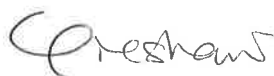


Notice of Modification

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

As delegate of the Minister for Planning, I modify the project approval referred to in Schedule 1, subject to the conditions in Schedule 2.



Clay Preshaw
A/Director Resource Assessments

Sydney 28 OCTOBER 2016

SCHEDULE 1

The Project Approval 08_0150 for the Bulli Seam Operations Project, granted by the Minister for Planning and Infrastructure, on 22 December 2011.

SCHEDULE 2

1. In the Schedule 1 DEFINITIONS, delete the definitions for "EA", "EA MOD 1", "NOW", "SCA" and "Statement of Commitments", and insert the following in alphabetical order:

DPI Water Department of Primary Industries Water Division

EA Environmental assessment titled *Bulli Seam Operations Environmental Assessment, Volumes 1-5* dated October 2009, and associated response to issues raised in submissions, titled *Bulli Seam Operations Responses to Submissions, Parts A and B*, dated April 2010

Environmental assessment titled *Ventilation Shaft No.6 Project Environmental Assessment* (3 volumes) dated October 2010, including the Response to Submissions dated 7 December 2010

Modification application 08_0150 MOD 1 and accompanying letter from BHP Billiton Illawarra Coal dated 18 March 2015

Modification application 08_0150 MOD 2, and Environmental Assessment titled *Appin East Mine Safety Gas Management Project* dated June 2016, including the Response to Submissions dated 17 August 2016, and the letters from South32 Illawarra Coal Pty Limited dated 8 October 2016 and 28 October 2016

Heritage Division The Heritage Division of OEH

Statement of Commitments The Statement of Commitments in Appendix 6

WaterNSW The State Water Corporation of NSW

2. Delete all references to "NOW", and replace with "DPI Water".
3. Delete all references to "SCA", and replace with "WaterNSW".
4. In condition 2 of Schedule 2, delete all words after "EA;" (except the Note), and replace with the following:
 - (b) Statement of Commitments;
 - (c) PPR; and
 - (d) conditions of this approval.
5. After condition 6 of Schedule 2, insert the following:

Appin Ventilation Shaft No. 6

6A. The Proponent may operate Appin Ventilation Shaft No. 6 until 31 December 2041, unless otherwise agreed by the Secretary.

Note: Under this approval, the Proponent is required to rehabilitate the site and perform additional undertakings, to the satisfaction of the Secretary and DRE. Consequently, this approval will continue to apply in all other respects other than the right to operate the ventilation shaft until the site has been properly rehabilitated.

6. In condition 7 of Schedule 2, after “mining operations”, insert “and mine ventilation activities”.

7. After condition 7 of Schedule 2 insert the following condition:

7A. The Proponent shall comply with the construction and operating hours listed in Table 1A for the Appin Ventilation Shaft No. 6:

Table 1A: Construction and operating hours

Activity	Hours (Other than for emergency purposes)
<u>Construction</u> Road and site access*, site preparation, liner construction, spoil management, drilling of boreholes, provision of services, related activities, post construction rehabilitation.	7.00am to 6.00pm, Monday to Saturday No works on Sunday or Public Holidays
Shaft drilling and lining and water management works. Any works that are inaudible at residential premises.	24 hours per day, 7 days per week
<u>Operation of Ventilation Shaft</u> Including commissioning of fans	24 hours per day, 7 days per week
<u>Operation of Service Boreholes</u> Delivery of concrete to the site and associated surface operations	24hrs per day, 7 days per week
Delivery of other materials to the site and associated surface operations	7.00am to 6.00pm, Monday to Saturday
Provision of supplies, consumables or utilities to underground	24hrs per day, 7 days per week

Notes:

- **Some road works potentially requiring traffic management measures, such as cutting in the access road to Menangle Road, line marking the intersection and installation of asphaltic concrete, may be undertaken outside these hours (subject to Council's approval) to take advantage of reduced traffic volumes.*
- *'Emergency purposes' refers to instances where the cessation of construction or operating 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 to demonstrate the specific emergency purposes and circumstances at the time*

8. In condition 2 of Schedule 4, in Table 2, insert the following row below “Appin Township”:

Douglas Park	All privately-owned residences	45	45	39	49
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9. After condition 2 of Schedule 4, insert the following

Construction Noise

2A The Applicant shall ensure that the noise generated by construction activities relating to the Appin East Safety Gas Management Project is managed in accordance with the requirements of the *Interim Construction Noise Guideline* (DECC, 2009), as may be updated from time to time.

2B The Proponent shall ensure that the construction noise generated by the Appin Ventilation Shaft No.6 project, does not exceed the noise impact assessment criteria set out in Table 2A at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.

Table 2A: Construction noise criteria dB(A)

Location	Day	Evening	Night	
	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{Aeq} (15 min)	L _{A1} (1 min)
All privately owned residences – 7.00am to 6.00pm, Monday to Saturday and 8.00 am to 1.00 pm Saturday	50	45	39	49
All privately owned residences – outside the above hours	45	45	39	49

10. In condition 14 of Schedule 4 delete “consultation with NOW, and to the satisfaction of the Secretary” and replace with “accordance with the approved Surface Water Management Plan”.
11. In condition 16 of Schedule 4:
- (i) delete “prepare and implement” and replace with “update and implement the”;
 - (ii) delete “30 September 2012” and replace with “31 January 2017”; and
 - (iii) insert the following after “reuse and recycle water;”
 - a Water Response Plan, which describes the measures and/or procedures that would be implemented to:
 - investigate, notify and mitigate any ground or surface water exceedances;
 - minimise, prevent or offset any adverse impacts to ground or surface water resources;
 - provide compensatory water supply to any owner of privately-owned land whose water supply is adversely impacted (other than an impact that is negligible) as a result of the project; and
 - (iv) after “monitoring and reporting procedures, insert, “including:
 - collection of baseline data on surface water quality in creeks and other waterbodies that could potentially be affected by the project; and
 - surface water and stream health impact assessment criteria”
12. In condition 17 of Schedule 4:
- (i) delete “groundwater”, and replace with “water”; and
 - (ii) delete “Brennans Creek valley, including the area of the emplacement;”, and replace with “emplacement;”
13. Delete conditions 22 and 23 of Schedule 4 and replace with the following:

Surface Activities Management Plan

22. The Proponent shall prepare and implement a Surface Activities Management Plan in respect of construction and use of service boreholes, pipelines, electrical infrastructure, works to public infrastructure, communications equipment and monitoring equipment, to the satisfaction of the Secretary. This plan must:
- (a) be submitted to the Secretary for approval by 30 April 2017, unless the Secretary agrees otherwise; and
 - (b) include the following:
 - a community consultation strategy;
 - a protocol for landholder agreements;
 - commensurate assessment of noise, air quality, traffic, biodiversity, heritage, public safety and other impacts in accordance with approved methods;
 - measures to avoid and/or minimise impacts;
 - measures to achieve performance with applicable standards and goals;
 - mitigation measures and/or compensation for significant noise, air quality and visual impacts at privately-owned residences; and
 - measures for the rehabilitation of disturbance.

Upper Canal

23. The Proponent shall not cause any damage to the Upper Canal during the construction and operation of the Appin East Mine Gas Safety Management Project.
- 23A. Prior to construction of the Appin East Mine Gas Safety Management Project, the Proponent shall:
- (a) undertake a dilapidation survey of the Upper Canal, in consultation with WaterNSW and the Heritage Division;
 - (b) prepare final detailed design plans in consultation with WaterNSW; and

- (c) undertake vibration monitoring for all earthworks undertaken within 25 metres of the Upper Canal,
to the satisfaction of the Secretary.

- 23B. Following completion of construction of the Appin East Mine Gas Safety Management Project, the Proponent shall:
- a) undertake a dilapidation survey of the Upper Canal in consultation with WaterNSW and the Heritage Division; and
 - b) repair, or pay the full costs associated with repairing, any damage to the Upper Canal caused by the project in consultation with WaterNSW and the Heritage Division,
to the satisfaction of the Secretary.

14. In condition 24 of Schedule 4:

- (i) delete "prepare and implement a", and replace with "update the approved";
- (ii) delete "30 September 2012", and replace with "31 January 2017"; and
- (iii) after "archival recording of potentially affected heritage items", insert "(including the Mountbatten Group)".

15. In condition 26 of Schedule 4:

- (i) delete "prepare and implement a", and replace with "update the approved";
- (ii) delete "31 December 2012"; and replace with "31 January 2017";
- (iii) in condition 26(b), delete "and"; and
- (iv) delete "LOS C, to the satisfaction of the Secretary" and insert:
"LOS C; and"
 - (d) include strategies to manage construction traffic, including road closure protocols, community consultation and measures to avoid potential road safety conflicts with other road users."

16. After condition 26 of Schedule 4, insert the following condition

26A The Proponent shall ensure that safe access to Ventilation Shaft No. 6 is provided from public roads.

17. After condition 33 of Schedule 4, insert the following conditions:

BIODIVERSITY

Appin East Mine Gas Safety Management Project

34. By 31 January 2017, the Proponent shall enter into a suitable arrangement to offset the clearing of Cumberland Plain Woodland to develop the Appin East Mine Gas Safety Management Project, to the satisfaction of the Secretary.

Ventilation Shaft No. 6

35. The Proponent shall prepare and implement a biodiversity offset strategy to compensate for the impact of Ventilation Shaft No. 6 on Cumberland Plain Woodland. The offset strategy must:
- (a) be prepared in consultation with OEH and to the satisfaction of the Secretary;
 - (b) incorporate at least 8.7 hectares of existing Cumberland Plain Woodland vegetation;
and
 - (c) make suitable arrangements to protect and manage this offset area in perpetuity.

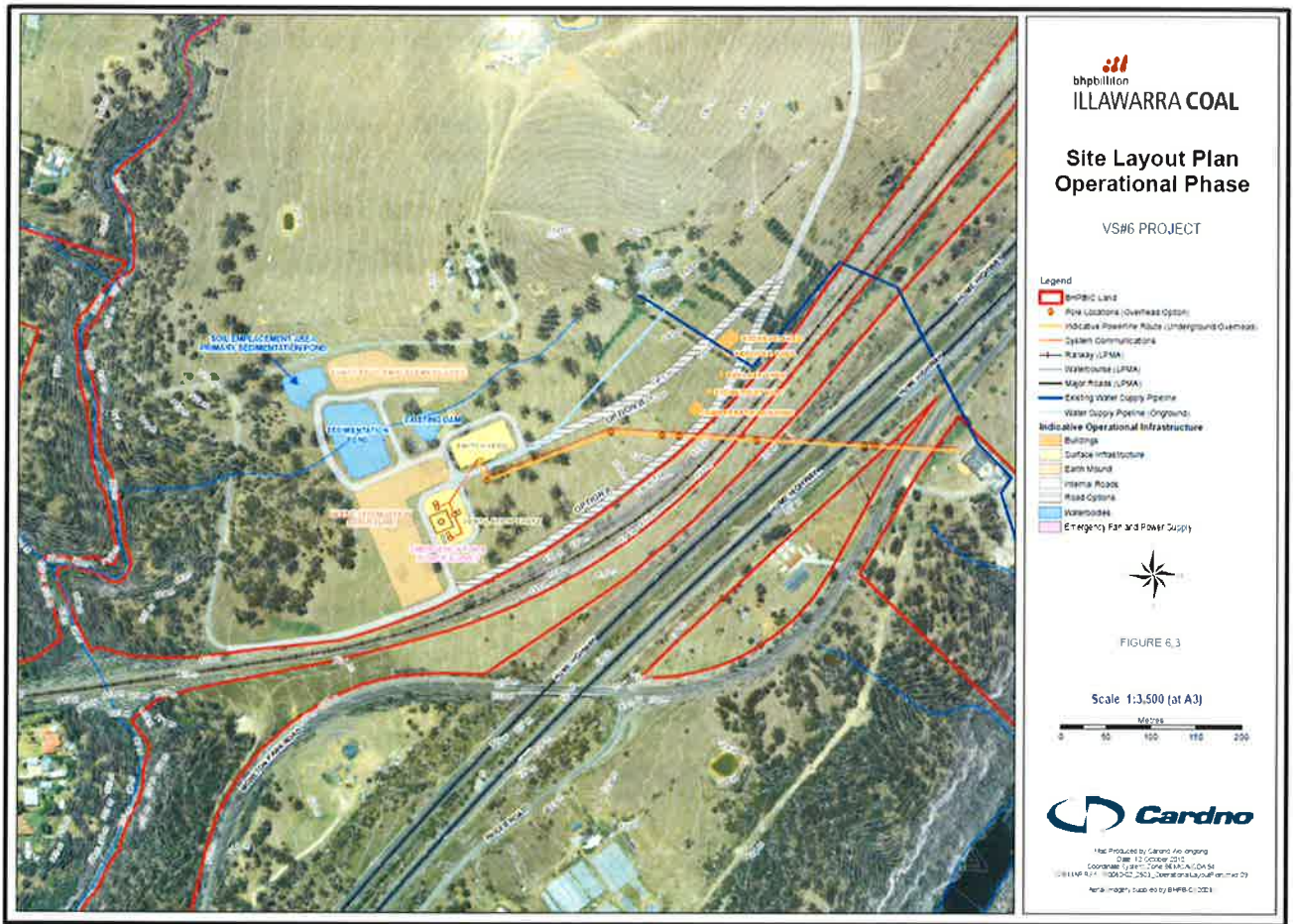
Note: The 8.7 hectare size for the Biodiversity Offset Area identified above is based on Cumberland Plain Woodland vegetation on shale (HN529) in good condition. An equivalent minimum offset for Cumberland Plain Woodland on flats vegetation (HN528) in good condition is 9.4 hectares.

Biodiversity Management Plan

36. The Proponent shall prepare and implement a Biodiversity Management Plan for the Appin East Mine Gas Safety Management Project and Ventilation Shaft No. 6, to the satisfaction of the Secretary. This plan must:
- (a) be prepared in consultation with OEH, and submitted to the Secretary for approval by 31 January 2017;
 - (b) describe how the implementation of offsets would be integrated with the overall rehabilitation of the site;

- (c) include:
- (i) a description of the short, medium and long term measures that would be implemented to:
 - implement the offset strategy; and
 - manage the remnant vegetation and habitat on the site and in the offset areas;
 - (ii) detailed performance and completion criteria for the implementation of the offset strategy;
 - (iii) details of vegetation clearing protocols, including procedures to:
 - minimise the amount of the clearing required;
 - compensate the loss of hollow-bearing trees for the Appin East Mine Gas Safety Management Project; and
 - translocate the Cumberland Plain Land Snail (*Meridolum corneovirens*) affected by the clearing of Cumberland Plain Woodland for the Appin East Mine Gas Safety Management Project;
 - (iv) details of the location and timing of tree screenings to minimise visual impacts of the project;
 - (v) a description of the measures that would be implemented in ongoing 5 year periods, including the procedures to be implemented to:
 - implement revegetation and regeneration within disturbed areas;
 - minimise the clearing of native vegetation;
 - control weeds and feral pests;
 - manage grazing and agriculture on site; and
 - control unauthorised access;
 - (vi) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;
 - (vii) a description of the potential risks to successful revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and
 - (viii) details of who would be responsible for monitoring, reviewing, and implementing the plan.

18. In APPENDIX 4 insert the following figure after Figure 2-5:



Appin Ventilation Shaft No. 6



Appin East Mine Safety Gas Management Project

19. After APPENDIX 5, insert the following:

**APPENDIX 6
STATEMENT OF COMMITMENTS**

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SOC1 STATEMENT OF COMMITMENTS

SOC-1

LIST OF TABLES

Table SOC-1	Summary of Project Management, Monitoring and Reporting
Table SOC-2	Summary of Project Research, Offset and Compensatory Measures
Table SOC-3	Summary of the Statement of Commitments for Surface Projects

SOC1 STATEMENT OF COMMITMENTS

In accordance with the Environmental Assessment Requirements (EARs), this section provides a statement of Illawarra Coal Holdings Pty Ltd's (ICHPL's) commitments in relation to the Bulli Seam Operations (the Project).

Proposed Project Environmental Management, Monitoring and Reporting

ICHPL has proposed a range of environmental management, monitoring and reporting for the Project. These are described in Sections 1 to 7 and are summarised in Table SOC-1.

In particular, the environmental assessments provided in Section 5 outline proposed environmental management measures for the Project including those relevant to land resources, subsidence, groundwater, surface water, aquatic and terrestrial ecology, Aboriginal heritage, non-Aboriginal heritage, noise, air quality, greenhouse gas emissions, road transport, socio-economics, hazard and risk, and visual character. Where relevant, environmental monitoring proposals are also provided in Section 5.

The proposed Project environmental management, monitoring and reporting will be considered by the relevant regulatory authorities during the Project assessment. It is recognised that changes to the Project environmental management, monitoring and reporting proposals contained in this Environmental Assessment (EA) may be made during the assessment process.

Where relevant, existing management plans will be reviewed and revised to incorporate the Project activities.

ICHPL also proposes that a Technical Working Group be formed and chaired by the New South Wales (NSW) Department of Planning and Environment (DPE) to manage the interaction between the Project and infrastructure owners. If established, ICHPL will participate as a member of the Technical Working Group.

Specific Environmental Commitments

Throughout the EA, ICHPL has made a number of specific environmental commitments. These relate to:

- the management of Project potential impacts on steep slopes on the Razorback Range;
- the management of Project potential impacts on registered production bores;
- the management of Project potential impacts on landholder riparian use;
- research, offset and compensatory measures for Project impacts on water quality and ecological aspects;
- the conduct of a coal wash underground emplacement pilot trial;
- the provision of a compensatory land package for the Stage 4 Coal Wash Emplacement;
- the management of the Hairy Geebung (*Persoonia hirsuta*) in the vicinity of the West Cliff Stage 4 Coal Wash Emplacement; and
- the management of the Southern Brown Bandicoot (*Isoodon obesulus obesulus*) in the vicinity of the West Cliff Stage 4 Coal Wash Emplacement.

These specific environmental commitments are described in the sub-sections below.

Steep Slopes

Steep slopes on the sides of ridges in the Wianammatta Group shales geology are predominantly found along the Razorback Range (which encompasses Donalds Ridge).

ICHPL Commitment

ICHPL will undertake a study into the potential subsidence related impacts on the steep slopes of Razorback Range (incorporating Donalds Ridge), focussing on steep slopes near roads and structures. The study will seek input from structural and geotechnical engineers and subsidence engineers, and will be conducted in consultation with the Wollondilly Shire Council (WSC) and landholders. The results of this assessment will be incorporated into management and mitigation measures (if required) as a component of future Extraction Plans to maintain the roads and structures in a safe and serviceable manner throughout the mining period.

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

Proposed Management, Monitoring and Reporting	Key EA Sections and Appendices
Management and Monitoring	
Extraction Plan	Sections 5.1 to 5.19 and 7.3.1
Risk Management Plans	Section 5.2, Appendices O, P, Q and R
• Stream Risk Management Plan	Section 5.2.1, Appendix P
• Upland Swamp Risk Management Plan	Section 5.2.2, Appendix O
• Aboriginal Heritage Site Risk Management Plan	Section 5.2.3, Appendix Q
• Major Cliff Line Risk Management Plan	Section 5.2.4, Appendix R
Subsidence Monitoring Programme	Section 7.3.1
Catchment Monitoring Programme	Sections 5.2.1, 5.5 and 5.6, Appendices B, C and P
Groundwater Monitoring Programme	Section 5.5.3 and Appendix B
Upland Swamp Monitoring Plan	Section 5.2.2, Appendices E and O
Biodiversity Management Plan	Sections 5.3.3, 5.7, 5.8 and 5.9, Appendices D, E, F and O
Broad-headed Snake Management Plan	Section 5.9.3 and Appendix F
Southern Brown Bandicoot Management Plan	Section 5.9.3 and Appendix F
Bushfire Management Plan	Section 5.3.3
Built Features Management Plan	Sections 5.4 and 5.11, Appendices A and H
Heritage Management Plan	Section 5.11.3, Appendix H
Aboriginal Heritage Plan	Section 5.10.3 and Appendix G
Noise Management Plan	Section 5.12, Appendix I
Air Quality Management Plan	Section 5.13, Appendix J
Energy Savings Action Plan	Section 5.14.3
Transport Management Plan	Section 5.15.3
West Cliff Stage 4 Coal Wash Emplacement Management Plan	Sections 5.3 and 6
Rehabilitation Management Plan	Section 6
Surface Goaf Gas Drainage Management Plan	Sections 2.5.5 and 6
Service Borehole Management Plan	Section 2.11.4
PED System Management Plan	Section 2.11.5
Mining Operations Plan	Sections 2.3 and 7.3.1
Mine Closure Plan	Section 6
Reporting	
Annual Environmental Management Report	Section 7.3.1
Licences and Approvals	Section 7.3.1
Greenhouse Gas Reporting	Section 7.3.2

This study will include aspects such as:

- Identification of structures, dams and roads that lie in close proximity to steep slopes.
- Site investigation and landslide risk assessment of structures near steep slopes by a qualified geotechnical engineer.
- Site investigation and structural assessment of structures where recommended by the geotechnical engineer. This will include recommendations to mitigate against potential impacts.

Menangle Road and Remembrance Drive cross the Razorback Range. ICHPL will develop management strategies, in consultation with the WSC, to manage the risks of down slope movement of surface soils and rock falls in the vicinity of these roads.

Registered Production Bores

Hawkesbury Sandstone aquifers are used for consumptive purposes. Bores in the middle Hawkesbury Sandstone may experience drawdown effects as a result of the Project. Predicted potential drawdowns at individual bores are listed in Appendix B.

ICHPL Commitment

Over the Project life, ICHPL will:

- Confirm, where the landholder consents, the location of landholder bores and report these details in relevant Extraction Plans.
- Develop a comprehensive groundwater monitoring programme to measure the actual groundwater effects of the Project (including triggers for investigation).

- Monitor the spread of groundwater depressurisation effects.
- If, in the event groundwater monitoring and investigation determines that an adverse Project-induced effect on the productive yield of a landholder's bore is occurring, implement appropriate contingency measures, for the period during which such effects continue (determined in consultation with the affected landholder), which could include:
 - lowering of the pumps in the landholder's affected bore;
 - deepening of the landholder's affected bore;
 - development of a new bore(s);
 - provision of an alternative water supply (i.e. of at least the same standard of quality and quantity as the landholder's bore prior to the land being affected by the Project), the nature of which would depend on the location of the affected landholder and the availability of nearby sources; or
 - if the above measures cannot be implemented, provision of compensation to the affected landholder for any loss of bore productivity arising from the Project-induced effects.

The contingency measures referred to above will be aimed at ensuring the landholder continues to have a water supply of at least the same standard of quality and quantity as the landholder's bore prior to the land being affected by the Project.

If, in the event groundwater monitoring and investigation determines that Project-related subsidence effects have resulted in physical damage to the bore (e.g. shearing resulting in the bore casing being affected) or in-hole pump sets, contingency measures and/or compensation for the physical damage will be determined in consultation with the Mine Subsidence Board.

Riparian Use

Subsidence can result in the conveyance of a portion of surface water flows to sub-surface fractures and reduce the riparian use of landholders.

ICHPL Commitment

Over the Project life, with the approval of the relevant landholders, ICHPL will:

- Confirm, where the landholder consents, the location of stream pools that are used for stock watering and domestic supply and report these details in relevant Extraction Plans.
- Develop a comprehensive surface water monitoring programme to measure the actual subsidence effects of the Project (including triggers for investigation) on these sources of riparian water supply.
- If, in the event surface water monitoring and investigation determines that an adverse Project-induced effect on the yield from pools is occurring, implement appropriate contingency measures, for the period during which such effects continue (determined in consultation with the affected landholder), which could include:
 - provision of an alternative water supply, the nature of which would depend on the location of the affected landholder and the availability of nearby sources; or
 - if the above measures cannot be implemented, provision of compensation to the affected landholder for any loss of water supply arising from Project-induced effects.

The contingency measures referred to above will be aimed at maintaining the landholder's water supply to a standard consistent with that prior to Project related subsidence impacts.

Research, Offset and Compensatory Measures

ICHPL has committed to funding a number of research, offset and compensatory measures. The research, offset and compensatory measures have primarily been developed to address Project impacts on surface water resources (Section 5.6) and ecological aspects (Sections 5.7 to 5.9).

ICHPL Commitment

ICHPL commits to implementing the research, offset and compensatory measures outlined in Table SOC-2.

Underground Emplacement Pilot Trial

The West Cliff Stage 4 Coal Wash Emplacement is considered the most viable coal wash management option for the Project. Notwithstanding, ICHPL has considered a range of coal wash emplacement and disposal alternatives.

ICHPL Commitment

ICHPL will fund and commence development of a pilot-scale research and development trial for underground coal wash emplacement technology at the Project, to the satisfaction of the Secretary. The trial will draw upon available information/technical data from similar investigations and trials in the Southern Coalfield and internationally.

The results of the trial will be used to inform a value analysis of the feasibility of a portion of the coal wash being emplaced underground at the Project. The value analysis will include consideration of aspects such as:

- practical application and mine safety for underground emplacement at the Project design volumes/rates;
- infrastructure requirements (including supporting equipment) for underground emplacement;
- water and other materials consumption/use requirements; and
- consideration of benefits/costs of underground emplacement versus ongoing surface emplacement at the West Cliff pit top.

Compensatory Land Package

Condition 5.1(e) (v) of the Dendrobium Mine Development Consent (DA 60-03-2001) (20 November 2001) stated:

Should the applicant seek approval for the use of Emplacement Area Stage No 3 in accordance with Condition 1.1(c) of this consent, the applicant shall ensure that a further detailed assessment is undertaken to the satisfaction of the Director-General. This assessment shall include, but not be limited to the following:

- (v) *details of compensatory measures at least a 2:1 ratio. The Applicant must formally negotiate this package to the satisfaction of the Director-General and in consultation with NPWS at least 12 months prior to the commencement of clearing for emplacement and be agreed to in writing by the Director-General, in consultation with NPWS; ...*

Table SOC-2
Summary of Project Research, Offset and Compensatory Measures

Activity	Financial Contribution
Research Programmes	
Streams: <ul style="list-style-type: none"> • Non-systematic subsidence effects and associated environmental consequences in significant watercourses. • Techniques for remediating stream bed fracturing. 	\$250,000
Total	\$250,000

ICHPL submitted an application to the DPE for approval to use the Stage 3 Coal Wash Emplacement (ICHPL, 2007). The ICHPL (2007) application offered a compensatory land transfer in accordance with Condition 5.1(e) (v) of DA 60-03-2001. The compensatory land transfer was accepted by the NSW State Government by the Notice of Staged Development Approval (25 December 2007) for *The Construction, Operation, Management and Rehabilitation of Stage 3 of the West Cliff Coal Wash Emplacement Area, Located at West Cliff Colliery*.

As described in Section 5.8.2, the Project would include the clearing of approximately 65 hectares (ha) of native vegetation for the Stage 4 Coal Wash Emplacement.

ICHPL Commitment

Consistent with the approved compensatory land package for the Stage 3 Coal Wash Emplacement, ICHPL commits to the provision of a compensatory land package for the Project that will include:

- transfer of at least 130 ha of native bushland (ratio of 2:1) from ICHPL to the NSW State Government;
- selection of suitable bushland for transfer;
- funding for costs associated with transferring the relevant land title to the NSW State Government; and
- funding for minor site improvement works if required.

Hairy Geebung

The Hairy Geebung (*P. hirsuta*) is listed as Endangered under the NSW *Threatened Species and Conservation Act, 1995* (TSC Act) and Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act). The Stage 4 Coal Wash Emplacement requires the clearance of approximately seven individuals of *P. hirsuta* plants from a local population of approximately 68.

ICHPL Commitment

ICHPL commits to sponsoring the following ecological initiatives, which are aimed at providing a better understanding of the local population of *P. hirsuta* and its management:

- A research programme with the aim of increasing the density of *P. hirsuta* in the area north of the Stage 4 Coal Wash Emplacement. Seed for the programme will be collected from the core area and propagated by a suitable local institution (such as the Mt. Annan Botanic Garden).
- Research programmes to determine the most appropriate measures to protect the *P. hirsuta* population. These will be incorporated into the Biodiversity Management Plan. It is proposed that such a programme involve an institution such as the University of Wollongong, which has considerable expertise in this area.

Southern Brown Bandicoot

The Southern Brown Bandicoot (*Isoodon obesulus obesulus*) is listed as Endangered under the TSC Act and EPBC Act. The Southern Brown Bandicoot was recorded by the Project surveys within and around the Stage 4 Coal Wash Emplacement.

ICHPL Commitment

ICHPL commits to implementing a number of ecological initiatives for the Southern Brown Bandicoot, aimed at:

- assisting with the protection, rehabilitation and enhancement of known or potential Southern Brown Bandicoot habitats; and
- collecting information to better understand the extent, distribution, density and population dynamics of the local Southern Brown Bandicoot population.

The initiatives will include the following measures:

- Erosion and sediment control works (e.g. at fire trail stream crossings) to improve known or potential Southern Brown Bandicoot habitat.
- Implementation of feral animal control measures within and around known and potential Southern Brown Bandicoot habitats – consistent with a "Priority 1 Action" from the Southern Brown Bandicoot Recovery Plan (NSW Department of Environment and Conservation [DEC], 2006a).
- Active revegetation/regeneration of appropriate shrub and groundcover species at known and potential Southern Brown Bandicoot habitat areas.
- Measures to reduce disturbances in known and potential Southern Brown Bandicoot habitat (e.g. reduce motorbike activity or rehabilitation of unnecessary tracks to limit feral animal access into Southern Brown Bandicoot habitats).
- Undertaking or sponsoring targeted surveys for the Southern Brown Bandicoot – consistent with a "Priority 1 Action" from the Southern Brown Bandicoot Recovery Plan (DEC, 2006a).
- Sponsoring a research program designed to collect information on habitat preference (e.g. preferred vegetative structure, species, position on slope, aspect, etc.) to better understand what constitutes optimal habitat for the Southern Brown Bandicoot at the northern extremities of its range.

- Sponsoring a research program designed to monitor the response of the Southern Brown Bandicoot to feral animal control – consistent with a "Priority 1 Action" from the Southern Brown Bandicoot Recovery Plan (DEC, 2006a).
- Placing captured animals from within the Stage 4 Coal Wash Emplacement Area in any relevant Southern Brown Bandicoot captive breeding programme (in consultation with the Department of Environment and Climate Change [DECC] and following any applicable approvals).
- Opportunities and options available to inform local communities of the conservation significance of the Southern Brown Bandicoot – consistent with a "Priority 2 Action" from the Southern Brown Bandicoot Recovery Plan (DEC, 2006a).
- Opportunities to involve local community groups in survey and monitoring for the Southern Brown Bandicoot – consistent with a "Priority 2 Action" from the Southern Brown Bandicoot Recovery Plan (DEC, 2006a).

Surface Projects (including shafts, supply boreholes, pipelines)

Table SOC-3 refers to the Statement of Commitments relevant to the construction and operation of Bulli Seam Operations projects that are primarily completed from the surface. Such projects include Ventilation Shaft No. 6 and the Appin East Mine Safety Gas Management Project. These commitments are relevant to any such subsequent projects.

**Table SOC-3
Summary of the Statement of Commitments for Surface Projects**

Environment or Community Aspect	Commitments
Working hours and noise	<ul style="list-style-type: none"> • Construction hours will minimise the impact on the community where practical. • Activities will be undertaken as per the hours in the relevant project assessment (except emergencies), with a preference to undertake audible activities during day-light hours where possible. • Works will be designed with consideration to minimising impacts on the community.
Public Consultation	<ul style="list-style-type: none"> • Illawarra Coal will continue to liaise with and provide information regarding surface activities via the Illawarra Coal Community Consultative Committee, or any other such community group that is deemed appropriate. • Illawarra Coal will continue to operate the 24-hour telephone line to provide an alternative method for public information.
Noise	<ul style="list-style-type: none"> • Noise will be mitigated as per the relevant project assessment and/or management plans. • Project layout will give consideration to the mitigation of noise impacts as practicable. • Noise performance will be incorporated into contractor performance requirements for surface projects in noise sensitive areas. • Illawarra Coal will undertake noise monitoring as per the relevant project assessment document or management plan. • Consultation will be undertaken with receivers subject to significant noise impacts from projects. Consultation will address any additional noise mitigation measures proposed.
Air quality and Greenhouse Gas	<ul style="list-style-type: none"> • Construction activities will be managed to minimise the generation of dust. • Suitable measures, such as site layout design, dust suppression, stockpile management, appropriate road surfaces and rehabilitation of disturbed areas will be applied to projects to minimise dust generation. • Plant and operating equipment will be maintained appropriately to minimise fuel consumption and associated emissions. • Electrical power consumption will be minimised during the operational phases of the project where at all practicable.
Water resources	<ul style="list-style-type: none"> • Stormwater runoff, soil and erosion control measures will be managed in accordance with guidelines detailed in the publication <i>Soils and Construction, Volume 1, 4th Edition and Controlled Activities on Waterfront Land. Guidelines for Laying Pipes and Cables in Watercourses on Waterfront Land, 2012</i>, where relevant. Water controls will be employed as per the applicable project assessment or management plan documentation. • Service supply boreholes will be cased and grouted to address any known regionally significant aquifers. • Drilling process waste water will be managed as per the relevant project assessment. • Water required for projects will be sourced from appropriate sources, such as: <ul style="list-style-type: none"> ○ Recycling captured water where possible, ○ Water Licence in accordance with the requirements of the Water Sharing Plan 2010 (DECCW 2009) and the Water Management Act 2000; ○ An authorised Sydney Water supply; or ○ Appin Mine Filtration Plant.
Biodiversity	<ul style="list-style-type: none"> • Biodiversity will be managed as per the relevant project assessment and/or management plans. • Projects will be designed and constructed to minimise the amount of clearing of

	<p>native vegetation and mature trees where practicable.</p> <ul style="list-style-type: none"> • A two-stage clearing process will be undertaken for the felling of any hollow bearing trees. • Where native vegetation has been cleared, rehabilitation activities will include representative native seed where at all practicable.
Heritage (Aboriginal)	<ul style="list-style-type: none"> • Heritage will be managed as per the relevant project assessment and/or management plans. • Where identified sites are located adjacent to proposed activities a barrier will be installed to prevent interaction. • Where unexpected sites are identified during construction activities, works in vicinity of the site shall stop and a qualified archaeologist engaged.
Heritage (Non-Aboriginal)	<ul style="list-style-type: none"> • Illawarra Coal will manage and conserve the Mountbatten Group in a manner consistent with its heritage values and in accordance with the Conservation Management Plan. • Illawarra Coal will ensure the sympathetic placement of new buildings and structures on properties subject to heritage infrastructure (such as the Morton Park: Mountbatten Group). • Vegetation clearing for project activities will be minimised and should not include historic plantings. • Any relics discovered during project activities will be assessed and documented by an appropriately qualified cultural heritage expert. Where it is relevant to do so, relics will be retrieved and managed in accordance with any recommendations made by the cultural heritage expert. • Where surface projects interact with heritage items owned by other parties (e.g. the Water NSW Upper Canal), the infrastructure owner will be consulted and relevant approvals obtained prior to works.
Traffic	<ul style="list-style-type: none"> • Traffic will be incorporated into environmental assessment documentation. Where relevant, a Traffic Management Plan will be developed and implemented to minimise impacts and ensure continued road safety. • Illawarra Coal will ensure any measures within a Traffic Management Plan will be implemented. • For large projects Illawarra Coal will advise local residents of the commencement of works and any related potential disruptions to local traffic.
Risks and Hazards	<ul style="list-style-type: none"> • Illawarra Coal will ensure contractors abide by Company HSEC policies and management systems. • Illawarra Coal will ensure contractors undertake the appropriate investigations with regards to underground service locations prior to the commencement of excavation works. • Diesel storages and pipelines shall be constructed and maintained in accordance with the relevant standards. • Appropriate risk management equipment (such as firefighting facilities and spill kits) will be present and maintained, with staff trained in their use. • Safety fencing will be installed around excavations and high risk areas of project sites to mitigate risks associated with unauthorised access. Vehicular accesses will be gated and locked when not in use.
Waste	<ul style="list-style-type: none"> • To minimise waste generation material generated from construction works will be utilised on site or as capping material at West Cliff emplacement area, where suitable. • Waste will be appropriately captured and transferred to suitable re-use, recycling or disposal locations.
Visual Amenity	<ul style="list-style-type: none"> • Clearing of native vegetation and mature trees will be minimised at projects where possible. • For long term infrastructure Illawarra Coal will look to avoid the use of highly reflective materials or materials not commensurate with the surrounds, as is practicable. • Screening trees will be included in revegetation works, as and where appropriate for long term projects. • Permanent lighting will be installed as per the relevant standards but will consider visual amenity and light spill. • Temporary lighting will be arranged to minimise light spillage as much as possible without compromising safety or operations.

Rehabilitation	<ul style="list-style-type: none">• Illawarra Coal will undertake rehabilitation of any areas disturbed by the project to ensure the environment is returned as close as possible to pre-project condition and/or to meet landowner specific requirements.• De-commissioning of boreholes and shafts will be undertaken in accordance with the requirements of the relevant government department/s.
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