

Project Approval

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

Under the Minister for Planning's delegation of 4 March 2009, I approve the project referred to in schedule 1, subject to the conditions in schedules 2 to 4.

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.

Sam Haddad
Director-General

SIGNED

Sydney

2nd October 2009

SCHEDULE 1

Application No:	08_0256
Proponent:	BHP Billiton Illawarra Coal Holdings Pty Ltd
Approval Authority:	Minister for Planning
Land:	Land within: Lots 6 and 7 of DP 250231; Lot 3 of DP 553170; Lots 1 and 2 of DP 576136; Lots 1 and 2 of DP 576138; Lot 2 of DP 747563; Lot 1 of 802151; Lots 1, 2 and 3 of DP 838568; and Lot 1 of DP 915066 (see Maps of the Project Sites in Appendix 1)
Project:	Appin Gas Drainage Project

Blue type represents December 2010 modifications

Pink type represents February 2012 modifications

SCHEDULE 2

DEFINITIONS

Conditions of this approval	Conditions contained in Schedules 2 to 4
Council	Wollondilly Shire Council
Department	Department of Planning and Infrastructure
Director-General	Director-General of the Department, or delegate
DRE	Division of Resources and Energy, within the Department of Trade and Investment, Regional Infrastructure and Services
EA	Environmental Assessment, titled <i>Appin Colliery Area 7 Goaf Gas Drainage Project</i> , dated June 2009, including the Response to Submissions
EA (Mod 1)	The environmental assessment titled <i>Relocation of MRD and Vertical Boreholes and Alternative Access Route</i> dated October 2010 and prepared by Cardno Pty Ltd, as modified by the letter dated 30 November 2010 titled <i>Response to Submissions</i> , prepared by BHP Billiton Illawarra Coal.
EA (Mod 2)	The environmental assessment titled <i>Section 75W Modification Application (Mod # 2): Additional Gas Drainage</i> dated 16 November 2011 and prepared by Cardno Pty Ltd, as modified by the letter dated 20 January 2012 titled <i>Response to Submissions s75W Modification 2</i> , prepared by BHP Billiton Illawarra Coal
Feasible	Feasible relates to engineering considerations and what is practical to build or carry out
Incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval
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 to ecosystems that is not trivial
MRD	Medium Radius Drilling
MSGD	Mine Safety Gas Drainage
OEHS	Office of Environment and Heritage
Project	The development as described in the EA
Proponent	BHP Billiton Illawarra Coal Holdings Pty Ltd, or its successors
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Response to Submissions	The Proponent's response to issues raised in submissions, titled <i>Response to Submissions: Appin Goaf Gas Project</i> , dated August 2009
RMS	Roads and Maritime Services
Site	Land to which the Project Application applies (see schedule 1)

ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

- The Proponent shall implement all reasonable and feasible 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

- The Proponent shall carry out the Project generally in accordance with the:
 - EA;
 - EA (Mod 1);
 - EA (Mod 2);
 - statement of commitments; and
 - conditions of this approval.

Notes:

- The general layout of the project is shown in Appendix 1.
- The statement of commitments is reproduced in Appendix 4.

- 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 requirement/s 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 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 drilling of goaf gas extraction wells and mine safety gas drainage, as identified in Appendix 1, may take place for 5 years from the date of this approval, unless otherwise agreed by the Director-General.
6. The operation of goaf gas extraction wells, as identified in Appendix 1, may take place for 10 years from the date of this approval, unless otherwise agreed by the Director-General.

Note: Under this approval, the Proponent is required to rehabilitate the site and perform additional undertakings to the satisfaction of the Director-General and DRE. Consequently, this approval will continue to apply in all other respects other than the right to drill and operate goaf gas extraction wells until the site has been properly rehabilitated.

PROTECTION OF PUBLIC INFRASTRUCTURE

7. The Proponent shall repair, or pay all reasonable costs associated with repairing public infrastructure that is damaged by the project.

OPERATION OF PLANT AND EQUIPMENT

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

STAGED SUBMISSION OF PLANS AND PROGRAMS

9. With the approval of the Director-General, the Proponent may:
 - (a) submit any plan or program required by this approval on a progressive basis; and
 - (b) combine any plan or program required by this approval with any similar strategy, plan or program required by an approval for the Appin Coal Mine.

SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS

NOISE

Construction and Operation Hours

- The Proponent shall construct and operate the project in accordance with the hours listed in Table 1, except for emergency purposes.

Table 1: Construction and operation hours of the project

Activity	Hours
Construction - site establishment of borehole and extraction plant sites, including vegetation clearing and drill assembly/setup - drilling of vertical boreholes and downhole - surface pipeline reticulation system works	Monday – Friday 7:00am to 6:00pm, Saturday 8:00am to 6:00pm and at no time on Sunday and Public Holidays
Construction - under-boring the Hume Highway and Main Southern Rail Line	7:00am to 6:00pm 7 days per week
Construction - drilling of MRD boreholes 1 and 2 and MRD boreholes 705 A to F - drilling of MSGD steered horizontal wells	24 hours 7 days per week
Operation - extraction plant, flaring and venting	24 hours 7 days per week

Note: 'Emergency purposes' refers to instances where the cessation of construction activities would have the potential to generate serious harm to the environment or serious safety issues. Should these activities be conducted outside of the hours permitted, a report must be provided to the Department within 7 days of the event containing relevant information and/or data to demonstrate the specific emergency purposes and circumstances at the time.

Impact Assessment Criteria

- The Proponent shall ensure that the noise generated by the project during operation (ie from the extraction plant, flaring and venting) does not exceed the noise impact assessment criteria set out in Table 2 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.

Table 2: Impact assessment criteria dB(A)

Location	Day/Evening L _{Aeq} (15 minute)	Night	
		L _{Aeq} (15 minute)	L _{A1} (1 minute)
1, 2, 5, 7 - 16	45	41	51
3, 4, 6	50	43	53

Notes:

- To interpret the locations referred to in Table 2, see the figure in Appendix 2.
- Noise generated by the project is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

- The Proponent shall ensure that the construction noise generated by the project, does not exceed the noise impact assessment criteria set out in Table 3 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.

Table 2A: Impact assessment criteria dB(A)

Noise Catchment Area	Standard Construction Hours	Outside Standard Construction Hours		
	Day/Evening L _{Aeq} (15 minute)	Day/Evening L _{Aeq} (15 minute)	Night	
			L _{Aeq} (15 minute)	L _{A1} (1 minute)
Goaf 4 (West)	50	45	40	50
Goaf 5 (Adjacent to Hwy)	55	50	43	53
Goaf 6 (East)	50	45	41	51
MSGD Site 1	46	41	36	46
MSGD Site 2	50	45	39	49

Notes:

- To interpret the locations referred to in Table 2, see the figure in Appendix 3.
- Standard construction hours are Monday – Friday 7:00am to 6:00pm, and Saturday 8:00am to 1:00pm.

Noise Management Plan

- The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan must:
 - be prepared by a suitably qualified expert;
 - be submitted to the Director-General for approval, within 1 month from the date of this approval;
 - include specific management procedures relating to those boreholes which have the potential to impact on private residences;
 - include a noise monitoring protocol for evaluating compliance with the noise limits in this approval, and for evaluating construction-related noise emissions; and
 - include a detailed Community Consultation Plan for construction noise impacts, including:
 - procedures for the written notification of nearby residents of the commencement of construction activities;
 - procedures for notifying residents at appropriate stages throughout the construction activities of any specific works that may result in potential noise impacts;
 - details of a telephone complaints line, including an after hours contact phone number;
 - procedures for handling complaints, including contact details of relevant site personnel responsible for following up complaints; and
 - details of proposed contingency measures to be implemented where complaints are received.

SOIL AND WATER

Pollution of Waters

- Except as may be expressly provided by a **OEHS** Environment Protection Licence, the Proponent shall comply with section 120 of the *Protection of the Environment Operations Act 1997* during the carrying out of the Project.

Water Management Plan

- The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Director-General. This plan must:
 - be submitted to the Director-General for approval, within 1 month from the date of this approval;
 - include measures to minimise impacts on groundwater quality, including the potential for cross contamination; and
 - include an Erosion and Sediment Control Plan, which must:
 - be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction manual* (Landcom 2004, or its latest version);

- identify activities that could cause soil erosion and generate sediment;
- describe measures to minimise soil erosion and the potential for transport of sediment to downstream waters;
- describe the location, function, and capacity of erosion and sediment control structures; and
- describe what measures would be implemented to monitor and maintain the structures over time.

AIR QUALITY

Impact Assessment Criteria

- The Proponent shall ensure that the dust and particulate emissions generated by the project do not cause additional exceedances of the air quality impact assessment criteria listed in Tables 4, 5 and 6 at any residence on, 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 criterion 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, 1991, AS 3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.

Greenhouse Gas Management

- The Proponent shall implement all reasonable and feasible measures to minimise energy use onsite and greenhouse gas emissions produced onsite.

TRAFFIC AND TRANSPORT

Traffic Management

- The Proponent shall ensure that:
 - safe access to the site is provided from public roads; and
 - traffic movements are restricted to existing or specifically constructed tracks.
- The Proponent shall:
 - construct the pipeline under the Hume Highway and Main Southern Rail Line in accordance with RMS design requirements; and
 - rehabilitate the pipeline, to the satisfaction of the RMS.
- The Proponent shall improve vehicle site lines at the MRD Borehole #1 access entry off Moreton Park Road by clearing privet vegetation to the satisfaction of Council.
- Prior to commencing construction of MRD Borehole #1, the Proponent shall:

- (a) notify residents of Railway Parade in writing of the construction and operational traffic that will occur during the project; and
 - (b) hold a joint inspection of Railway Parade, with Council, to assess the pre-existing condition of the road pavement.
- 9C. The Proponent shall repair, or pay all reasonable costs associated with repairing, damage to the pavement of Railway Parade, or any other local road, caused by the project.

HERITAGE

Aboriginal Cultural Heritage Management Plan

10. The Proponent shall implement the Aboriginal Cultural Heritage Management Plan to the satisfaction of the Director-General.

WASTE MINIMISATION

11. The Proponent shall:
- (a) ensure no waste is disposed of on site;
 - (b) implement reasonable and feasible measures to minimise waste generated by the Project; and
 - (c) ensure disposal of wastes occurs at appropriately approved waste disposal facilities.

LIGHTING EMISSIONS

12. The Proponent shall:
- (a) ensure that all external lighting for the project complies with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*; and
 - (b) take all practicable measures to mitigate off-site lighting impacts from the project, to the satisfaction of the Director-General.

BUSHFIRE MANAGEMENT

13. The Proponent shall take all reasonable measures to prevent the ignition and/or spread of bushfires.

REHABILITATION

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

Rehabilitation Management Plan

15. The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Executive Director Mineral Resources. This plan must:
- (a) be prepared in accordance with any relevant DRE guidelines;
 - (b) include details of rehabilitation of surface infrastructure during the operational phase;
 - (c) include details of final decommissioning of surface infrastructure and rehabilitation of sites; and
 - (d) Include a conceptual final landform plan showing remaining infrastructure, the expected final landform topography and vegetation types.

**SCHEDULE 4
ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING**

ENVIRONMENTAL MANAGEMENT STRATEGY

1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must:
 - (a) be submitted to the Director-General for approval prior to the commencement of construction activities at the first borehole;
 - (b) provide the strategic framework 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; and
 - (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.

REPORTING

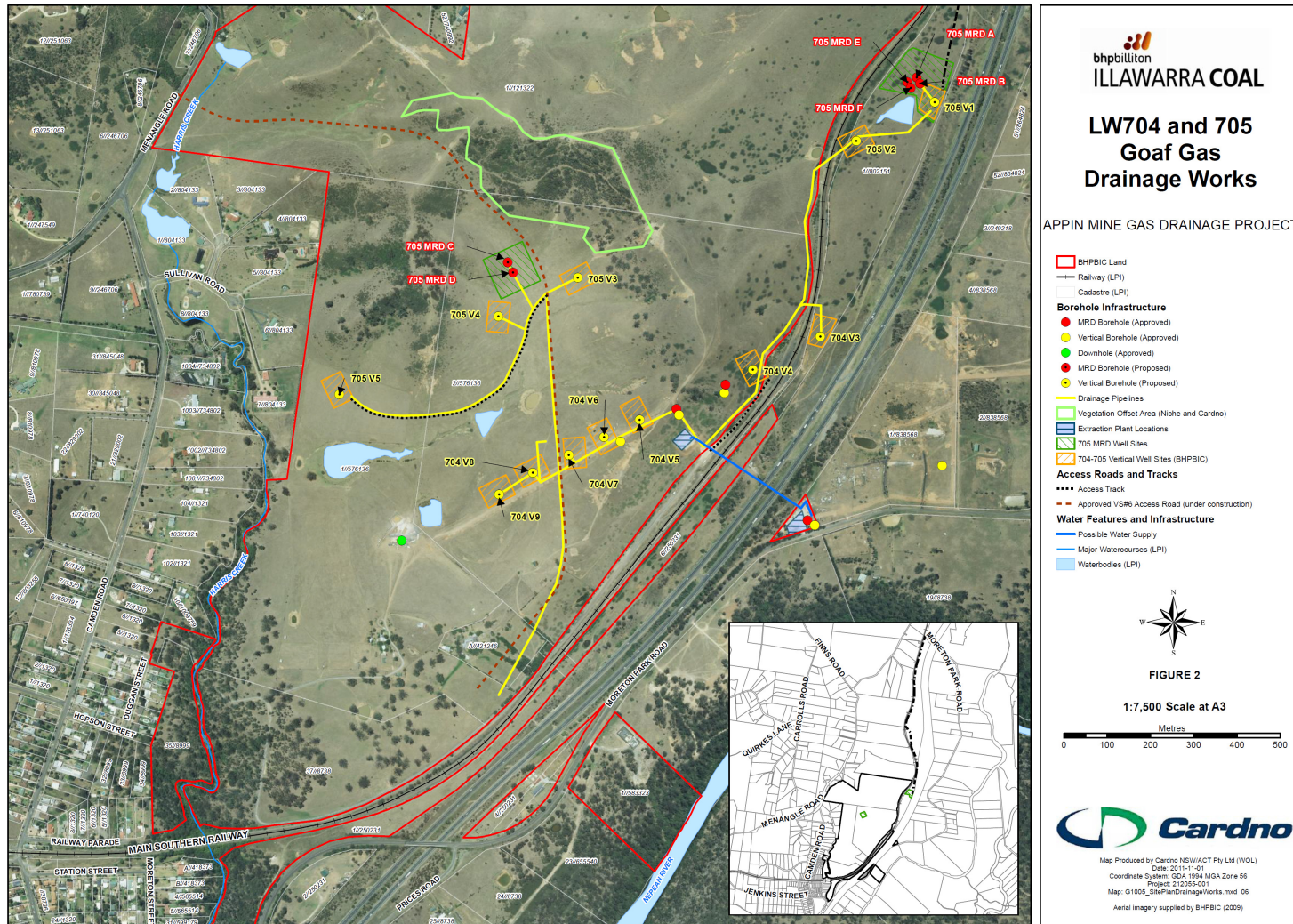
Incident Reporting

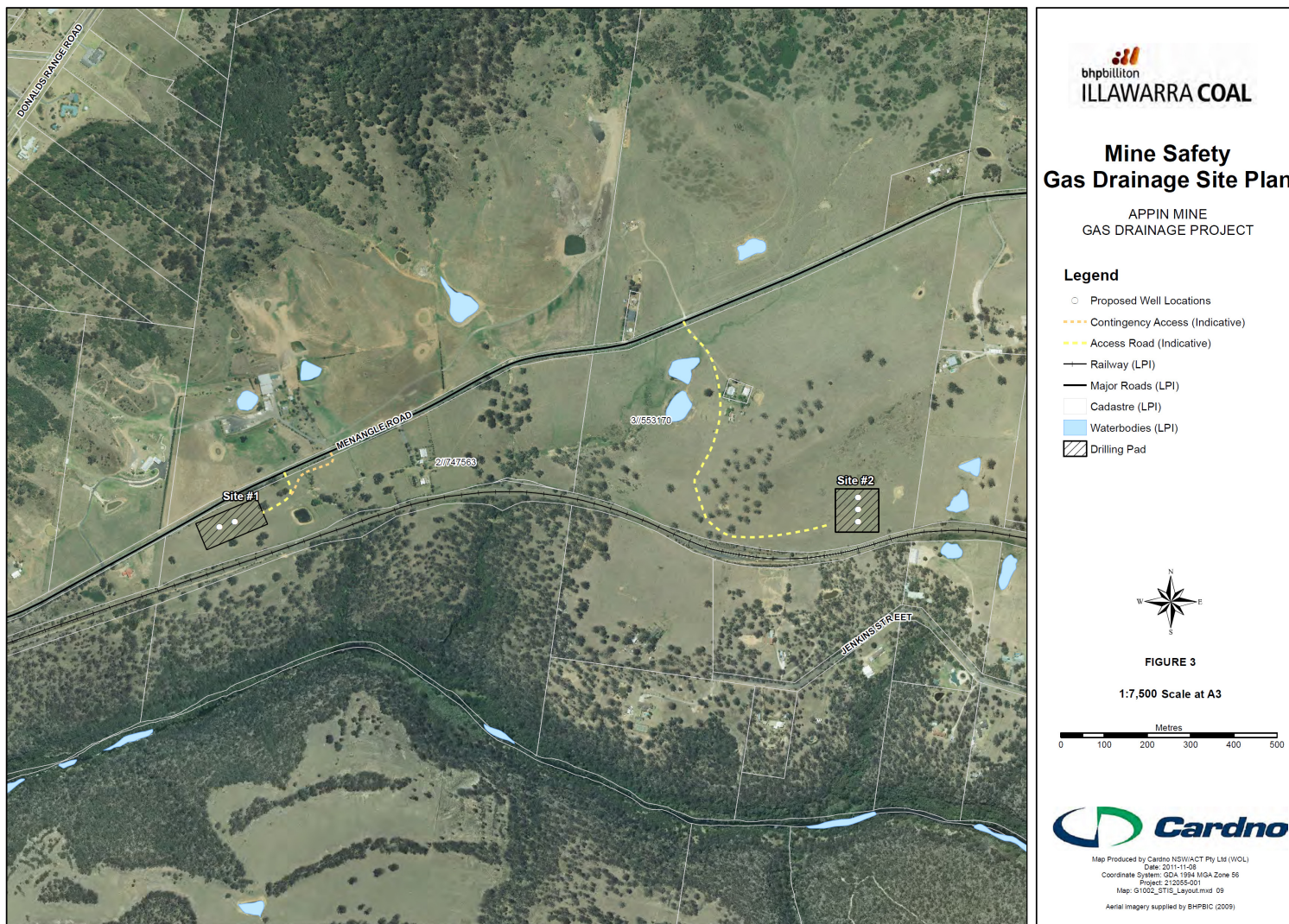
2. The Proponent shall notify the Director-General and any other relevant agencies of any incident that has caused, or has the potential to cause, significant risk of material harm to the environment, at the earliest opportunity. For any other incident associated with the project, the Proponent shall notify the Director-General and any other relevant agencies as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

ACCESS TO INFORMATION

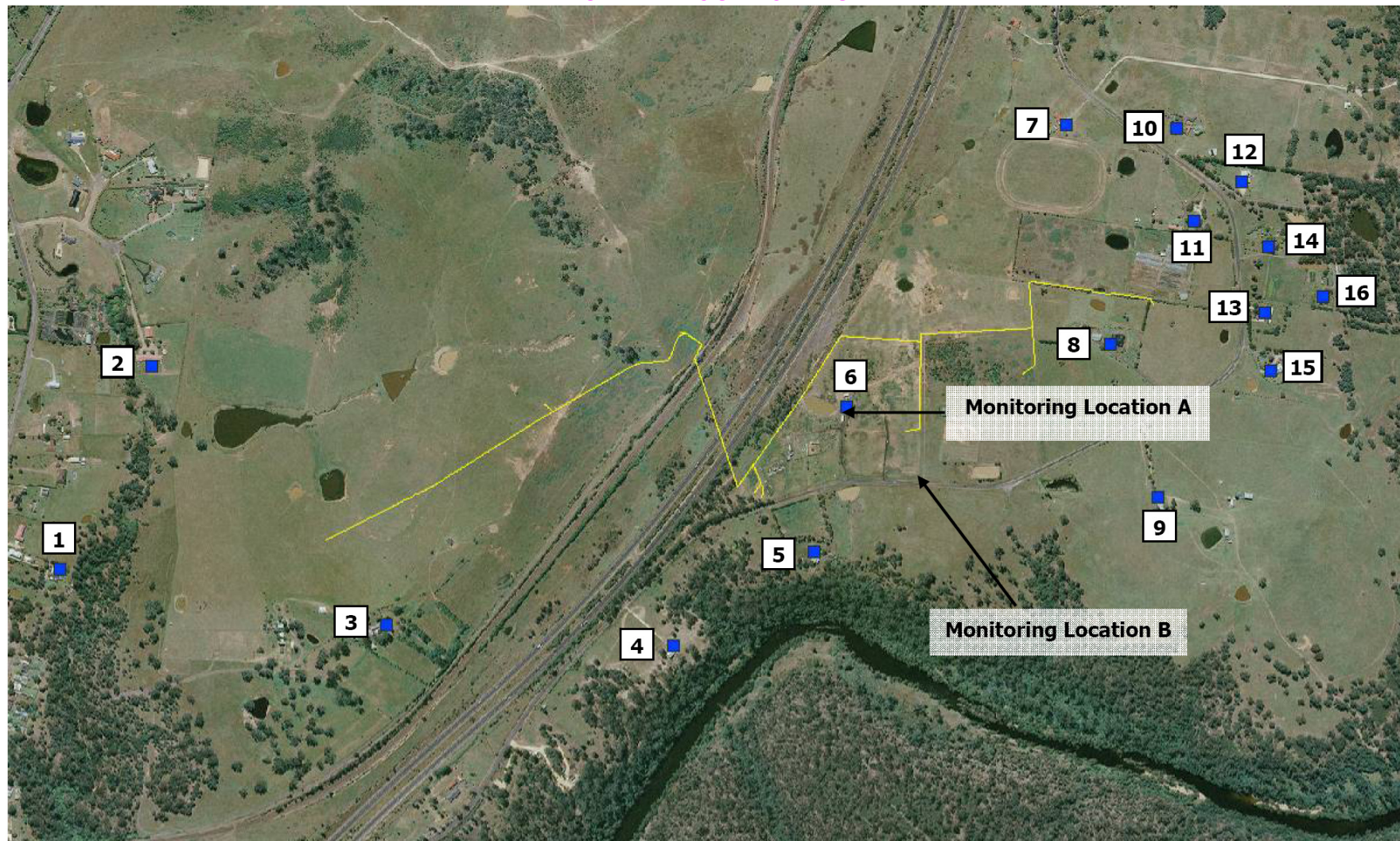
3. From 30 April 2012, the Proponent shall:
 - (a) make copies of the following publicly available on its website:
 - the EA, EA (Mod 1) and EA (Mod 2);
 - all current statutory approvals for the project;
 - approved strategies, plans and programs required under the conditions of this approval;
 - a comprehensive summary of the monitoring results of the approval, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
 - a complaints register, which is to be updated on a monthly basis;
 - any other matter required by the Director-General; and
 - (b) keep this information up to date, to the satisfaction of the Director-General.

APPENDIX 1 PROJECT SITE





APPENDIX 2
RESIDENTIAL NOISE RECEIVERS



APPENDIX 3 CONSTRUCTION NOISE RECEIVERS

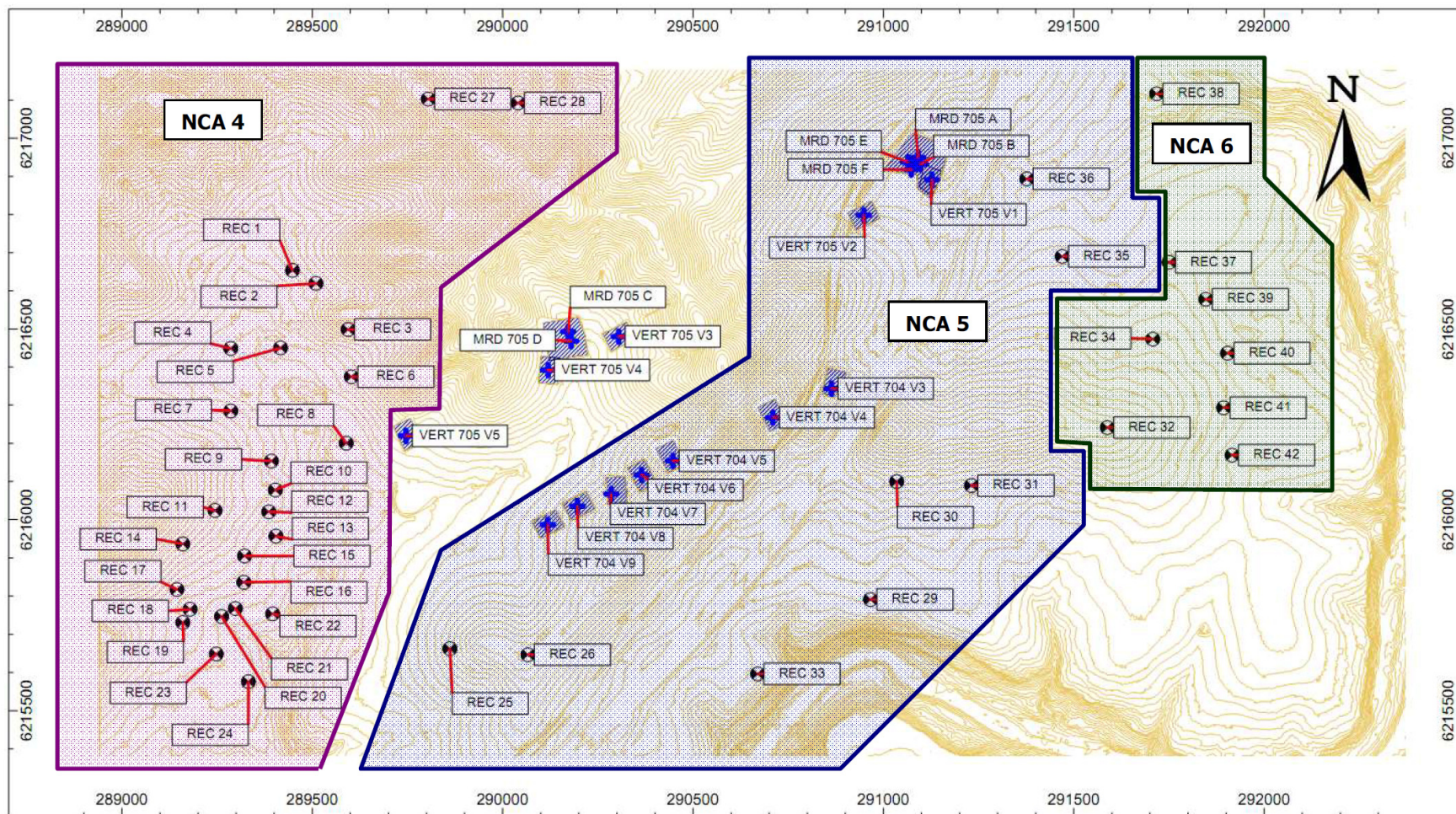


Figure 1: Goaf Gas Drainage receiver locations

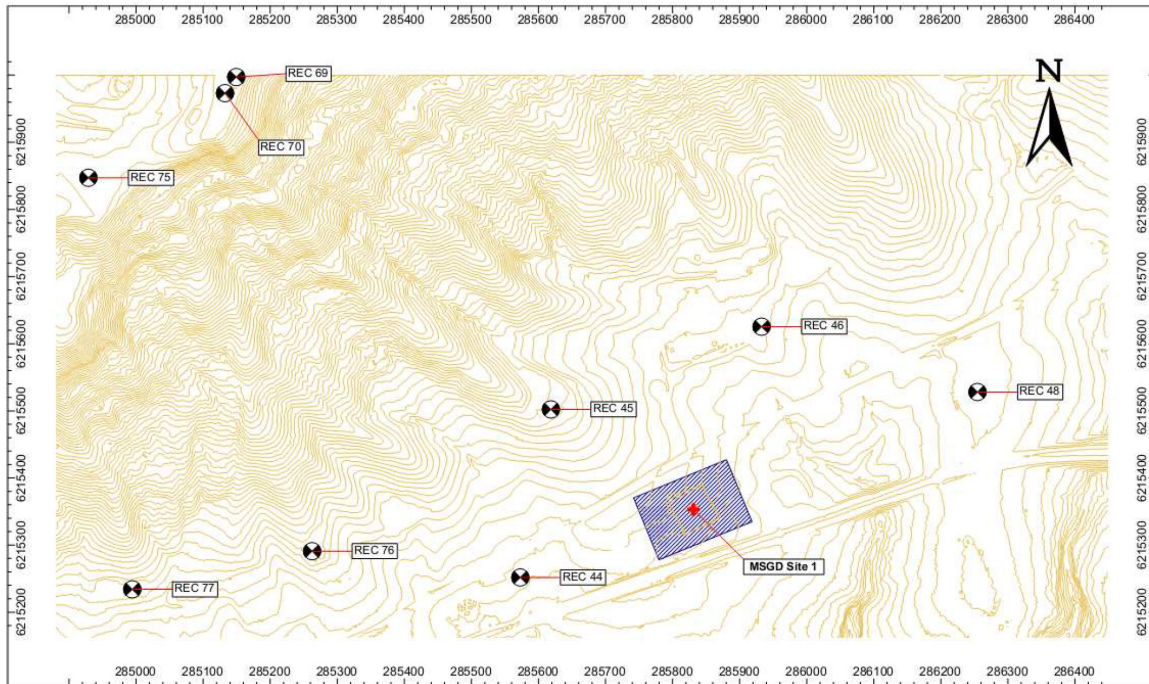


Figure 2: Mine Safety Gas Drainage Site 1 receiver locations

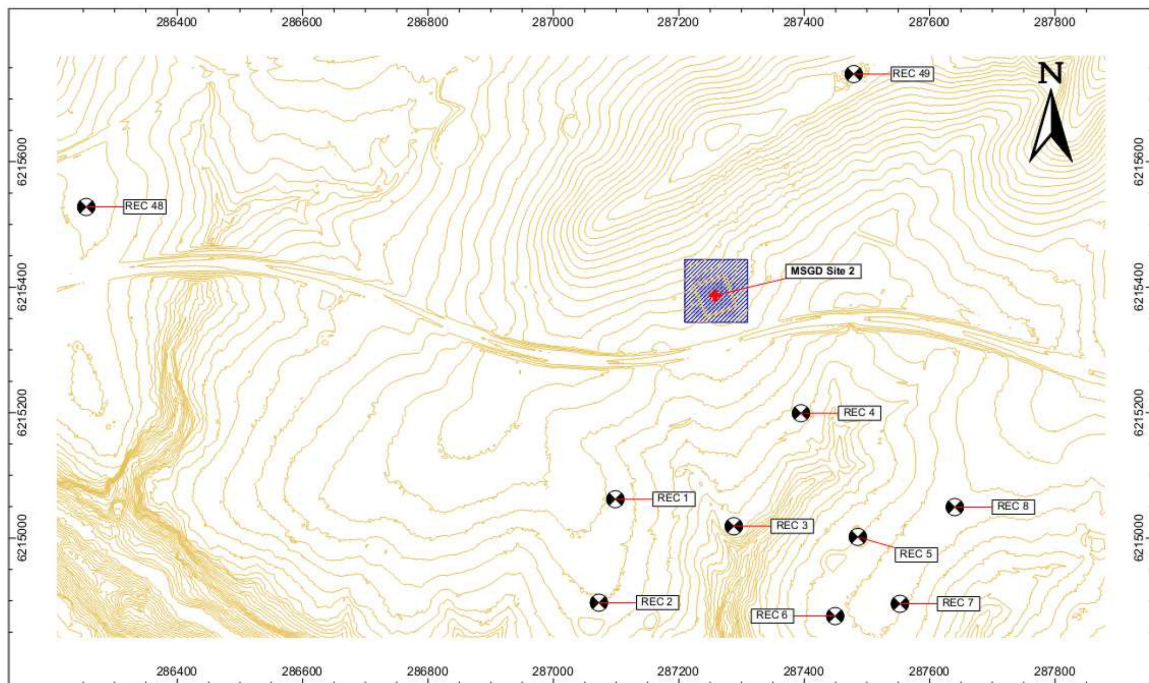


Figure 3: Mine Safety Gas Drainage Site 2 receiver locations

APPENDIX 4 STATEMENT OF COMMITMENTS

The Statement of Commitments contains all measures Illawarra Coal has made and will undertake to minimise impacts on the environment, and has been sourced from the Environmental Assessment and Response to Submissions.

Objective	Commitment
<i>Greenhouse Gas Emissions</i>	
Minimise impacts to the environment associated with GHG emissions.	- Subject to obtaining RTA/ARTC approval and/or any unforeseen construction delays to the under-bore beneath the road and rail corridor, BHPBIC will maximise the reticulation of goaf gas to EDL for electricity generation to minimise the emission of Greenhouse Gas emissions from the extraction of goaf gas associated with Longwall 703-705. (Note: this is the preferred option). - BHPBIC will implement a temporary flaring system to minimise GHG emissions from the extraction of goaf gas associated with Longwall 703 after three months of commissioning the secondary extraction plant. Flaring will occur until the road and rail corridor can be completed and connected to the EDL reticulation system. - BHPBIC will maximise the reticulation of goaf gas to the EDL to minimise the emission of GHG from the works associated with Longwall 704 and 705. - If unplanned and prolonged goaf gas venting occurs, BHPBIC will investigate the implementation of a flaring capability to minimise GHG emissions. - BHPBIC will flare methane gas drained from the MSGD sites.
<i>Working Hours - Construction</i>	
Minimise impacts on the local area from construction and site implementation.	- BHPBIC will carry out vertical well drilling and Hume Highway under-boring six days per week during daylight hours. - BHPBIC will drill the MRD and horizontal steered boreholes 24 hours per day, seven days per week until complete (approx. 13 week process for each well). - BHPBIC will conduct construction of the goaf gas reticulation pipeline six days per week during daylight hours. - BHPBIC will carry out extraction plant implementation activities six days per week during daylight hours.
<i>Working Hours – Operation</i>	
Minimise impacts on the local area from operation of the extraction plant.	The extraction plant(s) will operate 24 hours per day, seven days per week until goaf gas is depleted.
<i>Noise</i>	
Minimise noise impacts from the Appin gas drainage project activities on sensitive	- BHPBIC will endeavour to use the quietest available drilling plant, which is regularly maintained and fitted with appropriate mufflers. - Orient the drill rig and equipment so that the quietest side is faced toward the

Objective	Commitment
receivers.	nearest receivers where it is possible to do so. - Place temporary noise barriers around the drill rig. - Affected neighbours will be contacted and informed of likely duration of work, noise mitigation measures to be installed and contact details of BHPBIC Landholder Advisor will be provided to allow feedback on any noise impacts.
<i>Public Consultation</i>	
- Keep local residents informed of BHPBIC operations. - Provide a public opportunity to comment on ongoing operations at Appin Colliery.	- BHPBIC will continue to operate the Appin community office during construction of this project to allow for any public comments or enquiries. - BHPBIC will continue to operate the 24-hours telephone line to provide an alternative method for public information. - BHPBIC will continue to support the Appin Area Community Working Group, Douglas Park Advisory Panel and associated liaison activities to ensure the local community have an opportunity to raise any questions regarding the gas drainage project.
<i>Water</i>	
Minimise impacts on: - Quality - Supply - Groundwater	- Stormwater runoff, soil and erosion control measures will be managed in accordance with guidelines detailed in the Landcom Publication "Soils and Construction" Volume 1, 4th Edition, dated March 2004. - Water used for drilling operations will be from a Sydney Water Authorised User or licensed extraction from the Nepean River. - All excavated ponds will contain an appropriate impermeable liner to prevent water loss. The walls of the ponds will be of an appropriate height to provide adequate freeboard to prevent inflow or overflow during rainfall. - The vertical boreholes will be cased with steel and grouted in place from the ground surface of the well to the top of the Bulgo Sandstone section of the strata above the coal seam (approximately 250m underground) for goaf gas drainage wells and within the vicinity of the Bulli Seam (approximately 500m underground) for MSGD vertical wells. This is considerably below any regionally significant aquifers that may be present within the project area. - The MRD and MSGD boreholes will be cased with welded or threaded steel and grouted in place from the ground surface of the borehole to the end of the radial or build section where the horizontal alignment of the borehole starts, at an approximate depth of 450-500m underground. This is considerably below any regionally significant aquifers that may be present within the project area. - The water used in the extraction plant cooling process and borehole drilling will be removed and reused at Appin, West Cliff Collieries or another licensed facility.
<i>Flora and Fauna</i>	

Objective	Commitment
BHPBIC will minimise impacts on native vegetation and animals by managing: ▪ Weeds ▪ Cumberland Plain Woodland (CPW)	▪ Machinery and heavy vehicles will be washed down prior to accessing private properties to avoid the transmission of weeds or disease into intact areas of native vegetation. ▪ Rehabilitation of the land that was at the contingency goaf gas extraction location with local native species characteristic of CPW after the cessation of the goaf gas drainage.
<i>Rehabilitation</i>	
▪ To reduce long term affects from the proposed developments on the environment. ▪ To ensure public and/or private safety following completion of the borehole use.	▪ Any disturbed land will be rehabilitated to ensure the environment is returned back to the pre-development condition or to meet landowner specific requirements. ▪ Decommissioning of the boreholes will be undertaken in accordance with EDG01 Borehole Sealing Requirements on Land (Summerhayes, 1997). All boreholes will be sealed in accordance with these guidelines upon completion of operations.
<i>Waste</i>	
BHPBIC will minimise impacts on the environment associated with waste generation and disposal.	▪ BHPBIC will minimise waste where possible through careful planning of the extraction locations prior to implementation. ▪ Drilling waste will be reused where possible: ▪ At the West Cliff Coal Waste Emplacement for site capping or rehabilitation. ▪ Onsite for construction and rehabilitation purposes. ▪ Onsite for construction of noise barriers. ▪ Appropriate capture and transfer of waste to suitable reuse, recycling or disposal location.
<i>Air Quality</i>	
Reduce impacts from dust on surrounding properties.	▪ Construction activities will be managed in order to minimise dust generation.
<i>Heritage</i>	
BHPBIC will minimise impacts on Aboriginal and cultural heritage.	▪ Aboriginal cultural sites will be avoided and temporarily fenced during construction where possible. ▪ Aboriginal cultural sites that may be impacted during construction will be managed in accordance with the Aboriginal Cultural Heritage Management Plan and in consultation with registered Aboriginal Stakeholders. ▪ Any unexpected relics discovered during construction will be managed in accordance with the Cultural Heritage Management Plan and in accordance with

Objective	Commitment
	s146 of the Heritage Act.
<i>Traffic</i>	
Reduce the potential for traffic associated with the project to create congestion	▪ During the construction phase, warning signs will be erected at critical access points, including along Menangle Road and Moreton Park Road. ▪ A Journey Management Plan will be developed by the contractor and approved by the BHPBIC Project Manager prior to the commencement of any drilling works. This plan will guide appropriate controls for movement of project equipment including drilling rigs. ▪ If necessary, a Traffic Management Plan will be prepared by the Contractor and approved by the BHPBIC Project Manager prior to the commencement of any construction works. This plan will control movements of employee's vehicles and associated implementation traffic. ▪ BHPBIC has consulted with and obtained written agreements from all landholders. In addition, residents will be advised prior to the commencement of works and advised of any related disruptions to local traffic.
<i>Construction Management</i>	
▪ Minimise impact on the environment from construction work. ▪ Ensure employee safety during construction.	▪ The successful contractor/s will prepare management plans and safe work method statements for approval by BHPBIC prior to work commencing. ▪ The Contractor will maintain equipment to a safe standard and ensure secure storage. ▪ The Contractor will prepare an Environmental Management Plan for BHPBIC approval prior to the commencement of works. ▪ All works will be conducted in accordance with relevant construction legislation and best practice.