwater or processed brine with a HDPE liner with a permeability of $<1 \times 10^{-14}$ m/sec.	Prior to the commencement of water discharge into pond or dam.
	3.19 Confirm by QA inspection of the liner that the nominated permeability is achieved.	Prior to the commencement of water discharge.
	3.20 Prohibit vehicular access to the walls of the lined dam or pond.	Continuous
	3.21 Remove impermeable liner at completion of mining and dispose of to a facility licenced to accept saline waste.	Following removal of all saline groundwater or brine from the dam/pond.
	3.22 Inspect, sample and analyse ground beneath each dam or pond to confirm no leakage has occurred over the life of the pond.	Prior to final rehabilitation.
	3.23 (should saline contamination be identified), Remove and dispose of saline contaminated material (within the backfilled box cut).	As required and prior to final rehabilitation.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
4. Rehabilitation		
Decommission and remove the infrastructure and services no longer required for ongoing activities on the land of the Mine Site.	4.1 Confirm the proposed final land use of the Mine Site lands and identify the infrastructure and services to be retained to support this land use.	As part of the Mine Closure Plan for the mine.
	4.2 Demolish or deconstruct and remove infrastructure and services not required by the confirmed future land use.	Prior to relinquishment of Mining Lease.
The creation of a stable final landform on the Pit Top Area (and surrounding long-term disturbance areas, ie. ventilation shaft areas, Reject Emplacement Area and brine storage ponds), available for the proposed future use(s) of agriculture, and/or nature conservation.	4.3 Stabilise all earthworks, drainage lines and disturbed areas no longer required for mine-related activities in order to minimise erosion and sedimentation, and to reduce the visibility of the activities from adjacent properties and the local road network.	As required.
	4.4 Provide a low maintenance, stable and safe landform that blends with the surrounding topography and which is commensurate with re-established agricultural land uses.	Prior to mine closure.
	4.5 Ensure any areas of disturbance that require profiling meet the requirements of the final landform.	As area becomes available.
	4.6 Replace subsoil and topsoil over areas of disturbance in the same order and approximately same depths as it was removed.	As area becomes available.
	4.7 Ensure the most appropriate crop / pasture species are planted in areas returned for agricultural use.	As areas become available
	4.8 Conduct ongoing rehabilitation monitoring and maintenance throughout and beyond the operation.	Ongoing.
The progressive rehabilitation of disturbance associated with the Mining Area, ie. gas drainage and temporary ventilation activities, to create a stable final landform available for the proposed future use(s) of agriculture, forestry and/or nature conservation.	4.9 Restrict areas of disturbance to the areas identified and marked in accordance with <i>Commitments 1.1 to 1.5</i> .	Ongoing.
	4.10 Remove gas drainage equipment and backfill and cap each remaining bore hole in accordance with the former NSW Department of Primary Industries – Mineral Resources EDG01 guideline “ <i>Borehole Sealing Requirements on Land: Coal Exploration</i> ”.	At completion of gas drainage activities.
	4.11 Allow water retained within the sump(s) to evaporate, excavate any consolidated drill cuttings and fines, remove the plastic liner and backfill each sump.	At completion of gas drainage activities.
	4.12 Respread previously stripped and stockpiled topsoil and vegetation over the backfilled sumps and other cleared areas.	At completion of gas drainage activities.

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Desired Outcome	Action	Timing
4. Rehabilitation (Cont'd)		
The progressive rehabilitation of disturbance associated with the Mining Area, ie. gas drainage and temporary ventilation activities, to create a stable final landform available for the proposed future use(s) of agriculture, forestry and/or nature conservation. (cont'd)	4.13 Complete periodic inspections of the rehabilitated sites to confirm a return to the vegetation of the surrounding landform. 4.14 (Unless required for future access to monitor or manage subsidence related impacts), close, cross-rip and respread previously cleared vegetation over access tracks.	Annually. Once no longer required for site inspection purposes.
Cracking or surface deformation is identified promptly and remediated such that general rehabilitation objectives are not compromised.	See <i>Commitments 5.1 to 5.7.</i>	
Prevent any noxious weed infestations.	4.15 Obtain certification from plant supplier / contractor that equipment imported to the Mine Site has been cleaned and is free of soil and vegetation. 4.16 Undertake campaign weed spraying over the Pit Top Area and areas of surface disturbance of the Mining Area in consultation with I&I NSW-Agriculture and/or the local Noxious Weeds Inspector.	Prior to movement of equipment from hardstand of the working areas Prior to the stripping of topsoil.
5. Subsidence Management		
Identify and remediate surface cracks to minimise impacts on local hydrology, ecology and soils are minimised.	5.1 Inspect the identified 'cracking zones' above each longwall panel to identify occurrence of cracks. 5.2 Rip the surface over cracks not filled in by natural processes. 5.3 (For larger cracks for which surface ripping will not completely fill) fill with subsoil material sourced from stockpiles maintained at nearby gas drainage or ventilation sites, or within the footprint of the Reject Emplacement Area. 5.4 Undertake a detailed condition assessment of the 3rd order waterways within the predicted subsidence zone to enable assessment of changes post mining.	During and for a period of up to 2 years following mining of each longwall panel. Continuous and as required. Continuous and as required. Prior to commencing longwall mining.
Identify and remediate surface cracks to minimise impacts on local hydrology, ecology and soils are minimised.	5.5 Inspect local drainage lines above the active and completed longwall panels. Monitoring should assess any restriction of flows and hence restriction of fish passage to facilitate appropriate restorative measures.	As required.

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Desired Outcome	Action	Timing
5. Subsidence Management (Cont'd)		
Identify and remediate surface cracks to minimise impacts on local hydrology, ecology and soils are minimised. (cont'd)	5.6 Undertake water quality sampling from watercourses within the subsidence impact zone to determine any impacts on sediment loading and other parameters including salt loads.	During creek flow events.
	5.7 Note the effects of any ponding and commission a hydrologist or ecologist to recommend remedial actions should the area of ponding encroach upon sites of conservation or heritage significance.	During and for a period of up to 2 years following mining of each longwall panel.
Identify and minimise the impacts of subsidence-induced erosion on the local environment.	5.8 Inspect areas of the Mine Site susceptible to landslip or accelerated erosion, eg. drainage lines and steeply sloped areas of exposed Purlawaugh Formation derived subsoils.	Quarterly following mining activities which may produce subsidence
	5.9 (In the event of large-scale slope instability), undertake appropriate stabilisation works, eg. installation of deep sub-surface drainage trenches or construction of strategic catch drains along slope crests.	Continuous and as required.
	5.10 (In the event of erosion within Mine Site watercourses), stabilise the damaged or eroded banks (in accordance with an Erosion and Sediment Control Plan for the Longwall Project).	Continuous and as required.
Identify and minimise the impacts of valley closure and uplift ('upsidence') induced erosion on the local environment.	5.11 Establish survey lines along ephemeral drainage gullies and along gully crests and monitor during and after mining of each longwall panel to identify any signs of cracking or 'upsidence'.	Prior to the commencement of mining each longwall panel.
	5.12 Review predictions of 'upsidence' and valley crest movements after each longwall is completed.	Following completion of each longwall.
	5.13 (In the event that 'upsidence' results in surface cracking or erosion), undertake remedial works identified by <i>Commitments 5.1 to 5.7.</i>	Continuous and as required.
Identify and minimise the impacts of ponding on the local environment.	5.14 Sample ponded water to determine if there is any increase in salinity.	Quarterly for a period of up to 2 years upon identification of subsidence induced ponding.
	5.15 Inspect the watercourses over the subsidence zone to identify the location and extent of ponding.	Quarterly for a period of up to 2 years following identified subsidence.

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Desired Outcome	Action	Timing
5. Subsidence Management (Cont'd)		
Identify and minimise the impacts of ponding on the local environment. (cont'd)	5.16 For ponding where there is little or no vegetation of conservation significance monitor the location and extent of ponding. (If ponded area continues to increase in area, encroaches on vegetation of conservation significance or there is an increase in water salinity), excavate a channel to reduce the gradient change over the retained chain pillars. The excavation will be undertaken in accordance with an Aboriginal Cultural Heritage Management Plan and vegetation clearing procedures.	Quarterly for a period of up to 2 years following identified subsidence. Continuous and as required.
Identify and minimise the impacts of far field displacements on local infrastructure.	5.17 Monitor surface features (such as culverts) within 800m of the eastern edge and 1.5km of the western edge of the Mining Area. 5.18 (In the event of damage to surface structures such as pipes, culverts, water tanks, dams or other soil or water conservation structures), repair the damaged infrastructure or provide appropriate compensation.	Prior to mining that may result in subsidence at the relevant structure. Continuous and as required.
Identify and manage the impacts of subsidence on local property infrastructure (including residences).	5.19 Commission a dilapidation survey and inspection of all structures on non-project related land within the Mine Site by a qualified building consultant. 5.20 Use the dilapidation survey and subsequent report in an individual property subsidence management plans (IPSMP) (or similar as required under any Extraction Plan requirements) prepared for each non-project related property to be impacted (to provide fair and reasonable outcomes between the affected property owner and the Proponent). 5.21 Each IPSMP will address the following issues. • Timing and scale of predicted impacts. • Monitoring on the affected property during mining. • Timing for any remaining disconnection of services. • Post-mining inspection and reporting.	Prior to mining that may result in subsidence at the relevant structure. Prior to mining that may result in subsidence at the relevant structure. Prior to mining that may result in subsidence at the relevant structure.

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Desired Outcome	Action	Timing
5. Subsidence Management (Cont'd)		
Prepare and implement a Subsidence Monitoring Program	5.22 Prepare a Subsidence Monitoring Program (or similar as required under any Extraction Plan requirements) which includes the following elements. • A transverse subsidence line across the northern and southern panels. The lines will be installed to at least the middle of the next adjacent longwall before undermining occurs. • A longitudinal line extending in-bye and out-bye from the starting and finishing point of each panel, for a minimum distance equal to the cover depth. • A survey line along the riparian management zone of Kurrajong and Pine Creeks and their tributaries over the Mine Site. • A minimum of three monitoring pegs spaced 10m apart in a line or triangle at any feature of interest, eg. dam walls, archaeological sites, to measure subsidence, tilt and strain. • Visual inspections and mapping of damage before, during and after mining.	Prior to the commencement of mining in each longwall panel.
	5.23 Place monitoring survey pegs between 10m and 20m apart with a minimum of two baseline surveys of subsidence and strain completed before mine subsidence effects occur.	Prior to the commencement of mining in each longwall panel.
	5.24 Prepare and implement an Extraction Management Plan to manage subsidence impact(s) to the satisfaction of I&I NSW and DoP	Prior to Longwall mining commencing.
6. Groundwater		
Minimise the volume of mine in-flow to the underground workings.	6.1 Seal the mine drifts and ventilation shaft using in-strata grouting or hydrophobic sealant.	At time of Mine Closure.
Manage mine in-flows to minimise the potential for contamination of surface catchments.	6.2 Divert groundwater accumulating in the underground workings to designated sumps for pumping to surface.	Ongoing.
	6.3 Discharge groundwater pumped from the underground sumps into Dam A1 only.	Ongoing.
Implement a comprehensive and ongoing groundwater monitoring program.	6.4 Record extraction volumes including weekly totals from all pumping bores, and weekly totals from the underground mine and box cut sump.	Weekly.

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Desired Outcome	Action	Timing
6. Groundwater (Cont'd)		
Implement a comprehensive and ongoing groundwater monitoring program. (cont'd)	6.5 Record Volumes of water introduced to the mine for longwall operation and other requirements.	Weekly
	6.6 Record the groundwater quality (EC and pH) discharged from the underground workings and water supply bores.	Monthly.
	6.7 Sample and analyse water from all pumping bores and underground pumping stations.	Monthly.
	6.8 Record (by manual monitoring, or continuous automated monitoring) the standing water levels of piezometers P1 to P27 and WB1 to WB8 (and others as constructed).	Monthly initially and hence quarterly when stable flow established.
	6.9 Monitor the flow rate and water quality of the spring discharge from "Mayfield Spring".	Monthly initially and hence quarterly when stable flow established.
	6.10 Install additional multi-level vibrating wire piezometers over LW1 to LW3 to obtain detailed data as to the impact of mine subsidence on the groundwater of the various strata above the underground workings.	Prior to commencement of longwall mining.
	6.11 Collect data from the vibrating wire piezometers and compare against initial groundwater and subsidence modelling predictions.	Data collected continuously and downloaded and analysed quarterly.
	6.12 Commission an experienced hydrogeologist to collate and review the monitoring data collected annually in order to assess the impacts of the project on the groundwater environment, and to compare any observed impacts with those predicted from groundwater modelling. (see also <i>Commitment 16.11</i>)	Annually
	6.13 Develop the groundwater monitoring program in consultation with the Proponent's consultant hydrogeologist, the Department of Environment, Climate Change and Water – Office of Water and those groundwater users potentially affected by the Longwall Project. (see also <i>Commitment 16.12</i>)	Prior to commencement of longwall mining.
	6.14 Complete an initial audit of the groundwater model predictions against monitoring data.	6 months after the commencement of longwall mining.

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Desired Outcome	Action	Timing
6. Groundwater (Cont'd)		
Implement a comprehensive and ongoing groundwater monitoring program. (cont'd)	6.15 Recalibrate the groundwater model based on groundwater model audit and generate confirmatory forward impact predictions made. Include in all forward impact predictions the impact of brine re-injection at the conclusion of mine operations and check against initial predictions. (also required for Mine Closure Plan)	6 months after the commencement of longwall mining, every 5 years thereafter, and at least 12 to 18 months prior to cessation of mining.
	6.16 Carry out regular reviews of the groundwater model predictions against monitoring data.	Every 5 years (or more frequently if in-flows deviate significantly from predictions).
	6.17 Should the recalibrated model show groundwater inflows beyond those cases described in the EA, a separate detailed impact assessment will be conducted and mitigating measures determined.	Every 5 years (or more frequently if in-flows deviate significantly from predictions).
Preparation of a contingency plan in the event that the availability or quality of groundwater is reduced for local groundwater users.	6.18 Undertake remedial action if groundwater drawdown attributable to the mine reduces the saturated thickness of any non-project related bore by 15% or more. In the event that an existing water supply is deemed (by the hydrogeologist) to be adversely affected by the Longwall Project, the Proponent will mitigate, or compensate for this impact through the provision of a replacement water supply.	As required.
	6.19 Undertake remedial action if the water quality of the dewatering discharge indicates an inflow salinity of more than 20% above that predicted by Aquaterra (2009)	As required.
	6.20 Ensure all monitoring bores are licenced with the NSW Office of Water. All <i>Form A's</i> associated with the bores will be submitted to NOW at the time drilling is undertaken.	At time of Drilling
	6.21 Ensure the project is appropriately licensed for all groundwater make and use in accordance with required licensing arrangements through the NOW.	As required
7. Surface Water		
Minimisation of changes to existing drainage patterns of the Mine Site.	7.1 Retain selected surface water structures such as the farm dams and diversion swales to allow for continued water management across the Pit Top Area.	During construction period.

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Desired Outcome	Action	Timing
7. Surface Water (Cont'd)		
Prevention of discharge of sediment-laden water from the Pit Top Area.	7.2 Direct runoff collected within potentially contaminated catchments of the coal processing area and Reject Emplacement Area to storage basins (SB1, SB2 and SB3).	Ongoing.
	7.3 Dewater storage basins SB1, SB2 and SB3 and discharge the water to Dam A1 (or Dams C or D) to ensure no discharge or overflow.	Ongoing.
	7.4 Design and construct the storage basins to provide the capacity nominated by WRM (2009).	Prior to commencement of longwall mining.
	7.5 Design and construct the sediment dams to provide sufficient water settlement and sediment storage zones to contain the 5 day 90%ile storm event.	Prior to commencement of longwall mining.
	7.6 Dewater sediment dams within 5 days of significant rainfall event.	With 5 days.
	7.7 Direct all water from wash-down areas and workshops to oil/water separators and containment systems. The oily fraction will be placed in a containment system for removal, as necessary.	Ongoing.
	7.8 Ensure all storage tanks are either self-bunded tanks or bunded with an impermeable surface and have a capacity to contain a minimum 110% of the largest storage tank capacity.	Ongoing.
	7.9 Restrict refuelling, oiling and greasing to designated areas, away from drainage and where spill kits are readily available.	Ongoing.
	7.10 Discharge all groundwater into Dam A1, and either use without processing in selected areas on site or process through the Water Conditioning Plant to produce fresh water raffinate and concentrated brine.	Ongoing.
	7.11 Construct storages for saline groundwater (Dam A1) and brine (Dams A2, A3, B2 and BR1 to BR5 [as required]) using in-situ material which have an average depth of 5m and batter slopes of ~1:3 (V:H).	Dams A2, A3 and B2 Prior to commencement of mine dewatering and BR1 to BR5 as required.
	7.12 Line all dams to be used to store groundwater or brine with HDPE liner (permeability $<1 \times 10^{-14}$ m/sec).	Prior to commencement of mine dewatering.

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Desired Outcome	Action	Timing
7. Surface Water (Cont'd)		
Prevention of discharge of saline water from the Pit Top Area. (cont'd)	7.13 Maintain at least 0.5m freeboard in each brine storage (sufficient to cater for design 1 in 100 year ARI event).	Ongoing.
	7.14 Commence construction of brine storage ponds from 12 months prior to the anticipated requirement to accept brine discharge.	As required.
	7.15 Ensure all storages used for the storage of treated raffinate are constructed using a compacted clay lining, to an average depth of 5m and with batter slopes of ~1:3 (V:H).	Prior to commencement of use for raffinate storage.
	7.16 Maintain discharge water quality from the Water Conditioning Plant at the 100%ile limit of 350mg/L TDS.	During discharge events to the Namoi River.
	7.17 Develop, in consultation with the DECCW, a routine discharge quality and continuous discharge volume monitoring program and incorporate these requirements into a revised Site Water Management Plan.	At least 6 months prior to initial discharge.
	7.18 Maintain the pH level of water discharged beyond ML1609 within the range 6.5-8.0.	During discharge events r

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Desired Outcome	Action	Timing
7. Surface Water (Cont'd)		
Prevention of discharge of dirty, contaminated or saline water from the progressive disturbance areas of the Mining Area.	7.19 Prepare and implement a general Erosion and Sediment Control Plan (ESCP) (in accordance with the requirements of Landcom, 2004) to manage surface water flows within each gas drainage or ventilation shaft area. The ESCP will provide for the following management. – Prior to disturbance, the area will be marked out and 'no-go' zones identified. – If located on or adjacent to a natural drainage line, a diversion bank will be constructed up-slope of the area to be disturbed. – the requirement for a sediment basin will be determined, using the Revised Universal Soil Loss Equation (RUSLE). – If a sediment basin is required, ie. soil loss >200t/ha/year, the sediment basin design capacity will be calculated. – Soil will stockpiled away from natural drainage lines. – Sediment fencing will be installed along the down-slope boundaries of the disturbed areas. – All sediment control structures will be regularly inspected and repaired.	Prior to the commencement of gas drainage or ventilation shaft construction.
	7.20 Store potential contaminants, eg. drilling fluid, hydrocarbons, within bunded areas away from natural drainage lines.	Ongoing.
	7.21 Ensure all contaminated liquids are contained in lined sumps at each drill site.	Ongoing.
	7.22 Discharge any groundwater to a lined sump, with this water immediately directed to Dam A1 within the Pit Top Area.	Ongoing.
Minimisation of impact from dirty water contamination event.	7.23 Sample water discharging from licensed discharge points and analyse the water for suspended solids, turbidity, electrical conductivity, oil and grease, and pH.	With 24 hours of discharge.

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Desired Outcome	Action	Timing
7. Surface Water (Cont'd)		
Minimisation of impact from dirty water contamination event. (cont'd)	7.24 In the event monitoring confirms pollution has occurred, one or more of the following measures will be adopted. - The DECCW will be advised. Salient preceding weather information will also be provided. - Additional flocculants will be used to expedite settlement of sediments. - Plans will be set for the subject sediment dam will be enlarged or an additional sediment dam will be constructed downstream which will become the new site discharge point and monitoring location.	Within 7 days.
Minimisation of impact from hydrocarbon contaminated water event.	7.25 Undertake the following actions (in the event of a major hydrocarbon spill). - Collect the contaminated soil at the site of the spill and transport to an approved waste depot or designated 'land farming' area of the Mine Site. - Construct pits around the spill with sufficient hydraulic gradient to capture seepage water and contaminated material. - Pump out water captured in pits. - Monitor the local groundwater for signs of contamination.	As required.

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Desired Outcome	Action	Timing
7. Surface Water (Cont'd)		
Minimisation of impact from saline contamination event.	7.26 Prepare a formal contingency plan for a saline contamination event. The plan may include one or a combination of the following measures. - Dewatering from the underground workings will be transferred to an intact and lined storage structure (or ceased) along with any water remaining in the breached pond. - The breached pond or pipe will be repaired immediately and inspected by a suitably qualified person prior to re-integration into the saline water management system. - The water cart will be used to transfer non-saline water to the area of the spill to flush and dilute the water discharged. As far as practical, at least 4 times the volume of the spilled water will be used to flush the downstream environment. - Downstream vegetation will be monitored for any impacts of increased salinity and treated appropriately.	Prior to commencement of longwall mining.
Minimisation of erosion and sedimentation.	7.27 Maintain a ground cover of vegetation at 70% or better over areas disturbed but no longer required by the project 7.28 Armour the banks of the rail loop with ballast in flood zone (larger diameter competent rock). 7.29 Inspect the banks of the rail loop and remediate erosion damage within Kurrajong Creek Tributary 1.	Ongoing. Ongoing. Following flood events.
Ensure no additional salt load is added to the Namoi River catchment as a consequence of the Longwall Project.	7.30 Participate in, as required, the development of a salt accounting protocol with the DoP, DECCW and NOW. 7.31 Enter into an agreement for, and contribute sufficient funds to the 'Cap and Pipe the Bores' Program to ensure that there is a sufficient salt 'credit' for the Proponent to offset all planned salt discharges over the life of the mine. (Any agreement that NCOPL enters in relation to this matter will include the opportunity to 'trade' or otherwise dispose of salt credit in excess of that required to offset salt load attributable to mine water discharges.)	Prior to any discharge to the Namoi River. Prior to any discharge to the Namoi River.

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Desired Outcome	Action	Timing
7. Surface Water (Cont'd)		
Ensure no additional salt load is added to the Namoi River catchment as a consequence of the Longwall Project. (cont'd)	7.32 Should the Cap and Pipe Bores Program prove not to be viable, develop an alternate Green Offset program in consultation with NOW and DECCW	Prior to any discharge to the Namoi River.
Identification of alternative methods of disposal/use of brine.	7.33 Initiate a study by a recognised firm of engineering consultants to investigate the technical and economic viability of alternative methods of disposal (or use) of brine and raffinate produced by the on-site Water Conditioning Plant	Initial report to be developed within 3 years of project approval, with a revised report prepared every 5 years thereafter.
Implement a comprehensive and ongoing surface water monitoring program.	7.34 Monitor surface water quality for: pH, EC, TDS, TSS, Total Organic Carbon at locations upstream and downstream of the Pit Top Area on Kurrajong and Pine Creeks and their tributaries.	Quarterly during surface flow events
	7.35 Record the volume and quality (pH, EC, TDS, TSS, Total Organic Carbon) of water extracted and discharged to the Namoi River.	Weekly.
	7.36 Monitor the quality of water within of the Brine Storage Ponds	Quarterly
	7.37 Prepare and implement contingency plans in the event elevated levels of heavy metals are recorded.	Quarterly.
Avoidance of structures in drainage lines to prevent fish passage.	7.38 Construction of drainage line crossings will be undertaken in accordance with the policy and guideline document of I&I NSW "Why do fish need to cross the road?"	As Required.
8. Ecology		
Manage disturbance within the Pit Top Area to minimise disturbance to flora and fauna of conservation significance.	8.1 Clearly identify the boundaries of disturbance within the Pit Top Area and progressive disturbance associated with ventilation and gas drainage infrastructure. Ensure no clearing occurs outside these boundaries.	Prior to clearing. (see also <i>Commitments 1.1</i> and <i>1.2</i>).
	8.2 Avoid disturbance to the vegetation of Community 3 along Kurrajong Creek Tributary 1.	During clearing.
	8.3 Disperse and spread cleared native vegetation around disturbed areas to provide habitat, increase the seed bank and to provide a mulch material for nutrient cycling and water retention purposes.	Ongoing.
	8.4 Strip all groundcover vegetation with the topsoil to ensure maximum retention of nutrients and native seeds to facilitate rapid vegetation of the soil stockpiles.	Ongoing.

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Desired Outcome	Action	Timing	
8. Ecology (Cont'd)			
Manage progressive disturbance over the Mine Site to minimise disturbance to flora and fauna of conservation significance.	8.5	Clearly identify the boundaries of proposed disturbance. As far as practicable avoid disturbance to the vegetation of Community 3 along watercourses of the Mine Site.	Prior to clearing in the nominated area(s).
	8.6	Commission a qualified ecologist to complete a pre-clearance survey of nominated areas of disturbance (to identify whether any threatened species, population or community or their habitat is present).	Prior to clearing in the nominated area(s).
	8.7	Include an assessment of whether aquatic or fish habitat is present within the drainage features to be traversed by the access road and/or power line corridors. The location of access tracks will be determined in conjunction with an ecologist after inspecting each proposed route and determining the path with least impact on environmental values	Prior to clearing in the nominated area(s).
	8.8	(In the event that an EEC or threatened species or population is identified), relocate or reorientate proposed disturbance, if practicable.	Prior to clearing in the nominated area(s).
	8.9	If the relocation or re-orientation of the area to be disturbed is not practicable (for reasons of mine / operational safety), the consultant ecologist will relocate any fauna species residing within the area to be cleared.	
	8.10	Retain all substantial habitat trees, wherever possible.	During construction.
	8.11	Undertake any tree-felling in accordance with a Tree Felling Protocol. The Tree Felling Protocol will be developed by a qualified ecologist and will include, but not necessarily be limited to a description of: - the best time of the year for felling; - pre-felling mapping of habitat trees; - inspections of trees on the day of felling; - procedures for the safe removal of fauna species; - a relocation/release protocol; and - a protocol for the assessment and salvaging of tree hollows.	During construction.

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Desired Outcome	Action	Timing
8. Ecology (Cont'd)		
Manage progressive disturbance over the Mine Site to minimise disturbance to flora and fauna of conservation significance. (cont'd)	8.12 Disperse and spread cleared native vegetation around disturbed areas to provide habitat, increase the seed bank and to provide a mulch material for nutrient cycling and water retention purposes.	Following clearing if areas available, otherwise when revegetation area available.
	8.13 Strip all groundcover vegetation with the topsoil to ensure maximum retention of nutrients and native seeds to facilitate rapid vegetation of the soil stockpiles.	Ongoing.
	8.14 Re-site all hollows from hollow-bearing trees removed where practicable.	Ongoing.
Minimise long term impact on flora and fauna on and around the Mine Site.	8.15 Implement a weed management strategy, in consultation with the Livestock Health and Pest Authority and the Narrabri Shire Council weeds officer, for the retained or rehabilitated natural vegetation within the Mine Site.	To be developed in the Landscape Management Plan for the Project in accordance with the Stage 1 conditional requirement.
	8.16 Implement a feral animal management program to lower the predator impact upon small terrestrial native species.	In accordance with Landscape Management Plan.
	8.17 Inspect the sediment dams, evaporation ponds and brine storage ponds for fauna during the course of regular maintenance and operational inspections.	Ongoing.
	8.18 Undertake regular reviews of the revegetation program to ensure it remains relevant.	Annually.
	8.19 Time clearing within woodland communities, where practicable, to avoid fauna breeding seasons.	Ongoing.
	8.20 Undertake progressive and final rehabilitation across the Project Site to recreate a final land use of agriculture and native vegetation.	Ongoing.
Ensure the biodiversity value of the Mine Site and surrounding areas is maintained or improved.	8.21 Establish and implement a Biodiversity Offset Management Plan to the satisfaction of DoP (and in consultation with DECCW), to account for that area disturbed by the Longwall Project and in particular regard for Bertya Opponens, the Superb Parrot and Inland Grey Box EEC.	Within 9 months of Project Approval.
9. Indigenous Heritage		
Employees and contractors who are sensitive to, and respectful of, the Aboriginal heritage on the Mine Site.	9.1 Involve all site employees and contractors in an awareness program re: Aboriginal heritage issues.	At Site Induction (and re-induction).

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Desired Outcome	Action	Timing
9. Indigenous Heritage (Cont'd)		
Ensure protection of Aboriginal sites and artefacts of scientific significance (Aboriginal Sites 10, 19, 38 and 39).	9.2 Identify the boundaries of Aboriginal Sites 10, 19, 38 and 39 in conjunction with the Aboriginal stakeholders and the archaeologist and fence off (with fluorescent para-webbing (or similar material)).	Prior to any surface disturbance within 100m of the nominated sites.
	9.3 Erect a sign on the fencing identifying an "Environmental Protection Zone".	Prior to any surface disturbance within 100m of the nominated sites.
	9.4 Prohibit access to these sites by locating all surface disturbance (including roads) at least 10m from these fenced off areas.	Prior to any surface disturbance within 100m of the nominated sites.
	9.5 Remove the fencing (erected as nominated in <i>Commitment 9.3</i>) to allow the return of grazing to reduce the potential grass-fire hazard.	Following the completion of surface disturbance in the vicinity of the protected site.
Manage identified Aboriginal sites and artefacts (of Panels 1 to 7) in accordance with agreed management principles.	9.6 For Aboriginal Sites 10, 19, 38 and 39, design surface disturbing activities such as gas drainage operation, ventilation and access road construction to provide a buffer of at least 10m from the site fencing.	Prior to any surface disturbance.
	9.7 For all other Aboriginal sites, design surface disturbing activities such as gas drainage operations, ventilation and access road construction to avoid wherever possible the identified Aboriginal sites.	Prior to any surface disturbance within 100m of any other Aboriginal site.
	9.8 In the event that one of the Aboriginal sites (other than Aboriginal Sites 10, 19, 38 and 39) cannot be avoided, commission an archaeologist and invite representatives of registered Aboriginal stakeholders (Gomerioi and Narrabri LALC) to salvage the artefacts identified at the affected site ("the Salvage Area").	Prior to salvage.
	9.9 Undertake a full analysis of the material salvaged from within the Salvage Area by allowing the archaeologist to take the artefacts for further analysis.	Following salvage and prior to any surface disturbance.
	9.10 Return the salvaged artefacts to the authorised Aboriginal organisation.	Within 21 days of salvage.

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Desired Outcome	Action	Timing
9. Indigenous Heritage (Cont'd)		
Manage identified Aboriginal sites and artefacts (of Panels 1 to 7) in accordance with agreed management principles. (cont'd)	9.11 Place the salvaged artefacts in the care and control of the Aboriginal organisation agreed to by Narrabri LALC and Gomeroi. (The Proponent (if required) has agreed to provide an interim 'keeping place' in a designated storage facility within the Pit Top Area until such time as a suitable location is identified and agreed to by Narrabri LALC and Gomeroi).	Following salvage.
	9.12 Commission the preparation of a report ("Salvage Report") including full descriptions of the salvaged material, and an interpretation of the archaeological record within the Salvage Area.	Following salvage
	9.13 Provide copies of the Salvage Report to Narrabri LALC, Gomeroi and the DECCW	Within 3 months of salvage
Manage Aboriginal sites and artefacts (within the remaining Mining Area) in accordance with agreed management principles.	9.14 As mining approaches the completion of Panels 1 to 7, undertake a further detailed field survey, involving representatives of the registered Aboriginal stakeholders, above the Mining Area to be disturbed over the ensuing 7 years.	At least 12 Months prior to completion of mining in Panel 7.
	9.15 Identify and protect through fencing and signage, those sites determined to be of high scientific significance as agreed and determined in consultation between the Proponent, the registered Aboriginal stakeholders and the archaeologist.	Prior to any surface disturbance associated with Panel 8.
	9.16 In the event that an identified site cannot be avoided, commission an archaeologist and invite representatives of registered Aboriginal stakeholders (Gomeroi and Narrabri LALC) to salvage the identified artefacts. All salvage is to be undertaken as per <i>Commitments</i> 9.9 to 9.13 above.	Prior to any surface disturbance

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
9. Indigenous Heritage (Cont'd)		
Manage Aboriginal heritage values in accordance with agreed management principles.	9.17 Prepare, in consultation with the registered Aboriginal stakeholders and the DECCW, an updated Aboriginal Heritage Cultural Management Plan (AHCMP). The AHCMP will include: - protocols and procedures to ensure that all commitments (see <i>Commitments 9.1 to 9.20</i>) are implemented in full; - consultation and communication framework between the Proponent, registered Aboriginal stakeholders and the DECCW; - the accountabilities and responsibilities of the Proponent and registered Aboriginal stakeholders; and - All legal reporting requirements nominated by the DECCW.	Within 6 months of receiving Project Approval
Appropriate protection and/or salvage of Aboriginal sites and artefacts identified beyond the Aboriginal sites defined during previous field surveys.	9.18 Ensure that if any further Aboriginal artefacts are uncovered at any time during the life of the mine, work in the vicinity of the subject area ceases and the Proponent follows the procedures recorded in the AHCMP.	In the event of an Aboriginal site or artefact being identified.
	9.19 Wherever possible, if a tree is identified as having culturally made scars, it is retained <i>in situ</i> and protected.	In the event of a scarred tree being identified.
	9.20 Ensure that, where it is not possible to retain a scarred tree <i>in-situ</i> , the tree is cut down to preserve the scar, and relocated into a designated protected area. All activity associated with cutting of the tree and preservation of the scar is to be conducted in consultation with the Aboriginal stakeholders and the archaeologist.	In the event of a scarred tree being identified.

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Desired Outcome	Action	Timing
10. Noise		
All activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.	10.1 Ensure that the approved hours of operation are adhered to.	Ongoing.
	10.2 Use equipment with lower sound power levels in preference to more noisy equipment.	Ongoing.
	10.3 Regularly service all equipment used on-site to ensure the sound power levels remain at or below the levels used in the modelling to assess generated noise levels and compliance with the criteria.	Ongoing.
	10.4 Maintain a dialogue between the Proponent and surrounding neighbours and the local community to ensure any concerns over construction, operational or transport noise are addressed.	Ongoing.
Noise generated by construction activities does not exceed DECCW nominated criteria nor significantly impact on neighbouring landowners and/or residents.	10.5 Ensure that all equipment emits sound power levels consistent with the schedules in <i>Appendix A</i> of Spectrum Acoustics (2009).	Ongoing.
	10.6 Restrict the operation of a maximum of two (2) scrapers during construction operations under temperature inversion conditions, to one of the following areas only. - the longwall unit assembly area; - the ROM coal pad area; - the Reject Emplacement Area; or - the Brine Storage Area.	During construction phase.
	10.7 Undertake noise monitoring at the private residences most likely to be affected by construction noise.	As required during construction works with real time noise monitoring and attended quarterly monitoring.
	10.8 In the event that noise monitoring confirms exceedance of noise criteria at privately owned residences, where noise mitigation measures prove ineffective, negotiated agreements will be sought with the affected parties in accordance with the Industrial Noise Policy	As required if exceedances cannot be mitigated.
	10.9 In accordance with the Noise Management Plan and to account for inversion impacts, develop an operational protocol in consultation with the DECCW to clearly define operational procedures to be adopted during inversion conditions to minimise impact at adjoining privately owned residences	Within 3 months of approval.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
10. Noise (Cont'd)		
Noise generated by operational activities does not exceed DECCW nominated criteria nor significantly impact on neighbouring landowners and/or residents.	10.10 Fully enclose the rotary breaker within a shed (or similar) clad with tilt-up aerated concrete panels, or similar.	Prior to commencement of coal processing.
	10.11 Enclose the coal processing plant with clad steel sheeting and line 50% of the internal surface with acoustic insulation.	Prior to commencement of coal processing.
	10.12 Refrain from using the bulldozer on the Reject Emplacement Area in both the morning and evening periods.	During temperature inversion conditions.
	10.13 Limit the number of truck movements to the Reject Emplacement Area to 1 load per 15 minute period.	During temperature inversion conditions
	10.14 Ensure specific noise attenuation is provided to surface drills when operating over LW1 to LW3 and LW24 to LW26 to achieve a sound power level of 109dB(A).	Prior to surface drilling (under inversion conditions) above the nominated longwall panels
	10.15 Update the existing Noise Management Plan.	Within 6 months of approval
Noise generated by transport activities does not exceed DECCW nominated criteria nor significantly impact on neighbouring landowners and/or residents.	10.16 Ensure strict adherence to hours of operation, including transport activities.	Ongoing.
	10.17 Instruct all project employees and contractors to enter and exit the Mine Site in a courteous manner and without causing undue traffic noise.	On induction (and re-induction).
	10.18 Maintain the on-site road network to limit body noise from empty trucks travelling on internal roads.	Ongoing.
Blasting undertaken that complies with the nominated DECCW criteria.	10.19 Ensure that all blasts are designed by a suitably qualified and experienced blasting engineer or shot-firer and that each blast is designed to ensure compliance with the relevant assessment criteria or conditional requirements	As required.
Implementation of an appropriate noise monitoring program to ensure continuing compliance with DECCW guideline levels during longwall mining operations.	10.20 Undertake attended noise monitoring at the residences most likely to be affected by Longwall Project generated noise. "Bow Hills" "Belah Park" "Naroo" "Matilda" ¹ "Oakleigh" "Haylin View" ¹ "Newhaven" "Merrilong" ¹	Quarterly.

¹ Monitoring to commence as surface activities approach the eastern end of the southern longwall panels.

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Desired Outcome	Action	Timing
10. Noise (Cont'd)		
Implementation of an appropriate noise monitoring program to ensure continuing compliance with DECCW guideline levels during longwall mining operations. (within the remaining Mining Area). (cont'd)	10.21 Increase the frequency of monitoring during the first winter (May to September) of mining operations proposed under this approval. This will also incorporate real time noise monitoring as required under the Stage 1 modification approval.	Monthly.
	10.22 Review and submit noise monitoring results to the DECCW.	Annually.
11. Air Quality		
Site activities are undertaken without exceeding DECCW air quality criteria or goals.	11.1 Minimise the extent of clearing across the Mine Site including the campaigns to construct the area for reject emplacement and construct brine storage ponds.	Ongoing.
	11.2 Retain cleared trees and branches on the margins of cleared areas for use in stabilising disturbed areas once they are no longer required.	Ongoing.
	11.3 Undertake soil stripping at times when most appropriate (such as when there is sufficient soil moisture to prevent significant lift-off of dust and at times other than periods of high winds).	Ongoing.
	11.4 Operate water sprays on all continuous miners, the longwall unit and the breaker feeder to minimise dust creation underground.	Ongoing.
	11.5 Apply water to the coal at the feed hopper, crusher and at all conveyor transfer and discharge points.	Ongoing.
	11.6 Fit all surface conveyors with appropriate cleaning and collection devices to minimise the amount of material falling from the return conveyor belts.	Prior to commencement of coal processing.
	11.7 Enclose the rotary breaker . (see <i>Commitment 10.10</i>)	Prior to commencement of coal processing.
	11.8 Partially enclose all surface conveyors to minimise dust lift off.	Prior to commencement of coal processing.
	11.9 Cease construction of the brine storage ponds when the prevailing winds are from the northwest quadrant.	Ongoing.
	11.10 Apply water onto stockpiles and hardstand areas.	Ongoing.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
11. Air Quality (Cont'd)		
Site activities are undertaken without exceeding DECCW air quality criteria or goals. (cont'd)	11.11 Progressively rehabilitate areas of disturbance including gas drainage areas.	Ongoing.
	11.12 Progressively rehabilitate areas no longer required for operational purposes.	Ongoing.
Minimise the potential for spontaneous combustion of the coal stored and handled on site.	11.13 Minimise the length of time coal is held in stockpiles.	Ongoing.
	11.14 Monitor coal stockpiles for signs of spontaneous combustion.	Ongoing.
	11.15 Immediately report incidents to the appropriate authorities.	Ongoing.
	11.16 Extinguish fire by removal from stockpile, spreading and saturation with water.	In the event of ignition.
Ensure no employee's health is adversely affected as a result of employment at the Longwall Project.	11.17 Install underground ventilation system to provide fresh air to employees.	Ongoing and as required.
Minimise greenhouse gas, other gas and odour emissions through reduction in diesel consumption.	11.18 Optimise and schedule vehicle operations to minimise vehicle movements.	Ongoing.
	11.19 Maintain engines according to manufacturers' guidelines and keep tyres at optimum pressure.	Ongoing.
	11.20 Minimise vehicle idling time.	Ongoing.
	11.21 Prepare an updated Energy Savings Action Plan (ESAP).	Within 12 months of Project Approval.
Implementation of an appropriate air quality monitoring program to ensure continuing compliance with DECCW guideline levels.	11.22 Monitor deposited dust levels at 8 sites (ND1 to ND8).	Monthly.
	11.23 Monitor PM ₁₀ levels at 2 sites (ND9 to ND10).	1 in 6 days as per DECCW schedule.
	11.24 Review and submit dust monitoring results to relevant government agency.	Annually.
12. Soils and Land Capability		
Maintenance of soil value for rehabilitation and minimisation of soil loss through erosion.	12.1 Strip topsoil to a depth of 15cm and strip subsoil to a depth of 25cm (where sufficient soil depths are available).	During soil stripping operations.
	12.2 Avoid stripping or replacing under wet conditions.	During soil stripping operations.
	12.3 Stockpile topsoil and subsoil separately with topsoil stockpiles not exceeding 2m in height and subsoil stockpiles not exceeding 3m in height.	During stockpiling operations.
	12.4 Carefully select soil stockpile locations to avoid subsequent movement, to ensure that the soil structure is not degraded.	During soil stripping operations.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
12. Soils and Land Capability (Cont'd)		
Maintenance of soil value for rehabilitation and minimisation of soil loss through erosion. (cont'd)	12.5 Position soil stockpiles to prevent surface water runoff coming into contact with the soil stockpiles.	During soil stockpiling operations.
	12.6 Construct soil stockpiles with a 'rough' surface to assist in runoff control and seed retention and germination.	During soil stockpiling operations.
	12.7 Construct up slope water diversion banks to direct overland surface water flow away from soil stockpiles.	During soil stockpiling operations.
	12.8 Install protective earthworks such as straw bale or contour bank protection to protect the soil stockpile from overland flow as required.	Following stockpile construction.
	12.9 Install silt-stop fencing or similar protection immediately down slope of stockpiles and retain until such time as they develop a stable cover of vegetation.	Following stockpile construction.
	12.10 Sow soil stockpiles with stabilising groundcover species.	Following stockpile construction.
	12.11 Retain soil conservation structures, or if disturbed, reinstate these structures to maintain pre-mining soil and water management on the Mine Site.	Ongoing.
Minimise erosion on the Mine Site as a consequence of subsidence.	12.12 Inspect drainage lines, predicted surface cracking zones and other areas of the Mine Site susceptible to erosion, ie. soils of the Purlawaugh Formation on slopes >10°.	At least quarterly.
	12.13 Undertake remedial actions on areas of accelerated erosion, eg. reinstatement or realignment of contour banks, regrading of channels, sowing of cover crops, etc.	Ongoing and as required.
Ensure no tunnelling erosion occurs as a consequence of pipeline channel excavation and backfill.	12.14 Replace soil material in the reverse order to that removed, ie. lower subsoil layers, upper subsoil layers then topsoil	When under construction.
Remediate contaminated soils.	12.15 Excavate and remove soils contaminated with hydrocarbons or saline water.	Within one month of contamination occurring.
	12.16 (If the contamination is widespread) Remove contaminated material to facility licensed to accept the nominated contamination.	Within one month of contamination occurring.
	12.17 (If the hydrocarbon contamination is limited in area) Remove to a designated 'land farming' location (away from natural drainage) for bio-remediation of hydrocarbon contaminated material.	Within one month of contamination occurring.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing	
13. Transportation			
All motorists travel safely to and from the Mine Site with minimal disruption to Kamilaroi Highway or Kurrajong Creek Road traffic.	13.1	Transport coal entirely by rail.	Ongoing.
	13.2	Erect appropriate road signage.	As required.
	13.3	Ensure all employees and contractors are regularly informed about the safe driving requirements to and from the Mine Site.	On induction and ongoing.
	13.4	Instruct all employees regarding the possible scenario where the rail crossing is closed at shift change-over and requirement for patience whilst the crossing is closed	On induction.
	13.5	Transport all oversize loads with all necessary permits.	As required.
	13.6	Manage the maintenance of the Mine Access Road, Kurrajong Creek Road, North Western Branch Railway Crossing.	Ongoing for the life of the mine.
An improved understanding of the cumulative impacts of increased rail traffic on all stakeholders impacted by increased rail traffic to Port Newcastle.	13.7	Work co-operatively with the relevant authorities, and as required ARTC, in terms of financial and in kind commitment of resources (to be agreed with the relevant authority and on an equitable basis with other rail users) in a study into the cumulative impacts of increased rail traffic from all sources.	When commissioned by the relevant authority.
An understanding of the implications of the cumulative impacts of increased rail traffic, on traffic flow in and about the township of Gunnedah.	13.8	Work co-operatively with Gunnedah Shire Council in terms of financial and in-kind commitment of resources (to be agreed with Gunnedah Shire Council and on an equitable basis with other rail users) in an Integrated Traffic Management Study to be commissioned by Gunnedah Shire Council.	When commissioned by Gunnedah Shire Council.
14. Visual			
The operation of the Siding Springs Observatory is not affected by project operations.	14.1	Use soft lighting on the Pit Top Area to minimise impact on surrounding residents while allowing for evening maintenance and deliveries / night train loading activities.	Night-time operations.
Restriction of vantage points of project activities from neighbouring residences and public roads.	14.2	Maintain the perimeter amenity bund and vegetate with native grasses, shrubs and trees.	During the site establishment phase.
	14.3	Construct and vegetate a bund wall around the ventilation shaft areas to restrict the visibility of the activities from neighbouring residences.	During the site establishment phase.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
14. Visual (Cont'd)		
Restriction of vantage points of project activities from neighbouring residences and public roads. (cont'd)	14.4 Rehabilitate and revegetate all areas no longer required for site operations to ensure the maximum area of grassed paddock is present.	Ongoing.
	14.5 Construct/paint the load-out bin above the rail load-out area and site buildings in a grey/green hue to limit their overall visibility	During the site establishment phase.
15. Community Contributions		
Keep surrounding land owners and land users informed about site activities	15.1 Maintain the Community Consultative Committee or similar and include local community representatives.	Ongoing.
	15.2 Provide regular newsletters regarding project progress and operations.	Ongoing.
Contribute to the Local Community through appropriate contributions to Community Enhancement Activities	15.3 Provide funding of \$100,000 to the Gunnedah Shire Council Community Enhancement fund. Funding to be spread out equally over 5 annual instalments.	For 5 Years.
	15.4 Provide funding of \$1 500 000 to the Narrabri Shire Council Community Enhancement Fund. Funding to be provided in two instalments over two years.	2 Years.
16. Environmental Monitoring		
Implement a comprehensive and ongoing surface water monitoring program.	16.1 Monitor surface water quality for: pH, EC, TDS, TSS, Total Organic Carbon at locations upstream and downstream of the Pit Top Area on Kurrajong and Pine Creeks and their tributaries. (See also <i>Commitment 7.27</i>)	Quarterly during surface flows.
	16.2 Record the volume and quality (pH, EC, TDS, TSS, Total Organic Carbon) of water extracted and discharged to the Namoi River. (See also <i>Commitment 7.28</i>)	Weekly.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
16. Environmental Monitoring (Cont'd)		
Implement a comprehensive and ongoing groundwater monitoring program. (cont'd) (cont'd)	16.3 Record extraction volumes including weekly totals from all pumping bores, and weekly totals from underground and open cut sump. (see also <i>Commitment 6.4</i>)	Weekly.
	16.4 Record Volumes of water introduced to the mine for longwall operation and other requirements. (see also <i>Commitment 6.5</i>)	Weekly.
	16.5 Record the groundwater quality (EC and pH) discharged from the underground workings and water supply bores. (see also <i>Commitment 6.6</i>)	Monthly.
	16.6 Sample and analyse water from all pumping bores and underground for the following parameters. • EC, TDS, TSS and pH. • Calcium, magnesium, sodium and potassium. • Carbonate, bicarbonate, sulphate and chloride. • Aluminium, arsenic, boron, cobalt, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, silver, selenium, zinc. • Ammonia, nitrate, phosphorus, reactive phosphorus. (see also <i>Commitment 6.7</i>)	Quarterly
	16.7 Record (by manual monitoring, or continuous automated monitoring) the standing water levels of piezometers P1 to P27 and WB1 to WB8 (and others as constructed). (see also <i>Commitment 6.8</i>)	Monthly initially and Quarterly after first 12 months
	16.8 Monitor the flow rate and water quality of the spring discharge from "Mayfield Spring". (see also <i>Commitment 6.9</i>)	Monthly initially and Quarterly after first 12 months.
	16.9 Install additional multi-level vibrating wire piezometers over LW1 to LW3 to obtain detailed data as to the impact of mine subsidence on the groundwater of the various strata above the underground workings. (see also <i>Commitment 6.10</i>)	Prior to commencement of longwall mining.
	16.10 Collect data from the vibrating wire piezometers and compare against initial groundwater and subsidence modelling predictions. (see also <i>Commitment 6.11</i>)	Data collected continuously and downloaded and analysed quarterly.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
16. Environmental Monitoring (Cont'd)		
Implement a comprehensive and ongoing groundwater monitoring program. (cont'd)	16.11 Commission an experienced hydrogeologist to collate and review the monitoring data collected annually in order to assess the impacts of the project on the groundwater environment, and to compare any observed impacts with those predicted from groundwater modelling. (see also <i>Commitment 6.12</i>)	Annually
	16.12 Develop the groundwater monitoring program in consultation with the Proponent's consultant hydrogeologist, the Department of Environment, Climate Change and Water – Office of Water and those groundwater users potentially affected by the project. (see also <i>Commitment 6.13</i>)	Prior to commencement of longwall mining.
Implementation of an appropriate noise monitoring program to ensure continuing compliance with DEC guideline levels.	16.13 Undertake attended noise monitoring at the residences most likely to be affected by Longwall Project generated noise. "Bow Hills" "Belah Park" "Naroo" "Matilda" ² "Oakleigh" "Haylin View" ² "Newhaven" "Merrilong" ² (see also <i>Commitment 10.20</i>)	Quarterly
	16.14 Increase the frequency of monitoring during the first winter (May to September) of construction or mining operations. (see also <i>Commitment 10.21</i>) This will also incorporate real time noise monitoring in accordance with requirements under the Stage 1 modification approval.	Monthly
	16.15 Review and submit noise monitoring results to the DECCW. (see also <i>Commitment 10.22</i>)	Annually
Implementation of an appropriate air quality monitoring program to ensure continuing compliance with DEC guideline levels.	16.16 Monitor deposited dust levels at 8 sites (ND1 to ND8). (see also <i>Commitment 11.22</i>)	Monthly
	16.17 Monitor PM ₁₀ levels at 2 sites (ND9 to ND10). (see also <i>Commitment 11.23</i>)	1 in 6 days as per DECCW schedule.
	16.18 Review and submit dust monitoring result to relevant government agency. (see also <i>Commitment 11.24</i>)	Annually.

² Monitoring to commence as surface activities approach the eastern end of the southern longwall panels.

Statement of Commitments for Site Operations and Management

Desired Outcome	Action	Timing
17. Documentation		
A systematic set of documents are in place to guide the planning and implementation of all environmental management strategies.	17.1 Incorporate the environmental procedures in an on-site management system.	Prior to relevant activity.
	17.2 Prepare or update the following management and monitoring plans; • Mining Operations Plan • Aboriginal Cultural Heritage Management Plan • Energy Savings Action Plan • Waste Management Plan • Water Management Plan • Landscape Management Plan • Greenhouse Gas Minimisation Plan • Gas Drainage & Outburst Management Plan • Major Hazard Management Plan • Salinity Contamination Contingency Plan • Extraction Management Plan • Erosion & Sediment Control Plan • Noise Monitoring Program	Various and as nominated by project approval.
	17.3 Incorporate relevant environmental data / information in Annual Environmental Management Reports.	Annually.
18. General		
All buildings meet necessary building codes and specifications.	18.1 Construct all buildings with certification by Narrabri Shire Council.	During site establishment phase.
All employees and contractors are trained and assessed as competent to undertake those activities influencing the environment.	18.2 Implement a policy encouraging employment of local district personnel, with arrangements for training and certification.	Prior to commencement of project.
	18.3 Include environmental issues in the site induction process for new employees and/or contractors.	Prior to commencement of project.
	18.4 Develop and incorporate an environmental training program to ensure all employees and contractors are environmentally responsible and follow all relevant site-specific procedures.	Prior to commencement of project.
	18.5 Include environmental issues in the agenda for toolbox meetings with employees and/or contractors.	Ongoing.

APPENDIX 4 GENERAL TERMS OF PLANNING AGREEMENTS

Continuation of Stage 1 Planning Agreements

Funding Area	Minimum Proponent Contribution	Funding Time Frame
<u>Narrabri Shire</u> Upgrade and seal Kurrajong Creek Road, adjacent to the Project site	7.0 kilometres length of Kurrajong Creek Road to be upgraded and sealed.	Works to be completed within 12 months of Stage 1 project approval (17 November 2007).
<u>Narrabri Shire</u> Monetary Contribution – Provision of bush fire services	\$7,000	One instalment to be paid within 12 months of Stage 1 project approval (17 November 2007).
<u>Narrabri Shire</u> Community Infrastructure Contribution	\$93,000	An initial instalment of \$13,000 to be paid within 12 months of Stage 1 project approval (17 November 2007) with \$20,000 to be paid for a period of four years on the anniversary of the initial payment.
<u>Gunnedah Shire</u> Monetary Contribution – Gunnedah Urban Riverine Scheme	\$100,000	\$20,000 each year for a period of 5 years with the first instalment to be paid within 12 months of Stage 1 project approval (17 November 2007).

Notes:

- The Gunnedah Urban Riverine Scheme Contributions must be reviewed and adjusted to take into account any increase in the CPI over time, in accordance with the Planning Agreement between the Proponent and Gunnedah Shire Council required under this approval.
- The Community Infrastructure Contribution must be reviewed and adjusted to take into account any increase in the CPI over time, in accordance with the Planning Agreement and Narrabri Shire Council required under this approval.

Stage 2 Planning Agreements

Funding Area	Minimum Proponent Contribution	Funding Time Frame
<u>Narrabri Shire</u> Narrabri Swimming Complex	\$1,500,000	First contribution of \$750,000 to be made in conjunction with the 2010 Stage 1 community enhancement contribution. Second contribution of \$750,000 to be paid in conjunction with the 2011 Stage 1 community enhancement contribution.
<u>Gunnedah Shire</u> Monetary Contribution	\$100,000	\$20,000 each year for a period of 5 years with the first instalment to be paid in conjunction with the 2010 Stage 1 community enhancement contribution.

Notes: The notes for Stage 1 Community Enhancement Program contributions apply to Stage 2 Community Enhancement contributions.

**APPENDIX 5
INDEPENDENT DISPUTE RESOLUTION PROCEDURE**

**Independent Dispute Resolution Process
(Indicative only)**

