

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.

SHaddad

Sam Haddad
Director-General

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 Lot 1 DP576136, Lot 2 DP576136, Lot 1 DP915066, Lots 6 and 7 DP 250231 and Lots 1, 2 and 3 DP 838568 (see Map of Project Site in Appendix 1) |
| Project: | Appin Gas Drainage Project |

SCHEDULE 2

DEFINITIONS

| | |
|-------------------------|--|
| DECCW | Department of Environment, Climate Change and Water |
| Department | Department of Planning |
| DII | Department of Industry and Investment |
| Director-General | Director-General of the Department, or delegate |
| EA | Environmental Assessment, titled <i>Appin Colliery Area 7 Goaf Gas Drainage Project</i> , dated June 2009, including the Response to Submissions |
| Project | The development as described in the EA |
| Proponent | BHP Billiton Illawarra Coal Holdings Pty Ltd, or its successors |
| 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 |
| RTA | Roads and Traffic Authority |
| Site | Land to which the Project Application applies (see schedule 1) |

ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any 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; and
 - (c) conditions of this approval.

Notes:

- *The general layout of the project is shown in Appendix 1.*
- *The statement of commitments is reproduced in Appendix 3.*

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 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, as identified in Appendix 1, may take place for 3 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 DII. 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.

**SCHEDULE 3
SPECIFIC ENVIRONMENTAL CONDITIONS**

NOISE

Construction and Operation Hours

1. 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 1:00pm 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 | 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

2. 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.

Noise Management Plan

3. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Director-General. This plan must:
 - (a) be prepared by a suitably qualified expert;
 - (b) be submitted to the Director-General for approval, within 1 month from the date of this approval;

- (c) include specific management procedures relating to those boreholes which have the potential to impact on private residences (particularly MRD borehole 2); and
- (d) include a noise monitoring protocol for evaluating compliance with the noise limits in this approval, and for evaluating construction-related noise emissions.

SOIL AND WATER

Pollution of Waters

4. Except as may be expressly provided by a DECCW 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

5. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Director-General. This plan must:
- (a) be submitted to the Director-General for approval, within 1 month from the date of this approval;
 - (b) include measures to minimise impacts on groundwater quality, including the potential for cross contamination; and
 - (c) 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

6. 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 3, 4 and 5 at any residence on, or on more than 25 percent of, any privately owned land.

Table 3: 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 4: 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 5: 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

7. 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

8. The Proponent shall ensure that:
 - (a) safe access to the site is provided from public roads; and
 - (b) traffic movements are restricted to existing or specifically constructed tracks.
9. The Proponent shall:
 - (a) construct the pipeline under the Hume Highway and Main Southern Rail Line in accordance with RTA design requirements; and
 - (b) rehabilitate the pipeline, to the satisfaction of the RTA.

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 rehabilitate all land affected by the project to the satisfaction of the Director-General and DII.

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

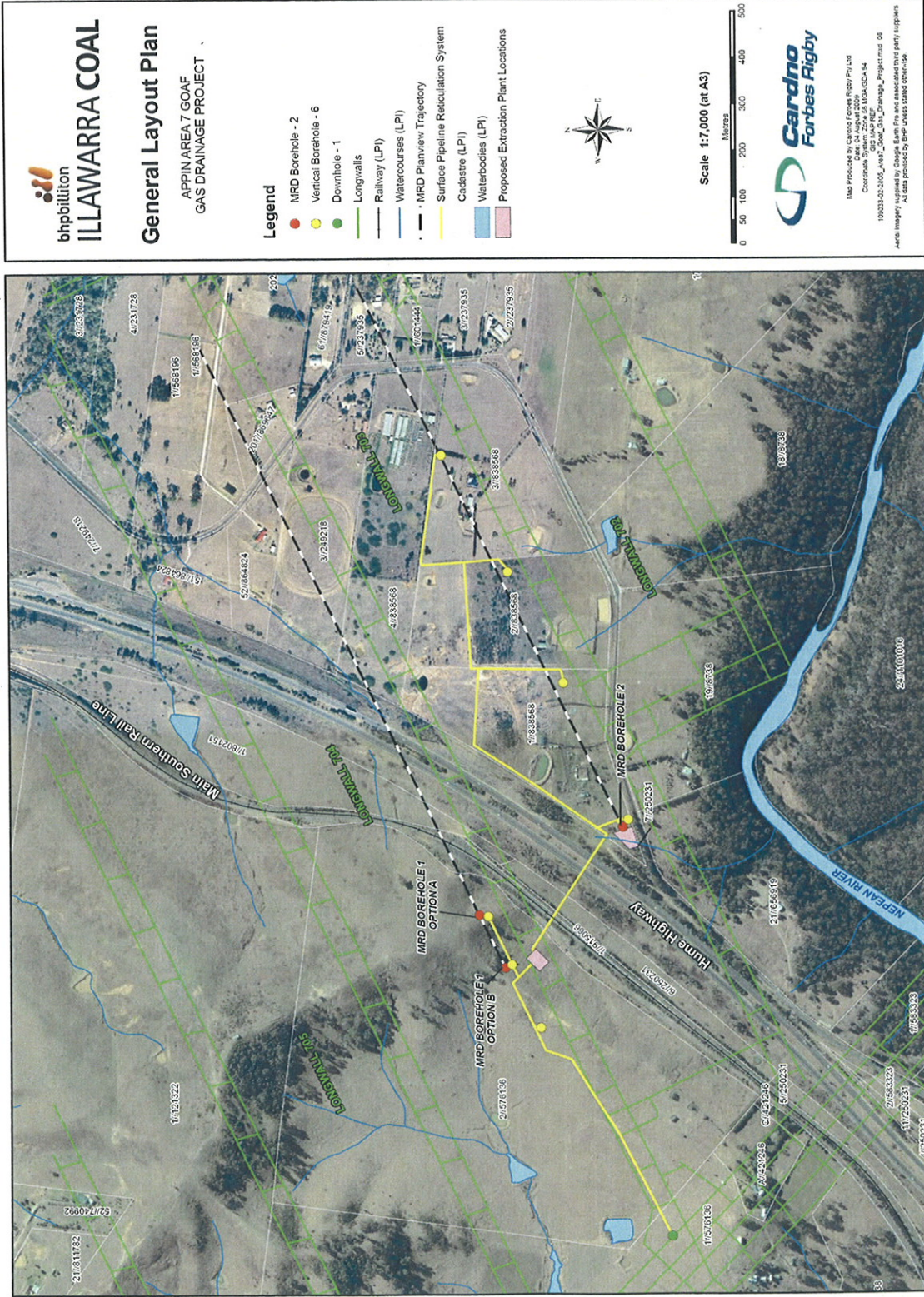
ENVIRONMENTAL MANAGEMENT STRATEGY

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.

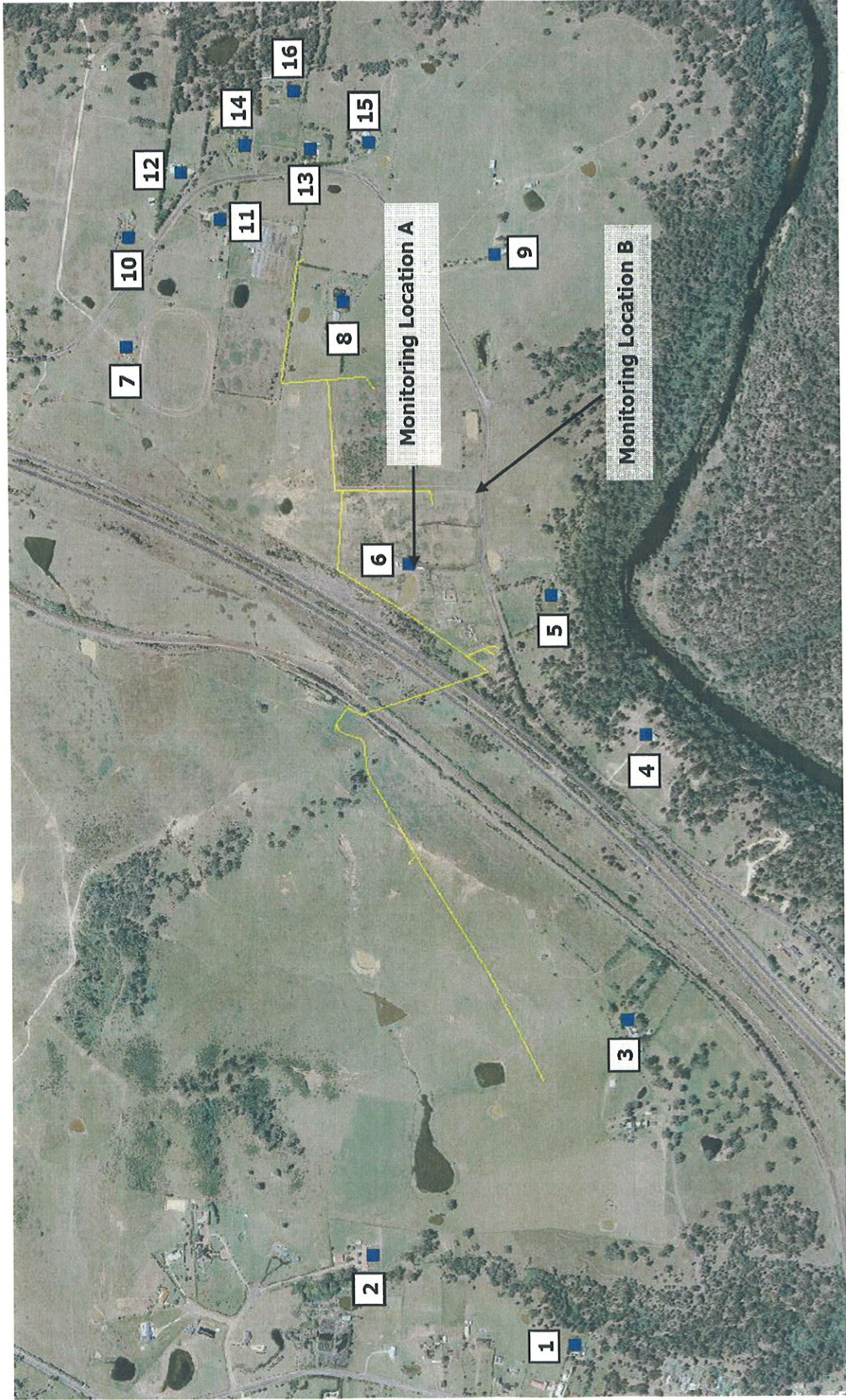
INCIDENT REPORTING

2. 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.

APPENDIX 1
MAP OF PROJECT SITE



APPENDIX 2
RESIDENTIAL NOISE RECEIVERS



**APPENDIX 3
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 |
|---|--|
| Greenhouse Gas Emissions | |
| <ul style="list-style-type: none"> Minimise impacts to the environment associated with GHG emissions. | <ul style="list-style-type: none"> It is BHPBIC's preference to reticulate the extracted goaf gas to the EDL electricity generating stations for utilisation. BHPBIC will endeavour to minimise the potential occurrence of direct goaf gas ventilation to the atmosphere in order to maximise GHG emissions reductions. If prolonged goaf gas ventilation occurs, BHPBIC will investigate the implementation of flares to minimise GHG emissions. |
| Working Hours - Construction | |
| <ul style="list-style-type: none"> Minimise impacts on the local area from construction and site implementation operations. | <ul style="list-style-type: none"> BHPBIC will carry out vertical well drilling and Hume Highway under-boring six days per week during daylight hours. BHPBIC will drill the MRD boreholes 24 hours per day, seven days per week until complete (expect six 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. |
| Working Hours - Operation | |
| <ul style="list-style-type: none"> Minimise impacts on the local area from operation of the extraction plant. | <ul style="list-style-type: none"> The extraction plant(s) will operate 24 hours per day, seven days per week until goaf gas is depleted. |
| Noise | |
| <ul style="list-style-type: none"> Minimise noise impacts from the goaf gas drainage project activities on sensitive receivers. | <ul style="list-style-type: none"> BHPBIC will endeavour to use quietest available MRD 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 nearest receivers where it is possible to do so. Place temporary noise barriers around the MRD drill rig. Place temporary noise barriers around the extraction plant. Affected neighbours will be contacted and informed of likely duration of work, noise mitigation works to be installed, and provided contact details of the Illawarra Coal Operations Manager- Exploration to provide feedback on any noise impacts. |
| Public Consultation | |
| <ul style="list-style-type: none"> Keep local residents informed of BHPBIC operations. Provide a public opportunity to comment on ongoing operations at Appin Colliery. | <ul style="list-style-type: none"> 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-hour telephone line to provide an alternative method for public information. BHPBIC will continue to support the Appin Area Community Working Group and associated liaison activities to ensure the local community have an opportunity to raise any questions regarding the goaf gas drainage project. |

| Water | |
|--|---|
| <p>To minimise impacts on:</p> <ul style="list-style-type: none"> • Quality • Supply • Groundwater | <ul style="list-style-type: none"> • 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. • All excavated ponds will contain an appropriate impermeable liner to prevent water loss. The walls of 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) this is well below any regionally significant aquifers that may be present within the project area. • The MRD 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, an approximate depth of 450m underground, well below that of 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 and/or West Cliff Collieries. |
| Flora and Fauna | |
| <p>BHPBIC will minimise impacts on native vegetation and animals by managing:</p> <ul style="list-style-type: none"> • Weeds • Cumberland Plains Woodland (CPW) | <ul style="list-style-type: none"> • Machinery and heavy vehicles will be washed-down prior to accessing private properties to avoid the transmission of weed seed 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 goaf gas drainage project to replace any cleared habitat. |
| Rehabilitation | |
| <ul style="list-style-type: none"> • To reduce long term affects from the proposed developments on the natural environment. • To ensure public and/or private safety following completion of borehole use. | <ul style="list-style-type: none"> • Any disturbed land will be rehabilitated to ensure the environment is returned back to the pre-development condition or to meet landowner specific requirements. • De-commissioning of the boreholes will be undertaken in accordance with <i>EDG01 Borehole Sealing Requirements on Land</i> (Summerhayes, 1997). All boreholes will be sealed in accordance with these guidelines upon completion of operations. |
| Waste | |
| <p>BHPBIC will minimise impacts on the environment associated with waste generation and disposal.</p> | <ul style="list-style-type: none"> • BHPBIC will minimise waste where possible through careful planning of the extraction locations prior to implementation. • Drilling waste will be reused where possible: <ul style="list-style-type: none"> ○ At West Cliff Coal Wash Emplacement for site capping or rehabilitation ○ Onsite for construction and rehabilitation purposes ○ Onsite for construction of the noise barrier. • Appropriate capture and transfer of waste to suitable reuse, recycling or disposal location. |

| Air Quality | |
|--|--|
| <ul style="list-style-type: none"> • Reduce impacts from dust on surrounding properties. | <ul style="list-style-type: none"> • Construction activities will be managed in order to minimise the generation of dust. |
| Heritage | |
| <ul style="list-style-type: none"> • BHPBIC will minimise impacts on Aboriginal cultural heritage | <ul style="list-style-type: none"> • Aboriginal cultural sites will be avoided and temporally 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. |
| Traffic | |
| <ul style="list-style-type: none"> • Reduce the potential for traffic associated with this proposed project to create congestion. • Protect road safety. | <ul style="list-style-type: none"> • During the construction phase, warning signs will be erected along Moreton Park Road and Camden Road at the access points to each property. • 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 drill 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 landowners. In addition, residents will be advised prior to the commencement of works and advised of any related disruptions to local traffic. |
| Construction Management | |
| <ul style="list-style-type: none"> • Minimise impact on environment from construction work. • Ensure employee safety during construction. | <ul style="list-style-type: none"> • The successful contractor/s will prepare a safe working method statement 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 conducted in accordance with relevant construction legislation and best practice. |