

**MAJOR PROJECT ASSESSMENT:
Appin Coal Mine Vent Shaft No 6
(10_0079)**



Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

April 2011

Cover Photo: Project setting.

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EXECUTIVE SUMMARY

BHP Billiton Illawarra Coal Pty Limited (Illawarra Coal) owns and operates the underground Appin Coal Mine, located approximately 45 kilometres (km) northwest of Wollongong. Illawarra Coal is proposing to construct an additional ventilation shaft (Appin Ventilation Shaft No. 6) from an approved underground mining domain, located approximately 500 metres from Douglas Park, in the Wollondilly LGA. The shaft would also provide ventilation to proposed mining domains under the Bulli Seam Operations Project (MP 08_0150) which is currently under assessment by the Department.

The project involves construction of a new upcast ventilation shaft and the installation of associated extraction fans and ancillary surface infrastructure. It would also require the construction of a 2.6 km access road and provision of electrical power to the site. In addition, Illawarra Coal proposes to construct and operate several service supply boreholes for delivery of materials to the underground workings. Illawarra Coal has chosen to submit this project application separately to the BSO project application. The key reason for this is the timing of construction, which would take about three years.

The project is classified as a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and consequently the Minister for Planning is the approval authority for the application.

The Department exhibited the Environmental Assessment (EA) for the project between 19 October and 18 November 2010 and received a total of 10 submissions - 6 from public authorities and 4 from the general public. Most of the submissions raised concerns regarding the project, with the main issues being the potential noise, biodiversity and air quality impacts of the project.

The Department has assessed the project application, EA, submissions on the project and Illawarra Coal's response to submissions in accordance with the relevant requirements of the EP&A Act, including the objects of the Act and the principles of ecologically sustainable development. Based on this assessment, the Department is satisfied that the project can be managed in a manner that would not result in any significant impacts on the environment or surrounding land owners.

The project does have the potential to cause noise impacts to surrounding privately-owned residences. However, as the noise impacts would be short term and Illawarra Coal has committed to implementing best practices, the Department is satisfied that surrounding residents would not be adversely affected for a prolonged period of time. The Department has recommended conditions requiring Illawarra Coal to prepare and implement a Noise Management Plan, including noise monitoring, to manage the performance of the project.

The project would also result in the clearing of approximately 3.5 hectares of Cumberland Plain Woodland, a listed Endangered Ecological Community. Illawarra Coal has committed to rehabilitating the site with local native species characteristic of this vegetation community at the completion of the project. The Department has also recommended conditions requiring Illawarra Coal to implement a biodiversity offset strategy, developed in consultation with the then Department of Environment, Climate Change and Water, to ensure that 8.7 to 9.4 hectares of existing Cumberland Plain Woodland vegetation (dependent on vegetation type) would be protected and secured in perpetuity.

The project also has potential impacts on air quality, especially with regards to offensive odour emissions and their impacts to surrounding residences, including Douglas Park. The Department is satisfied that odour can be minimised to acceptable levels and has recommended a condition of approval requiring Illawarra Coal to ensure that offensive odours are not emitted from the site. In addition, the Department has recommended that Illawarra Coal prepare and implement an Air Quality Monitoring Plan, to monitor, assess and report on emissions of odour and greenhouse gas.

The Department is satisfied that the proposed project would increase safety for underground mine workers and allow for future development of coal resources at the mine, which is a significant contributor to the Illawarra regional economy. The project alone would also generate \$45 million in capital investment and create 10 construction jobs for up to 3 years.

The Department considers that the benefits of the project outweigh its potential costs and that it is in the public interest, and should therefore be approved, subject to conditions.

1. BACKGROUND

BHP Billiton Illawarra Coal Pty Limited (Illawarra Coal) owns and operates the underground Appin Coal Mine, located approximately 45 kilometres (km) northwest of Wollongong (see **Figure 1**). Existing operations at the Appin Mine extract coal from the Bulli Seam, approximately 500 metres (m) below the surface, using longwall mining methods.

Illawarra Coal is currently mining the longwall domain known as Area 7 within the Bulli Seam in the Appin mine. It has also submitted a major project application, currently under assessment by the Department, to extend current mining operations and commence new mining in the Bulli Seam (the Bulli Seam Operations project, MP 08_0150).

For it to expand production within Area 7, and to develop and extract additional longwall domains within the Bulli Seam Operations Project, additional ventilation shafts and ancillary infrastructure are required.

To address this requirement, Illawarra Coal is seeking approval for the construction and operation of an upcast ventilation shaft, known as Appin Ventilation Shaft No. 6, at a site approximately 500 m east of Douglas Park, in the Wollondilly LGA (see **Figures 1 and 2**).

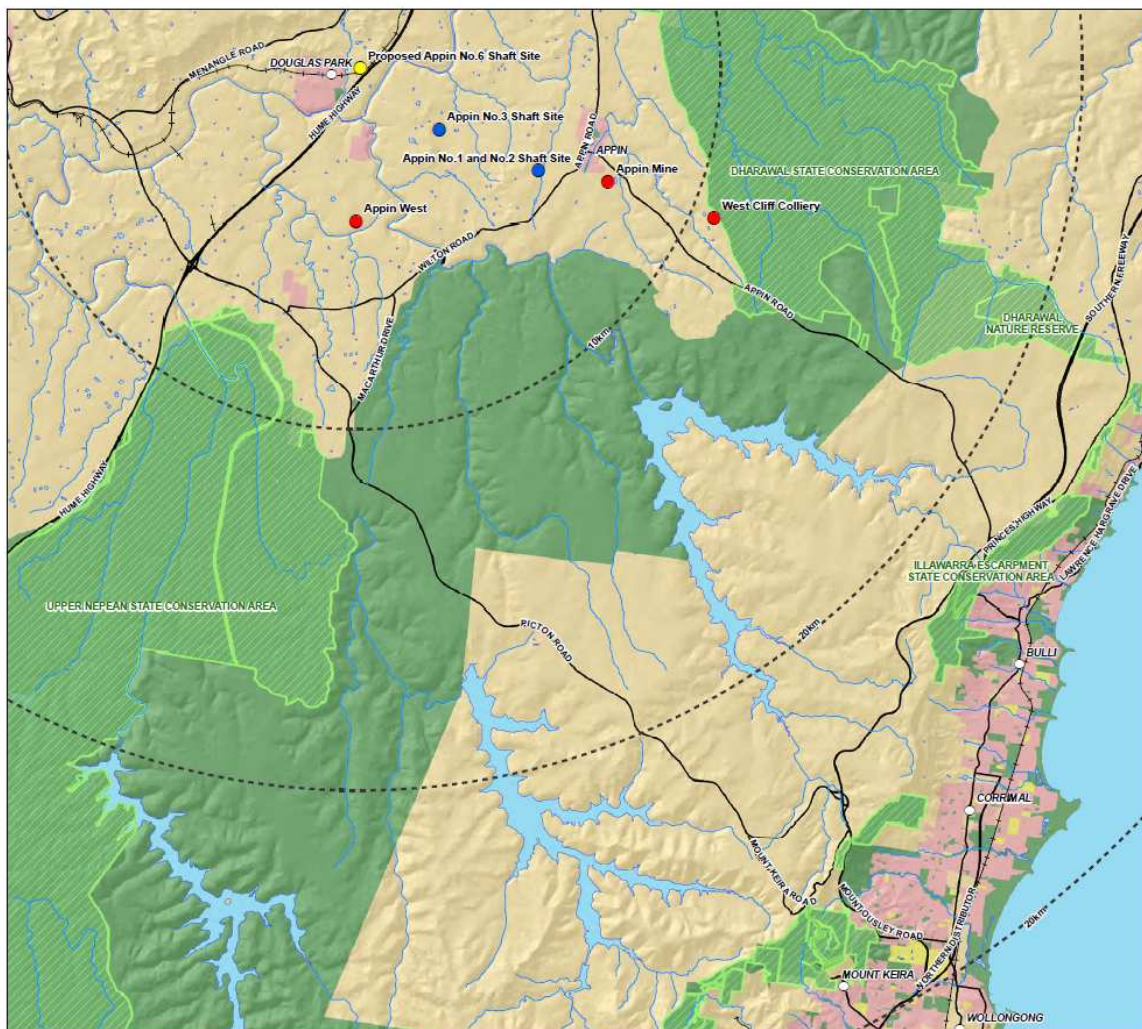


Figure 1: Regional Context

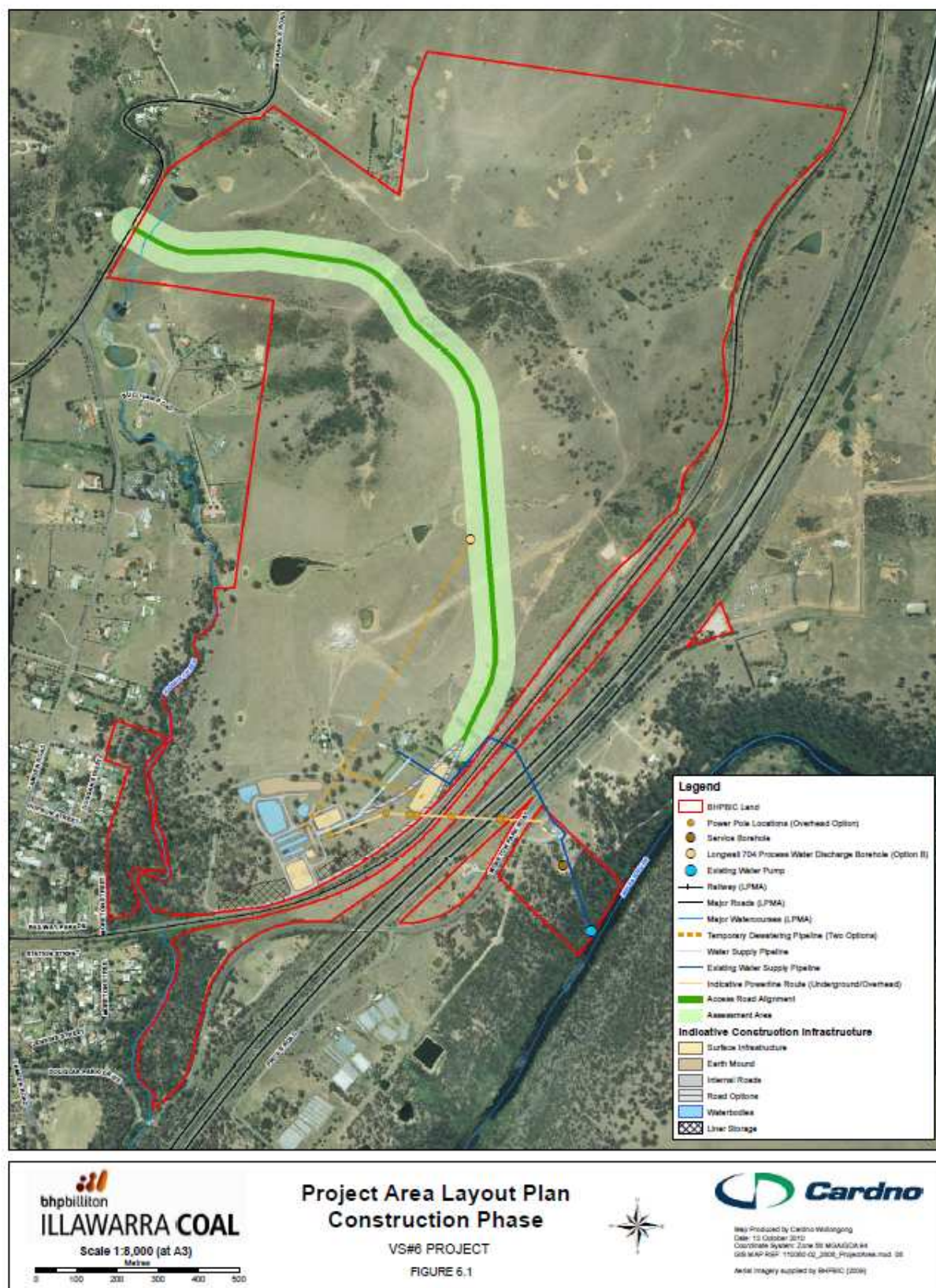


Figure 2: Project Area Layout

2. PROJECT DESCRIPTION

Illawarra Coal intends to construct and operate an additional upcast ventilation shaft and related ancillary infrastructure. The key components of the project are summarised in **Table 1**, depicted in **Figure 2**, and described in detail in the Environmental Assessment (EA) for the project (see **Appendix E**).

Table 1: Key Project Components

Aspect	Description																			
Project Summary	<p>The project involves:</p> <ul style="list-style-type: none">• construction and use of a new upcast ventilation shaft;• installation of associated extraction fans and ancillary surface infrastructure;• construction of an access road and provision of electrical power to the site;• construction and use of service supply boreholes for delivery of materials to underground workings; and• a total construction period of around 36 months.																			
Project Setting	<p>The proposed location for the ventilation shaft is on land owned by Illawarra Coal.</p> <p>The township of Douglas Park is located 500 m southeast of the site, on the other side of Harris Creek, an ephemeral headwater stream (see Figure 2).</p> <p>The southern and eastern sides of the site are bounded by the Hume Highway, Moreton Park Road and the Main Southern Railway. The Nepean River is located to the southeast.</p> <p>The vegetation on the site has largely been cleared, and comprises mainly exotic pasture, but contains remnants of native vegetation, including the Cumberland Plain Woodland Endangered Ecological Community.</p> <p>The site also contains the heritage-listed property, the Mountbatten Group, located immediately north of the proposed ventilation shaft.</p> <p>Existing land uses in the area include stock grazing, rural residential, residential township, primary school, mixed agriculture, community centre and small business.</p>																			
Operational hours	<table><tr><th>Activity</th><th>Hours</th><th>Time Frame</th></tr><tr><td>Construction - access road</td><td rowspan="3">Day light hours, 6 days per week (Monday – Saturday)</td><td>6 months (c. Dec 2011)</td></tr><tr><td>Construction - site establishment</td><td>6 months (c. Dec 2011)</td></tr><tr><td>Construction - provision of electricity to site</td><td>6-12 months (c. Dec 2011)</td></tr><tr><td>Construction - shaft sinking and lining</td><td>24 hours per day, 7 days per week</td><td>20 months (c. August 2013)</td></tr><tr><td>Construction - installation of ventilation fans and other surface buildings and infrastructure</td><td>Day light hours, 6 days per week (Monday – Saturday)</td><td>9 months (c. June 2014)</td></tr><tr><td>Operation - ventilation fans</td><td>24 hours per day, 7 days per week</td><td>30 years (c. 2045)</td></tr></table>	Activity	Hours	Time Frame	Construction - access road	Day light hours, 6 days per week (Monday – Saturday)	6 months (c. Dec 2011)	Construction - site establishment	6 months (c. Dec 2011)	Construction - provision of electricity to site	6-12 months (c. Dec 2011)	Construction - shaft sinking and lining	24 hours per day, 7 days per week	20 months (c. August 2013)	Construction - installation of ventilation fans and other surface buildings and infrastructure	Day light hours, 6 days per week (Monday – Saturday)	9 months (c. June 2014)	Operation - ventilation fans	24 hours per day, 7 days per week	30 years (c. 2045)
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Access road	<p>A new access road is proposed from Menangle Road to the site. The access road would be 2.6 km in length and would be located entirely on Illawarra Coal-owned land.</p>																			
Site establishment	<p>Site establishment works would include:</p> <ul style="list-style-type: none">• clearing of 6 hectares (ha) of vegetation, including 3.5 ha of native vegetation;• extending an existing pipeline pumping water from the Nepean River to the Mountbatten property. The new pipeline would be 50 millimetres in diameter and supply water for construction (approx 50 megalitres (ML) per year) to the ventilation shaft site; and• constructing surface water management measures to mitigate impacts to Harris Creek and the Nepean River.																			

Aspect	Description
<i>Provision of electricity to site</i>	<p>Works proposed to supply electricity to the ventilation shaft site include:</p> <ul style="list-style-type: none"> • augmenting the Douglas North Substation; • installing power supply line from this substation to the site; and • constructing a 66kV/11kV electrical switchyard on the site.
<i>Shaft sinking and lining</i>	<p>The shaft would be constructed using a method called “blind boring”, which involves drilling (using a very large diameter drill head) from the surface to the required depth. At all times, the shaft would be filled with water, with the drilling process performed completely submerged, which would assist with spoil removal and control of dust and noise emissions. If unforeseen complications were to occur with this drilling method, Illawarra Coal would complete the drilling using a conventional sink method, which could extend the construction period, but would not change the magnitude of any impacts, including noise and dust.</p> <p>Spoil from the excavation would be pumped from the shaft as a slurry to onsite processing ponds, where spoil would settle from the water. Excavators would regularly move the spoil to designated spoil dewatering areas to dry out prior to being added to the shaft spoil emplacement area. The shaft spoil emplacement area is predicted to be approximately 3 m high and cover an area of 150 m by 40 m.</p> <p>The shaft would be lined with either a precast lining system or an in-situ lining system, both of which would require storage areas on site for liner materials. Water used in the construction of the shaft would be pumped into the underground workings or underground water management system through an additional water disposal borehole.</p>
<i>Construction of associated Vent Shaft No 6 infrastructure</i>	<p>Construction of infrastructure associated with the ventilation shaft would include:</p> <ul style="list-style-type: none"> • three electric powered ventilation fans (2 operational and 1 stand-by); • emergency diesel powered stand-by fan and diesel generator; and • fan housing and evases (ie flared ventilation air diffusers).
<i>Construction and operation of service boreholes and associated infrastructure</i>	<p>Approximately 10 service supply boreholes are proposed as part of the project. Each of these boreholes would be approximately 200 - 300 mm in diameter. They are required for delivery of electricity, water, ballast, concrete, etc for use in the underground workings.</p>
<i>Rehabilitation</i>	<p>Complete site rehabilitation would take approximately 5 years following the decommissioning of the vent shaft (anticipated in 2045). Illawarra Coal intends to use the emplaced shaft spoil to fill in the vent shaft and associated boreholes.</p> <p>The project involves the disturbance of 6 ha of land, including 3.5 ha of native vegetation that constitutes an Endangered Ecological Community (Cumberland Plain Woodland). Illawarra Coal proposed an offset area of 8.1 ha of Shale Hills Woodland, however has made no commitment to securing this offset in perpetuity.</p> <p>Illawarra Coal proposes to progressively rehabilitate the project disturbance area.</p>
<i>Employment</i>	10 full-time construction jobs, for up to 36 months
<i>Capital Cost</i>	\$45,000,000

3. STATUTORY CONTEXT

3.1. Major Project

The project is classified as a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) because it is a development for the purposes of coal mining, and therefore triggers the criteria in Clause 5 of Schedule 1 of *State Environmental Planning Policy (Major Development) 2005*. As such, the Minister for Planning is the approval authority for the project.

However, on 25 January 2010, the former Minister delegated to the Deputy Director-General (Development Assessment and Systems Performance), his powers and functions as approval

authority under section 75J of the EP&A Act to approve project applications with less than 25 public submissions and with a capital investment value under \$50 million. The project meets these criteria and consequently the Deputy Director-General may determine the application under delegated authority.

3.2. Permissibility

The land subject to the application is zoned 1(a1), Rural A1, under the *Wollondilly Local Environmental Plan 1991*. Under section 79C of the EP&A Act, a consent authority (under Part 4 of the Act) is required to take into consideration any proposed instrument that has been the subject of public consultation. The *Draft Wollondilly Local Environmental Plan 2009* was exhibited in November of 2009. Under this draft LEP the land subject to the application is zoned RU2, Rural Landscape.

Mining is permissible with consent in both the 1(a1) and RU2 zones. Further, *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* allows underground mining to be carried out on any land, with consent.

Consequently, the project application can be approved.

3.3. Other Approvals

Under Section 75U of the EP&A Act, a number of other approvals have been integrated into the Part 3A approval process and are not required to be separately obtained for the project. These include:

- vegetation clearance permits under the *Native Vegetation Act 2003*;
- heritage related approvals required under the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977*; and
- certain water-related approvals under the *Water Management Act 2000* and the *Water Act 1912*.

Under Section 75V of the Act, a number of other approvals (which still must be obtained), must be granted in a manner that is substantially consistent with any Part 3A approval for the project. These include:

- an environment protection licence under the *Protection of the Environment Operations Act 1997*;
- a mining lease under the *Mining Act 1992*; and
- a consent under section 138 of the *Roads Act 1993*.

The Department has consulted with the relevant government authorities responsible for these other approvals, and considered the relevant issues relating to these approvals in its assessment of the project (see Section 5). None of the relevant authorities object to the project on grounds related to these other approvals.

3.4. Exhibition and Notification

Under Section 75H(3) of the EP&A Act, the Director-General is required to make the Environmental Assessment (EA) prepared for a project publicly available for at least 30 days. After accepting the EA for the project, the Department:

- made it publicly available from 19 October until 18 November 2010:
 - on the Department's website;
 - at the Department's Information Centre and Wollondilly Shire Council; and
 - at the offices of the Nature Conservation Council;
- notified relevant State government authorities and Wollondilly Shire Council by letter; and
- advertised the exhibition in the *Macarthur Chronicle* and in the *Wollondilly Advertiser* on 19 October 2010.

This satisfies the requirements of Section 75H(3) of the EP&A Act.

During the assessment process the Department also made a number of documents available for download on the Department's website. These documents included the:

- project application;
- Director-General's environmental assessment requirements;
- EA;
- public submissions received during the exhibition period; and
- Illawarra Coal's response to issues raised in submissions.

3.5. Environmental Planning Instruments

Under Section 75I of the EP&A Act, the Director-General's report is required to include a copy of or reference to the provisions of environmental planning instruments that substantially govern the carrying out of the project.

The Department has considered the project against the relevant provisions of several *State Environmental Planning Policies* (SEPPs) and other environmental planning instruments (see **Appendix D**), and is satisfied that none of these instruments substantially govern the carrying out of this project.

3.6. Objects of the *Environmental Planning and Assessment Act 1979*

The Minister is required to consider the objects of the EP&A Act when making decisions under the Act. The objects of most relevance to the Minister's decision on whether or not to approve the proposed project are found in Section 5(a)(i),(ii),(vi)&(vii). They are:

'The objects of this Act are:

(a) to encourage:

- (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
- (ii) the promotion and co-ordination of the orderly and economic use and development of land,*
- (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
- (vii) ecologically sustainable development (ESD).'*

The Department has fully considered the objects of the EP&A Act, including the encouragement of ESD, in its assessment of the application. The assessment integrates all significant economic and environmental considerations and seeks to avoid any potential serious or irreversible damage to the environment, based on an assessment of risk-weighted consequences.

The Department is satisfied that the project is able to be undertaken in a manner that is consistent with the objects of the EP&A Act.

3.7. Statement of Compliance

Under Section 75I of the EP&A Act, the Director-General's report is required to include a statement relating to compliance with the environmental assessment requirements issued for the project. The Department is satisfied that the environmental assessment requirements have been complied with.

4. ISSUES RAISED IN SUBMISSIONS

Following exhibition of the EA, the Department received 10 submissions:

- 6 from public authorities; and
- 4 from the general public.

A summary of the issues raised in these submissions is provided below and a full copy is attached in **Appendix C**.

4.1 Public Authorities

The **Department of Environment Climate Change and Water** (DECCW, now the Office of Environment and Heritage) did not support the project in its initial submission, as it considered that the offset strategy proposed by Illawarra Coal was inadequate. This was because Illawarra Coal had not made a commitment to any legal mechanism or instrument to ensure the conservation of its proposed biodiversity offset area in perpetuity. Following further consultation with Illawarra Coal, DECCW recommended a condition of approval to establish an offset strategy to compensate the loss of 3.5 ha of Cumberland Plain Woodland. The Department has considered this issue in Section 5.3 of the report.

DECCW also recommended conditions, which the Department has considered, relating to:

- noise impact criteria, monitoring, mitigation and management;
- prevention of offensive odour; and
- stormwater management.

The **Department of Industry and Investment** (DII, now part of the Department of Primary Industries) has no objections to the project, but requested that Illawarra Coal be required to prepare Rehabilitation and Vegetation Management Plans for the project.

The **NSW Office of Water** (NOW, now part of the Department of Primary Industries) has no objections to the project, however proposed conditions of approval relating to:

- licensing requirements under the *Water Act 1912*;
- prevention of damage to riparian vegetation, waterfront beds and banks, watercourse flow, water quality, and any pumps or structures; and
- protection of riparian zones.

The Department's **Heritage Branch** (now part of the Office of Environment and Heritage) noted that the project site contains the Morton Park Mountbatten Group of heritage buildings (listed as a local heritage item under the Wollondilly LEP), and random scatters of historical archaeological artefacts. As a consequence, the Heritage Branch initially raised concerns regarding:

- the potential impact to the fabric of the buildings through vibration resulting from the project;
- the inclusion of measures for mitigating the visual impacts in the Statement of Commitments;
- lack of reference to section 146 of the *Heritage Act 1977* in the Heritage Management Plan; and
- the potential for the Mountbatten Group to be reassessed as a State-significant heritage item.

In response, Illawarra Coal provided a supplementary vibration assessment that found that, during both construction and operation of the Project, the magnitude of ground and airborne vibrations predicted to occur would be significantly less than the relevant criteria for heritage and other sensitive structures. The Heritage Branch was satisfied with this response. Further considerations of Heritage issues are discussed in Section 5.5 below.

Wollondilly Shire Council (Council) did not object to the project, but noted its objection to the related BSO project and to the project being assessed ahead of any BSO project approval. Illawarra Coal responded that the BSO project EA stated that additional ventilation shafts would be subject to separate assessments and approvals. Due to delays in the BSO project's assessment and further potential delays, Illawarra Coal chose to proceed with this stand-alone project application (rather than a future modification to any BSO project approval).

Council also raised concerns in regards to:

- the reduced availability of water allocations from the Nepean River for agricultural industry;
- the discharge of water from the shaft spoil emplacement area into Harris Creek;
- soil erosion management;
- contamination of groundwater;
- indigenous heritage;
- potential impacts to the Mountbatten Group;
- noise mitigation works; and
- access road requirements.

The Department has considered these matters in its assessment of the project in Section 5 below.

The **Roads and Traffic Authority** (RTA) has no objections to the project, however has recommended application of its standard conditions of consent.

4.2 Community

All of the 4 submissions from the general public objected to the project. The main concerns or grounds for objection were:

- proximity to the township of Douglas Park, particularly the Douglas Park Primary School;
- air quality impacts during both operation and construction; and
- noise during construction.

Other concerns included potential impacts from operational noise, odour, subsidence, and increased traffic, and the project's impacts on the visual landscape and to non-Aboriginal heritage.

4.3 Response to Submissions

Illawarra Coal provided a response to issues raised in submissions, and revised its Statement of Commitments for the project (see **Appendix B**). The response to submissions was made publicly available on the Department's website.

The Department has considered the issues raised in submissions, and Illawarra Coal's response to these issues, in its assessment of the project.

5. ASSESSMENT

5.1 Noise and Vibration

The EA includes a specialist noise and vibration impact assessment undertaken by specialist acoustic technicians Wilkinson Murray Pty Ltd in accordance with applicable guidelines, including DECCW's *NSW Industrial Noise Policy (INP)* and *Interim Construction Noise Guideline (ICNG)*. The assessment was undertaken with reference to sensitive receivers in the vicinity of the project (see **Figure 3**).

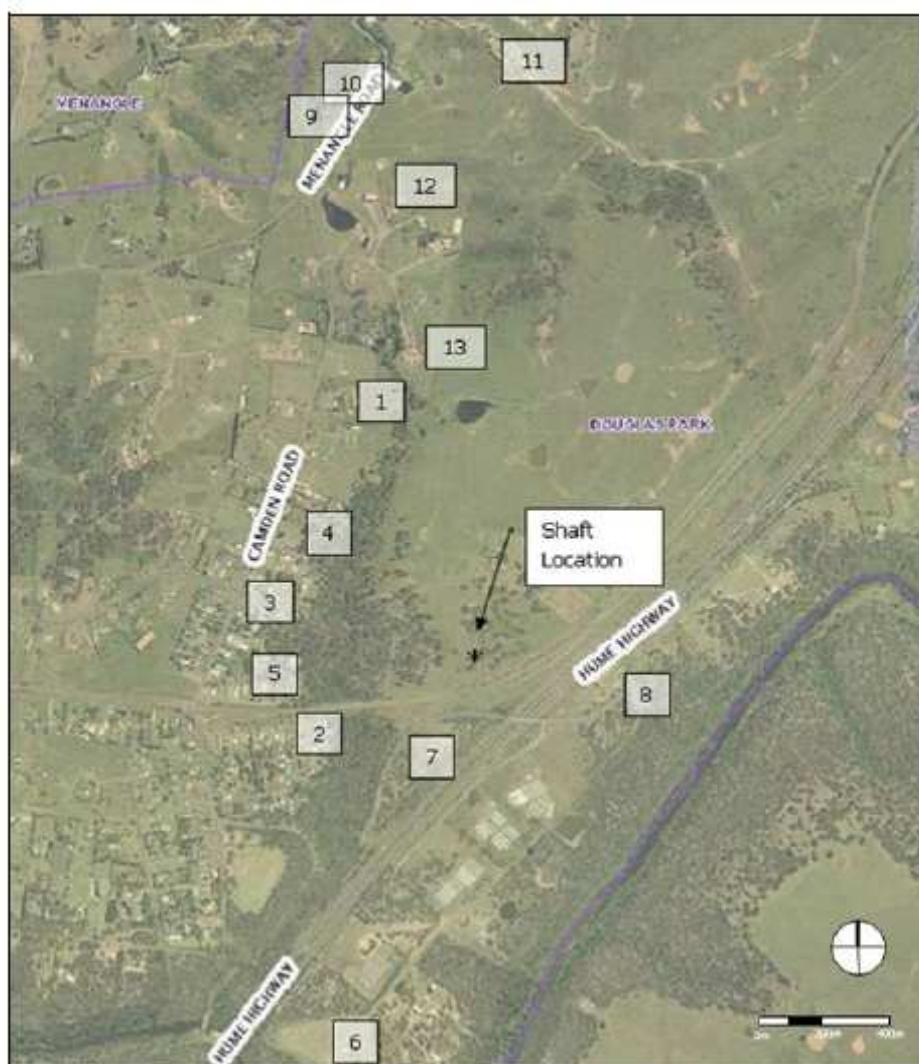


Figure 3: Assessment Locations

Construction Noise

The project has the potential to cause noise impacts during construction from the following activities:

- access road construction;
- Douglas North Substation augmentation;
- shaft construction;
- shaft liner preparation and installation;
- underground/overhead powerline construction; and
- borehole construction.

Construction activities would generally be undertaken during the day, six days per week (Monday to Saturday) with the exception of shaft sinking (blind boring) and shaft lining activities which would be undertaken 24 hours per day, seven days per week. Shaft sinking and lining is expected to be completed within twenty months of commencement (ie by August 2013). The blind boring method, proposed as the first preference for construction, would minimise noise emissions by keeping the shaft full of water.

Noise modelling, completed by Wilkinson Murray, determined predicted noise levels experienced from construction activities during day and night time periods at each of the 13 assessment locations. No exceedance of the night time criteria under the ICNG (39 dB(A)) was predicted at any receiver for the night time period. However, a small exceedance (1 dB(A)) was predicted to occur during the day at receiver 1, on Camden Road, during the site establishment phase, if all equipment was operating at full capacity. Given the very small level of this exceedance, that is predicted to occur only as a worst case scenario, and its short term nature, the Department is satisfied that noise impacts associated with construction could be satisfactorily managed and would not result in any significant impact.

In its final submission, DECCW proposed noise criteria for construction which were more stringent than both the operational project specific noise levels and the standard criteria established by the ICNG. As no justification was provided for this change to standard criteria, and Illawarra Coal would still be subject to operating hours defined in the approval for particular activities, the Department does not support this proposal.

DECCW also recommended that works generating high impact noise, such as rock hammering, only be undertaken during particular hours, in addition to a requirement to meet construction noise criteria. In response, Illawarra Coal argued that this would only result in extending the timeframe of construction works and associated disruptions to the local community. The Department is satisfied that the noise construction criteria proposed for the project would satisfactorily manage the impacts of these works, and consequently does not accept that further restrictions are required.

To ensure compliance with relevant noise criteria during construction, Illawarra Coal has committed to undertake quarterly noise monitoring during the construction phase and for the first two years of operation. DECCW recommended that this monitoring be more frequent, with monthly monitoring to occur during the construction phase. As the noise assessment predicted an exceedance of the construction noise impact criteria during the day, and given that 2 members of the public raised concerns about potential noise impacts, the Department supports this proposed condition. However, should the monitoring results show compliance with the noise exceedance criteria within the first year, then the frequency of monitoring should be reduced to quarterly.

Operational Noise

The project has the potential to cause noise impacts during the operational phase, primarily through the continuous use of extraction fans in the evases. The project involves the operation of two extraction fans 24 hours a day, 7 days per week, with a third extraction fan on stand-by.

To mitigate the impacts associated with the operation of the vent shaft, Illawarra Coal has committed to orientating the vent shaft fans away from Douglas Park and installing a noise mitigation barrier. Illawarra Coal also committed to undertake quarterly noise monitoring at specified receiver locations in Douglas Park in the first two years of operation, to ensure the accuracy of the modelled results.

Modelling of operational noise by Wilkinson Murray showed that compliance with INP criteria would be achieved during all time periods for the operational phase of the project, both with and without the installation of a noise mitigation barrier. DECCW recommended that the operational noise criteria for

the day and evening periods should be set at the predicted operational level of 39dB(A), rather than the project specific noise level (PSNL) of 45dB(A). However, Illawarra Coal advised that additional operational activities, such as deliveries to boreholes and supporting surface operations, would result in noise levels beyond those predicted for the extraction fans alone, and consequently requested that day and evening operational noise criteria be set at the PSNLs. The Department considers this request reasonable.

With the implementation of the above mitigation measures, the Department is satisfied that the project can be undertaken in a way that would not result in any long-term or significant noise impacts to surrounding privately-owned residences.

Vibration

The project has the potential to cause vibration impacts during both construction and operation.

Wilkinson Murray's assessment of vibration impacts during construction predicted that it is unlikely that vibration would be detectable or measureable at any receiver. The predicted vibration from the use of a rock breaker, considered to be the worst-case scenario, complied with DECCW's criterion for human comfort within 50 m, while the nearest residential receiver is at a distance of at least 400 m. In addition, the criterion for avoiding vibration impacts to building structures (10 mm/s) was not predicted to be exceeded at any receiver.

During operation, the only source of vibration would be the operation of the evase extraction fans. However, the design of the fans would minimise vibration impacts through balancing and foundation design. As a consequence, no vibration impact is predicted at any receiver.

Conclusion

In addition to the mitigation measures proposed by Illawarra Coal, the Department has recommended conditions that require the company to prepare and implement a revised Noise Management Plan for the project, which includes monitoring of the noise performance for both the construction and operational phases of the project. With these measures in place, the Department is satisfied that the project can be undertaken in a manner that would not result in any long-term or significant noise or vibration impacts at surrounding privately-owned residences.

5.2 Air Quality & Greenhouse Gas

The EA included a specialist air quality assessment (AQA) undertaken by PAE Holmes in accordance with applicable guidelines including DECCW's *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*.

Dust and Particulate Matter

The AQA considered potential impacts to air quality through the generation of dust during both the construction and operational phases. In submissions to the Department, two members of the public raised concern in regards to dust generated during construction and its impact to air quality.

Construction activities identified as potential sources of dust and particulate matter include vegetation clearing and site preparation, vent shaft construction, access road construction and excavations on site. The assessment found that the impact to air quality as a result of the drilling of the vent shaft would not result in significant impact as the proposed blind boring method of construction involves the shaft being filled with water at all times, significantly reducing dust generation.

In addition to blind boring, Illawarra Coal has committed to mitigating air quality impacts from construction through implementing measures such as:

- dust suppression activities like water spraying;
- sealing the access road; and
- rehabilitating disturbed areas.

In addition, the Department notes the relatively short-term period of overall construction activities (3 years) and the much shorter period of the main dust-generating construction activities, such as construction of the access road and site establishment (expected to be completed simultaneously over a period of about 6 months).

The project would also have operational impacts on air quality as a result of the release of particulate matter contained in the mine ventilation air (MVA) discharged through the shaft evases. In its assessment, PAE Holmes modelled the maximum predicted 24-hour and annual average PM₁₀ concentrations for the project, during operations, at five receiver locations (see **Figure 4**). The results were assessed against relevant DECCW air quality criteria. Included in this modelling was Illawarra Coal's proposed mitigation measure to increase plume dispersion by discharging MVA at a 45 degree angle in a north-easterly direction, away from Douglas Park.

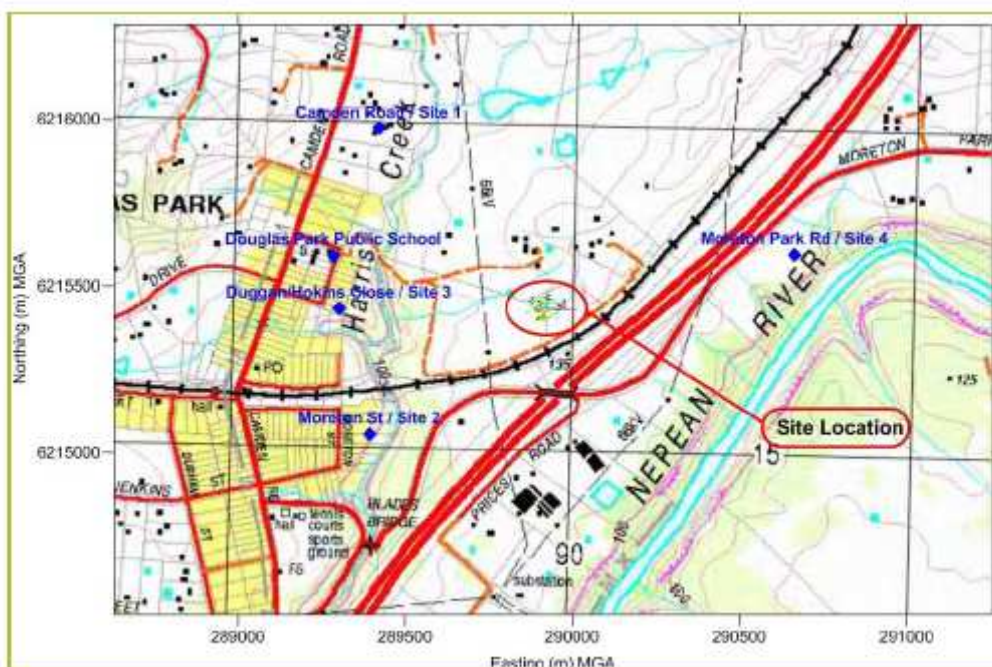


Figure 4: Air Quality Assessment Receptor Locations

The modelling shows that the predicted levels of PM₁₀ emissions (both 24 hour and annual averages) are very low at all receptors (see **Table 2**).

Table 2: PM₁₀ Modelling Results

Site No.	Location	Max 24-hour PM ₁₀ Concentration (µg/m ³)			Average Annual PM ₁₀ Concentration (µg/m ³)		
		Criterion	Ventilation Flow 650 m ³ /s	Ventilation Flow 550 m ³ /s	Criterion	Ventilation Flow 650 m ³ /s	Ventilation Flow 550 m ³ /s
1	Camden Road	50	6.1	6.9	30	0.6	0.8
2	Moreton Street		3.0	4.4		0.2	0.3
3	Cnr Duggan/Hoskins Close		2.6	3.3		0.3	0.3
4	Moreton Park Road		2.4	3.1		0.2	0.2
N/A	Douglas Park PS		3.2	4.1		0.3	0.4

Total suspended particulate (TSP) emissions were also considered in the AQA. Given that the larger particles do not remain suspended in the atmosphere for long periods of time or distances, in addition to the proposed directional discharge of air away from Douglas Park, PAE Holmes considered that the potential impacts of TSP emissions were limited to a small footprint of Illawarra Coal-owned land.

Based on the AQA's modelling, the Department is satisfied that the project's impacts to air quality from dust during both construction and operation would be minimal and would be adequately managed under Illawarra Coal's proposed commitments.

Odour

The AQA included an assessment of the odour impacts of the project. To predict MVA odour levels emitted by the shaft, PAE Holmes used odour levels measured at Appin Vent Shaft No. 3 as a model input. The air emitted from Vent Shaft No. 3 is considered representative of air that would be extracted by Vent Shaft No. 6, as the respective mining areas are adjacent, have similar coal and geological properties, and the proposed mining would occur in the same coal seam. The results (shown in **Table 3**) predicted no exceedance of DECCW's odour assessment criteria at any receiver location. The modelled results predicted odour concentration at Douglas Park as less than 2 OU and at most locations as less than 1 OU. Peak levels of 3 OU were predicted on sparsely populated elevated terrain to the north and west of the vent shaft site (see **Figures 5 and 6**).

Table 3: Odour Modelling Results

Site No.	Location	Predicted Odour Concentration (OU) 99 th Percentile nose response		
		Ventilation Flow 650 m ³ /s	Ventilation Flow 550 m ³ /s	Criteria
1	Camden Road	1.6	1.7	3.0
2	Moreton Street	0.5	0.5	
3	Cnr Duggan/Hoskins Close	1.0	1.1	
4	Moreton Park Road	0.7	0.7	
N/A	Douglas Park PS	1.1	1.1	2.0

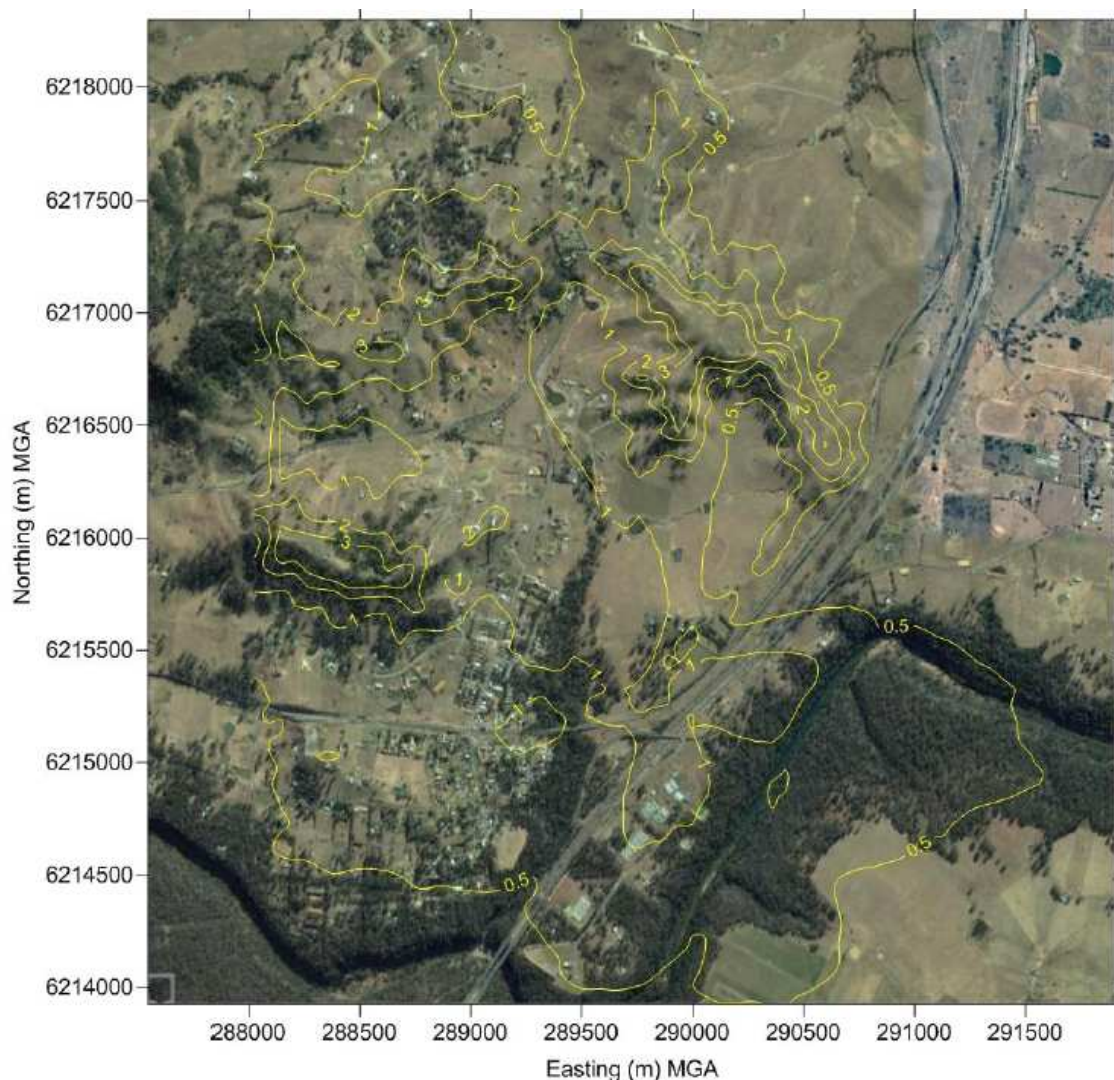


Figure 5: Odour Modelling Results - Ventilation Flow of 650 m³/s

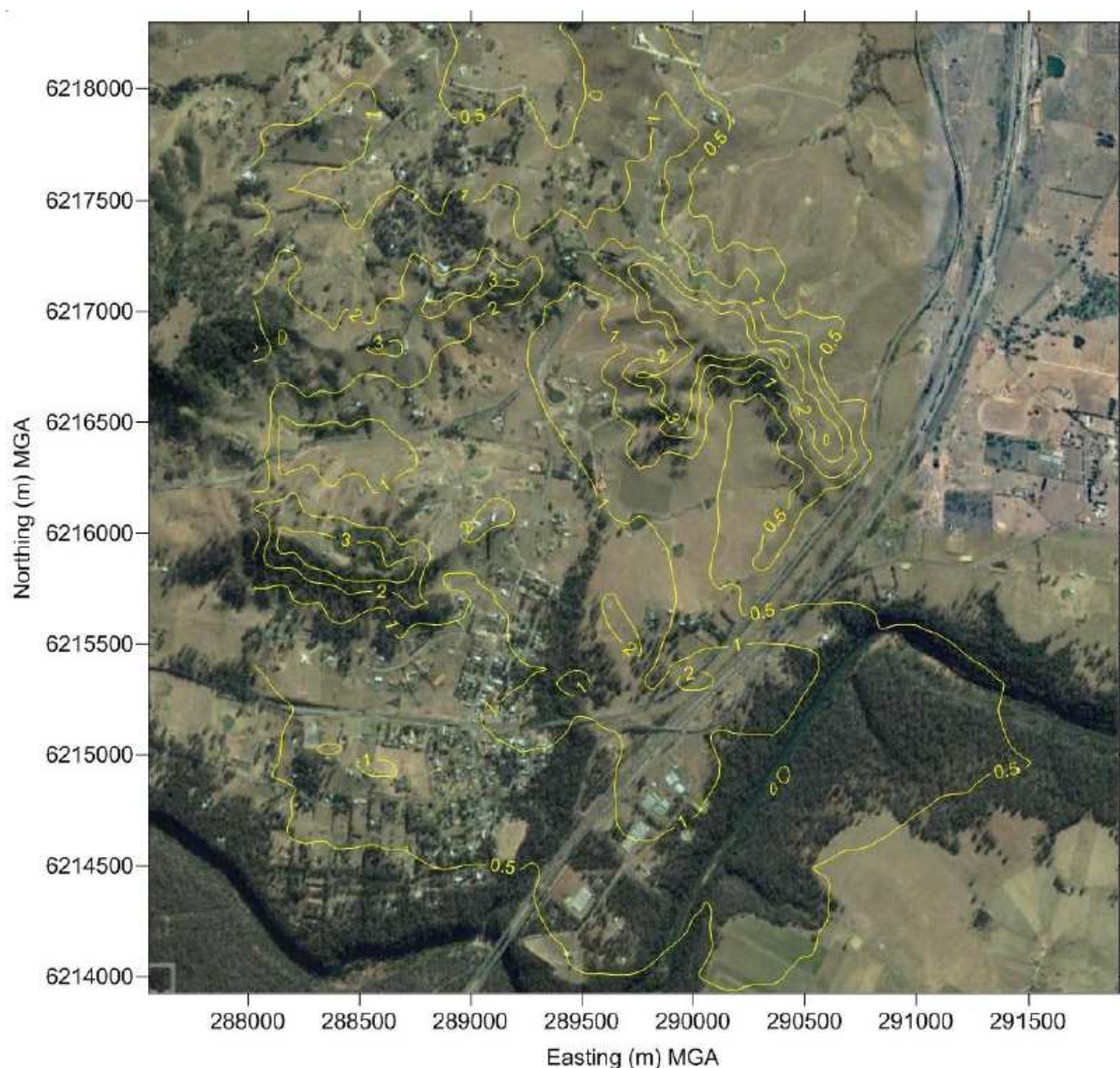


Figure 6: Odour Modelling Results - Ventilation Flow of 550 m³/s

In its initial submission, DECCW raised concerns regarding potential odour impacts. DECCW asked Illawarra Coal to assess the likelihood of encountering particularly-odorous materials such as oil shale, and if this were to occur, whether an exceedance to the criteria would result at any receiver.

Illawarra Coal confirmed that the odour concentrations measured at Vent Shaft No. 3 were the highest measured emissions from the Bulli Seam known to Illawarra Coal. In addition, the company undertook follow-up measurements of odour concentrations at Vent Shaft No. 3, which showed odour levels about half of those used for the model input. Illawarra Coal considers that this confirms that the approach taken in the original modelling was conservative. The Department and DECCW are satisfied with this approach and agree that it provides a robust assessment of potential odour impacts. In addition, Illawarra Coal noted that the areas predicted to experience odour concentrations of 3 OU were sparsely populated and were therefore subject to higher exceedance criteria than Douglas Park under the *Approved Methods for Modelling and Assessment of Air Pollutants in NSW*.

The Department is satisfied that the odour assessment is appropriate, conservative and robust. Nevertheless, it has recommended a condition of approval requiring Illawarra Coal to ensure that the vent shaft does not emit offensive odours from the site.

Other

Other potential impacts to air quality from the operation of the vent shaft include emissions of hydrocarbons, organic compounds and metallic compounds from within the MVA. To assess the potential concentration levels of these pollutants, the AQA measured air extracted from the nearby West Cliff and Dendrobium Coal Mines and samples from underground mine return air taken near an active longwall at Appin Area 7. All results showed concentrations that were either non-detectable or well below relevant air quality goals. Consequently, the Department is satisfied that no adverse impacts from any of these pollutants would occur as a result of the project.

Conclusion

In addition to the mitigation measures proposed by Illawarra Coal, the Department has recommended conditions that require the company to prepare and implement an Air Quality Monitoring Plan for the project, which would include protocols for monitoring emissions of greenhouse gas and odour. With these measures in place, the Department is satisfied that the project can be undertaken in a manner that would not result in any significant or unacceptable air quality impacts at any surrounding receiver.

5.3 Flora and Fauna

The project would disturb a total of 6 ha of land, including:

- 3.14 ha of Shale Plains Woodland;
- 0.40 ha of Shale Hills Woodland; and
- 2.37 ha of exotic pastures.

The EA contains an ecological assessment completed by Niche Environment and Heritage. This assessment included database and literature reviews and field surveys of the site, including vegetation mapping validation (see **Figure 7**).

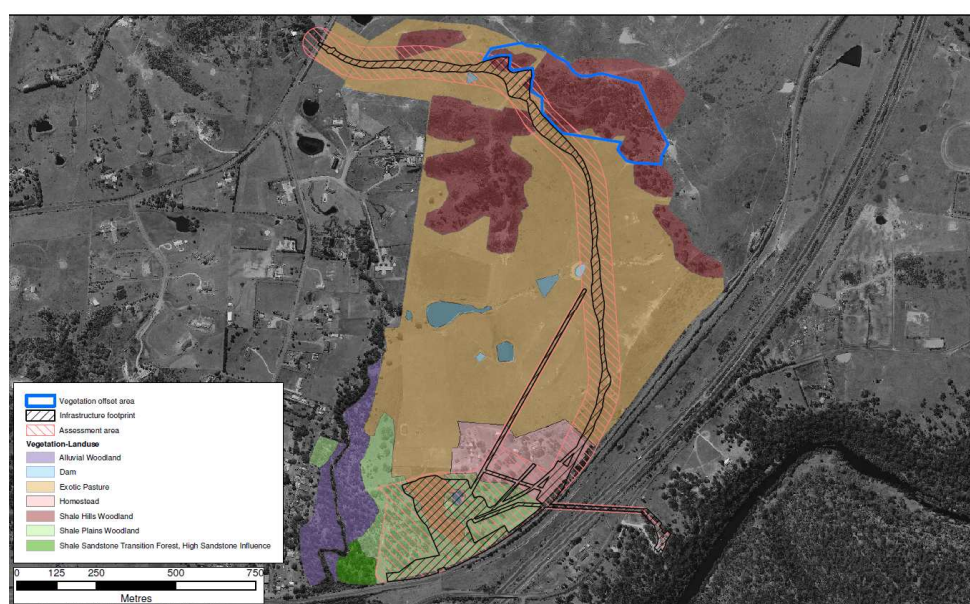


Figure 7: Study Area Vegetation Mapping

Flora

Much of the vegetation proposed to be cleared for the project consists of an Endangered Ecological Community (EEC), *Cumberland Plain Woodland*, listed under both the NSW *Threatened Species Conservation Act 1997* (TSC Act) and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 2005* (EPBC Act). A summary of vegetation to be disturbed is shown in **Table 4**.

It is noted that approximately 3.5 ha of low-moderate resilience Cumberland Plain Woodland EEC, equating to 8.6% of the total local distribution, would be disturbed by the project. The Department and DECCW agree that, for the project to be able to meet the principle of 'improving or maintaining' biodiversity values over the medium to long-term, it would require a vegetation offset of suitable size and quality. This issue is discussed below.

Table 4: Impact to Vegetation Types and Communities

Vegetation Type	Study Area (ha)	Impact (ha)	EEC (TSC Act)	EEC in study area (ha)	% EEC Impacted (local distribution)
Shale Plains Woodland	12.15	3.14	Cumberland Plain Woodland (also listed as critically endangered under EPBC Act)	41.18	8.6%
Shale Hills Woodland	29.03	0.40			
Alluvial Woodland	6.95	0	River Flat Eucalypt Forest on coastal floodplains	6.95	-
Shale Sandstone Transitional Forest (High Sandstone Influence)	1.22	0	Shale Sandstone Transition Forest (also listed as critically endangered under EPBC Act)	1.22	-
Exotic Pastures/Cleared	83.24	2.37	N/A	-	-
Total	132.95	5.91		49.35	7.12%

The ecological assessment's database search identified the occurrence of 22 threatened flora species or their habitats within 10 km of the project site. However, no threatened flora species, listed under either the EPBC Act or the TSC Act, were identified during field surveys of the study area completed in June 2010. Given the level of the survey, the site condition and the habitat present, the assessment concluded that no threatened flora species would be impacted as a result of the project.

In its initial submission to the Department, DECCW noted that survey searches were undertaken at an inappropriate time of year for the detection of Sydney Plains Greenhood (*Pterostylis saxicola*), Bynoe's Wattle (*Acacia bynoeana*), and Bargo Geebung (*Persoonia bargoensis*). Illawarra Coal subsequently confirmed that the habitat for these species was not present within the study area.

Fauna

The assessment found that 12 threatened species had a high to moderate likelihood of occurrence on site, including 6 birds, 3 bats and 3 arboreal mammals (Koala, Eastern Pigmy Possum, and Squirrel Glider). However, a field survey of the site did not find evidence of any of these species, nor were they recorded in any previous studies of the area. Despite the potential loss of 29 tree hollows as a result of the project, the assessment considered it unlikely that the project would result in the loss of significant foraging and breeding resources, or the death or injury of individuals.

To minimise the impact to fauna, Illawarra Coal has committed to a range of standard management strategies including limiting the clearing of mature trees wherever possible and undertaking a two-stage clearing process for felling of any hollow bearing trees.

Biodiversity Offset and Rehabilitation

The EA includes a rehabilitation strategy and biodiversity offset strategy which outlines strategies to progressively rehabilitate the site and to compensate for the 3.5 ha of Cumberland Plain Woodland that would be cleared by the project. Illawarra Coal proposed an offset area of 8.1 ha of Shale Hills Woodland in the northwest corner of the project site (see **Figure 7** above). This area was later revised to 8.7 ha following application of DECCW's Biobanking Calculation Methodology.

DECCW and the Department considered the proposed offset strategy inadequate due to the absence of a proposed legal instrument or mechanism for securing the offset in perpetuity. Illawarra Coal argued that permanent offsetting was not justified as the project consists of a temporary facility, and the site would be rehabilitated using Cumberland Plain Woodland species and would also exclude existing grazing activities from the site. The Department notes that these measures might improve the distribution and quality of the Cumberland Plain Woodland on site in the long term, however, recognises that rehabilitation would not fully commence for at least 30 years and reconstruction of ecological communities involves high risk and uncertain biodiversity outcomes.

Consequently, the Department has recommended a condition requiring Illawarra Coal to develop and manage an in-perpetuity biodiversity offset to the satisfaction of the Director-General, in addition to the EA's proposed rehabilitation and mitigation measures. The size of the recommended offset was calculated using the Biobanking Calculation Methodology and, depending on the type of vegetation occurring in the offset area, would range from 8.7 to 9.4 ha.

Conclusion

The Department acknowledges that the project would require clearing of 3.5 ha of Cumberland Plain Woodland EEC. However, the Department is satisfied that the impact to biodiversity is able to be mitigated and/or offset to ensure that biodiversity values are maintained and potentially improved over the medium to long term. To achieve this goal, the Department has recommended conditions requiring Illawarra Coal to:

- develop and implement a biodiversity offset strategy to the satisfaction of the Director-General;
- develop a comprehensive Biodiversity Management Plan to provide for detailed implementation of this strategy;
- provide for protection and conservation of the offset area in perpetuity;
- lodge a conservation and biodiversity bond to ensure that the offset area is established and maintained to the satisfaction of the Director-General; and
- develop a detailed Rehabilitation Management Plan in accordance with DII guidelines.

5.4 Water Resources

Water Extraction

The project would require approximately 50 ML/year for construction works. Illawarra Coal intends to meet this demand through an existing pipeline from the Nepean River. Illawarra Coal would apply to NOW to transfer the required water allocation to this pump from an existing pump in the Menangle Management Zone. In its submission, NOW notes that its draft *Water Sharing Plan for the Greater Metropolitan Region Surface Water Sources* (draft Metropolitan Water Sharing Plan) is due to come into force in mid 2011, and consequently any such transfer of water allocation should be conducted in accordance with the requirements of this plan. Consequently, the Department has recommended a condition of approval ensuring that Illawarra Coal obtains all necessary water licences and approvals for the project under the *Water Act 1912* and/or the *Water Management Act 2000*, including meeting the requirements of any relevant Water Sharing Plan.

Council raised concerns regarding the proposed extraction of water, and the potential of this to reduce water allocations to support agriculture. In response, Illawarra Coal noted that although the EA identifies a requirement of 50 ML/year for construction, it is unlikely that the full amount would actually be required, as water from sedimentation ponds would be reused for the drilling process where possible. Illawarra Coal also stated that as any water extraction would be in accordance with the requirements of the draft Metropolitan Water Sharing Plan, it is unlikely that any adverse effects would be felt by other water users within the catchment. The Department also notes that water allocations throughout the State are managed through an essentially free market for both purchase and sale, and therefore simply reflect supply and demand.

Consequently, the Department is satisfied that impacts of reduced supply to other users would be minimal, would only occur over a relatively short-time frame and can be mitigated through water recycling measures on-site. Nevertheless, the Department has recommended a condition of consent requiring Illawarra Coal to develop and implement a Water Management Plan, including a site water balance with provisions to investigate and implement all reasonable and feasible measures to minimise water use by the project.

Stormwater Runoff

During construction, the project has the potential to impact surface water through increased erosion, and sedimentation from runoff carrying suspended solids from excavated soils and shaft spoil. Illawarra Coal has committed to implement stormwater and erosion control measure in accordance with standard requirements.

However, both DECCW and Council raised concerns regarding potential impacts to water quality in Harris Creek from stormwater discharge. DECCW recommended that Illawarra Coal should be required to investigate the feasibility of discharging stormwater into the underground mine, in order to reduce discharges to Harris Creek. In response, Illawarra Coal reiterated that the stormwater control ponds are designed for a 1 in 10 year, 72 hour duration storm event. In addition, water captured in the stormwater ponds would be reused in the drilling process.

Consequently, overflow from these ponds would only result from a very significant rainfall event, in which case any impacts of suspended solids and salinity from the shaft spoil would be diluted by site runoff, as well as being further diluted by high flows in both Harris Creek and the Nepean River. Illawarra Coal also stated that the proposed surface water management system has significantly greater capacity than that recommended by DECCW.

Council also raised concerns regarding runoff from access roads being diverted into pre-existing farm dams, and the potential impact this may have on gully erosion. In response, Illawarra Coal confirmed that runoff would be dispersed via engineered drains and energy spreading devices, and that all road verges and drains would be grassed, making it unlikely that runoff would contribute to gully erosion.

Overall, the Department is satisfied that the proposed stormwater management system is suitable for managing any potential impacts from stormwater runoff, including those to Harris Creek and the Nepean River. Nevertheless, the Department has recommended conditions of approval requiring Illawarra Coal to prepare and implement a Water Management Plan. Under the Water Management Plan, Illawarra Coal must prepare an Erosion and Sediment Control Plan that would describe measures to minimise soil erosion and the potential for transport of sediment to downstream waters. This plan is to be prepared in consultation with DECCW and NOW.

Groundwater

No groundwater would be extracted as part of the project. The Soil and Water Assessment completed by EcoEngineers Pty Ltd, considered it very unlikely that proposed site excavations would encounter deep groundwater. While there was a small risk that these works may encounter some waters within the Ashfield Shale, the assessment considered the risk to be low, as the estimated depth of the shale around the vent shaft site was predicted at 16 m. However, it is also considered possible that drilling of the ventilation shaft may inject some water into the shale waters.

Illawarra Coal has committed to line and grout the ventilation shaft following drilling. Consequently, significant impacts to shallow or regional aquifers would be avoided. In its submission, NOW supports this commitment and notes that it is widely applied measure throughout the industry.

Conclusion

The Department is satisfied that the project can be managed so that it would not have a significant impact on water resources. The Department has recommended conditions, generally consistent with those proposed by NOW and DECCW, including the preparation of a Water Management Plan for the project. In particular the Water Management Plan would include:

- Site Water Balance;
- Erosion and Sediment Control Plan;
- Surface Water Monitoring Program; and
- Water Response Plan.

5.5 Other Issues

Table 5: Assessment of Other Environmental Issues

Issue	Potential Impacts/Consideration	Conclusion
<i>Traffic</i>	<ul style="list-style-type: none"> • The project has the potential to impact the road network through increased traffic and construction of a site access road. The Traffic Impact Assessment included in the EA predicted an additional 70 light vehicles and 66 heavy vehicles accessing the site per day during construction. During the operational phase of the project this would reduce to 4 light vehicles and 4 heavy vehicles per day. • The EA predicted that this level of additional traffic would not impact the existing level of service of the Camden Road/Menangle Park Road. • The project's proposed access road would intersect with Menangle Road, north of its intersection with Camden Road (see Figure 2). Illawarra Coal would develop the intersection design in consultation with the RTA and Council. In their submissions, neither the RTA nor Council 	<ul style="list-style-type: none"> • The Department is satisfied that the impact to Douglas Park as a result of increased traffic would be minimal and that the additional light and heavy vehicles using local roads would have a minimal impact on traffic flows on local roads and highways. • Contemporary traffic management conditions have been included in the proposed approval.

	<p>had any objections to these proposed road works.</p> <ul style="list-style-type: none"> • However, one resident of Douglas Park raised concerns regarding the location of the proposed access road and its associated intersection with Menangle Park Road, due to the removal of plantings on the road reserve in front of their property. In response, Illawarra Coal confirmed that these plantings were exotic and have negligible environmental value. Nevertheless Illawarra Coal has committed to rehabilitate the road verge, with existing or similar vegetation, in consultation with this resident. 	
<i>Heritage</i>	<ul style="list-style-type: none"> • An Aboriginal Cultural Heritage Assessment was undertaken as part of the EA by Niche Environment and Heritage. Four Aboriginal sites were identified during a site survey of the study area, which was attended by representatives of the Tharawal Local Aboriginal Land Council and Cubbitch Barta Title Claimants Aboriginal Corporation. These sites were assessed as being of moderate to low archaeological significance, and that the project proposed no risk to them. • Illawarra Coal has prepared an Aboriginal Heritage Management Plan (AHMP) to facilitate the management and mitigation of any potential impacts, including the construction of barrier fencing, and immediate stop work procedures in the event that Aboriginal objects are found. • Niche also undertook a Heritage Impact Statement to assess the impact of the project on non-Aboriginal heritage. The assessment found the project may impact the aesthetic significance of the locally-listed Morton Park Mountbatten Group. • Illawarra Coal has prepared a Heritage Management Plan including measures to manage and mitigate these impacts, such as vegetation screenings and minimising vegetation clearing. With these measures implemented, the assessment considered the impacts to be negligible. 	<ul style="list-style-type: none"> • The Department has recommended conditions that would require Illawarra Coal to prepare a Heritage Management Plan (HMP) in consultation with DECCW, the Heritage Branch and Council. In addition, the Department recommends Illawarra Coal prepare a Conservation Management Plan for the Mountbatten Group. • Consequently, the Department is satisfied that heritage impacts are likely to be minimal and that the required HMP would ensure that both predicted and non-predicted impacts are satisfactorily managed.
<i>Visual</i>	<ul style="list-style-type: none"> • Cardno completed a Visual Impact Assessment for the EA which determined that, because the project site is located in a natural depression in the local landscape as well as being in the same valley as Douglas Park, the visual catchment is limited. Potential views from Douglas Park would be restricted due to the presence of significant mature vegetation along Harris Creek. • Direct views of the ventilation shaft would occur from the Main Southern Railway Line and the Hume Highway, however impacts are considered to be minimal as they would only occur for brief periods as vehicles progressed. • Temporary impacts would occur from floodlights during 24/7 shaft sinking during construction. However, the distance of residential properties from the site and the significant screening from surrounding trees, in addition to the shaft spoil emplacement and the noise attenuation bund, would all contribute in mitigating potential night lighting impacts. 	<ul style="list-style-type: none"> • The Department is satisfied that the project would not have a significant impact on any sensitive visual receiver. • The Department has recommended conditions to ensure lighting emissions from the project are managed and minimised.
<i>Waste</i>	<ul style="list-style-type: none"> • The majority of waste associated with the project would be drill cuttings from construction of the ventilation shaft and boreholes. The shaft construction would generate approximately 17,000 m³ of spoil material. This spoil would be stored on site in the shaft spoil emplacement area. After the completion of mining, this material would be reused to fill the shaft and boreholes. • Other waste streams include cleared vegetation, fuels and hazardous material, general waste and sewage. • Vegetation waste would be stored separately and re-used wherever possible as mulch. • All fuels and other hazardous materials would be stored and transported in a manner that avoids risk of land or water contamination. 	<ul style="list-style-type: none"> • The Department is satisfied that waste streams would be minimal and would be adequately managed. • No further measures are required.

<i>Rehabilitation</i>	<ul style="list-style-type: none"> • Illawarra Coal intends to rehabilitate the site using stored shaft spoil from the on-site shaft spoil emplacement area. Complete site rehabilitation would take approximately five years after decommissioning of the ventilation shaft. • In its submission, DII recommended conditions of approval requiring development and implementation of a Rehabilitation Management Plan, including requirements for objectives and criteria for site rehabilitation, options for future use of the site, and measures to minimise and manage any ongoing environmental impacts. • Illawarra Coal has expressed concern that requirements for a Rehabilitation Plan under this approval may be duplicated under any future approval for the Bulli Seam Operations Project. In order to address this concern, it is proposed that, with the Director-General's agreement, Illawarra Coal may combine any strategy, plan or program required under the Vent Shaft approval with any similar strategy, plan or program required under any approval granted for the Bulli Seam Operations Project. 	<ul style="list-style-type: none"> • The Department has recommended conditions of approval consistent with those recommended by DII. • Consequently, the Department is satisfied that the project site would be restored to an equivalent or improved condition to that that existed prior to the project.
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6. RECOMMENDED CONDITIONS

The Department has prepared recommended conditions of approval for the project (see **Appendix A**). These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts of the project;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

Illawarra Coal has reviewed and accepted the recommended conditions.

7. CONCLUSION

The Department has assessed the EA, submissions on the project and Illawarra Coal's response to submissions, in accordance with the objects of the EP&A Act, including the requirement to encourage ESD and is satisfied that the impacts of the project can be mitigated and/or managed to ensure an appropriate level of environmental performance.

Illawarra Coal has chosen to submit a stand-alone project application for the Appin Vent Shaft No 6, rather than a future modification to any BSO project approval. The key reason for this is the length of the construction period (around 3 years, commencing in mid 2011), coupled with the delays in the BSO project's assessment and approval. Given the length of the construction period, and the benefit of improved ventilation in Appin Area 7 and during development of Appin Area 9, there is no reason to support deferral of commencement of this project until after any project approval for the BSO project. However, the Department emphasises that any approval of the Appin Vent Shaft No 6 project does not guarantee or imply future approval of the BSO project.

The project would potentially result in a small exceedance of noise criteria at a single receiver location during construction activities. Nonetheless, the Department is satisfied that the project can be undertaken in a manner than would not result in any long-term significant noise impacts to surrounding privately-owned residences.

The project would result in the clearing of approximately 3.5 ha of Cumberland Plain Woodland, which Illawarra Coal has committed to rehabilitating with local native species characteristic of this vegetation community at the cessation of the project. The Department has also included conditions that require Illawarra Coal to prepare and implement a Biodiversity Offset Strategy to protect and secure in perpetuity at least 8.7 ha of existing Cumberland Plain Woodland vegetation.


The Department is satisfied that the proposed project would increase safety for underground mine workers and allow for future development of coal resources at the Appin and Appin West Mines, which are significant contributors to the Illawarra economy. The project alone would also generate \$45 million in capital investment and create 10 full time construction jobs for around 36 months.


The Department is confident that these benefits can be achieved without significant impacts to the environment or to nearby residents. On balance, the Department believes the benefits of the project outweigh its potential costs, that it is in the public interest and that it should be approved, subject to conditions.

RECOMMENDATION

It is RECOMMENDED that the Deputy Director-General, as delegate of the Minister:

- consider the findings and recommendations of this report;
- approve the project application, subject to conditions; and
- sign the attached instrument of approval (**Appendix A**).


Manager,
Mining Projects 28.3.11


Executive Director,
Major Projects Assessment 8.4.11


Director,
Mining and Industry Projects


Deputy Director-General
Development Assessments and Systems Performance 4/5/11

APPENDIX A – CONDITIONS OF APPROVAL

See the attached Instrument of Approval (tag A).

APPENDIX B – RESPONSE TO SUBMISSIONS

See attached documents Tagged B

APPENDIX C – SUBMISSIONS

See attached *Appin Gas Drainage Project: Submissions*.

APPENDIX D – ENVIRONMENTAL PLANNING INSTRUMENTS

SEPP No.33 – Hazardous and Offensive Development

The Department is satisfied that the project is not potentially hazardous or offensive, and that the proposal is generally consistent with the aims, objectives and requirements of SEPP 33.

SEPP No.44 – Koala Habitat Protection

The Ecological Assessment in the EA states that while the trees to be removed by the project constitute potential Koala habitat, they are not considered to be core Koala habitat under clause 4 of SEPP 44. As such, the Department is satisfied that the project is generally consistent with the aims, objectives, and requirements of SEPP 44.

SEPP No. 55 – Remediation of Land

The Department is satisfied that the land subject to the project approval does not have a significant risk of contamination, given it is undeveloped land, and that the project is generally consistent with the aims, objectives, and requirements of SEPP 55.

SEPP (Mining, Petroleum Production and Extractive Industries) 2007

Under clause 7 of the Mining SEPP, the project (which is development “for the purposes of” underground mining) is permissible with consent on any land. Part 3 of the SEPP lists a number of matters that a consent authority must consider before determining an application for consent for the development purposes of mining, including compatibility with other land uses, natural resource management and environmental management, resource recovery, transport and rehabilitation.

These matters are not required to be considered by an approval authority when determining major projects under Part 3A. Nonetheless, the Department has considered these matters in its assessment of the project. The Department is satisfied that the project is able to be managed in a manner that is generally consistent with the aims, objectives, and provisions of the Mining SEPP.

SEPP (Infrastructure) 2007

The project is unlikely to be affected by the provisions of SEPP (Infrastructure) 2007, as it is unlikely to represent “traffic generating development” under Schedule 3 of the SEPP. Nonetheless, the application was referred to the RTA, which did not object to the project and raised matters that can be pursued under the requirement for a consent under Section 138 of the *Roads Act 1993* and a road occupancy licence.

Wollondilly Local Environment Plan 1991

Land associated with the project is situated on land zoned 1 (a1) (Rural “A1” Zone). Mining is permitted with development consent in this zone.

APPENDIX E – ENVIRONMENTAL ASSESSMENT

See attached CD-ROM entitled *Environmental Assessment: Appin Ventilation Shaft No. 6*, dated October 2010.