



Office of  
Environment  
& Heritage

Your reference: DA 305-7-2003 MOD 14  
Our reference: DOC14/234677-01  
Contact: Robert Gibson, 4908 6851

Mr Matthew Sprott  
Planning Officer, Mining Projects  
Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Dear Mr Sprott

**RE: NORTH WAMBO UNDERGROUND MINE LONGWALL 10A MODIFICATION (DA 305-7-2003 MOD 14)**

I refer to your email dated 3 October 2014 seeking comments on the Environmental Assessment (EA) for the North Wambo Underground Mine Longwall 10A Modification Project.

The Office of Environment and Heritage (OEH) has reviewed the EA for this project in relation to Aboriginal cultural heritage and potential impacts on threatened biodiversity. Due to resource constraints, OEH has not been able to assess the possible effect of mine subsidence on flood behaviour.

As a consequence of this assessment OEH identified some weaknesses in the threatened biodiversity assessment and the lack of a commitment to provide a biodiversity offset in the event that this project causes any harm to threatened biodiversity. Further details and recommended conditions of approval are provided in **Attachment 1**.

If you require any further information regarding this matter, please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4908 6851.

Yours sincerely

 17 OCT 2014

**RICHARD BATH**  
Senior Team Leader Planning, Hunter Central Coast Region  
Regional Operations

Enclosure: Attachment 1

## **ATTACHMENT 1: REVIEW OF THE ENVIRONMENTAL ASSESSMENT FOR THE NORTH WAMBO UNDERGROUND MINE LONGWALL 10A MODIFICATION (DA 305-7-2003 MOD 14) WITH RECOMMENDED CONDITIONS FOR APPROVAL**

The Office of Environment and Heritage (OEH) has undertaken a review of the report '*North Wambo Underground Mine Longwall 10A Modification Environmental Assessment for the modification of DA 305-7-2003: The addition of North Wambo Underground Mine Longwall 10A*' (EA) prepared by Peabody Energy (dated September 2014). The review of the EA is in relation to possible impacts of the proposed development on Aboriginal cultural heritage and threatened biodiversity. OEH's comments and recommended conditions of consent are provided below:

### **ABORIGINAL CULTURAL HERITAGE ASSESSMENT**

OEH has reviewed '*Cultural Heritage Impact Assessment – North Wambo Underground Mine Longwall 10A Modification, Prepared by RSP Australia East Pty Ltd, Prepared for Wambo Coal Pty Ltd, August 2014*', which forms Appendix D of the EA with respect to Aboriginal cultural heritage. OEH makes the following comments with regarding the proposed Aboriginal cultural heritage management recommendations:

1. OEH concurs that all nine (9) AHIMS registered Aboriginal sites should remain *in situ* unless any impact is unavoidable. OEH also supports the proposed subsidence monitoring of the nine (9) AHIMS registered Aboriginal sites, however, OEH additionally recommends that the sites are clearly marked and fenced to ensure that their locations are visible so and thus will be protected from unintended harm.
2. OEH supports the recommendation that Aboriginal sites within the existing *Aboriginal Heritage Impact Permit (AHIP) # 2222 boundary*, continue to be managed in accordance with the terms and conditions of that AHIP, and that such works must be undertaken in consultation with the Registered Aboriginal Parties (RAP's). OEH will also support the recommendation that any collected Aboriginal objects being transferred to the established '*temporary keeping place*' under the existing *Care and Control Agreement Permit # 3130*, however, OEH is not in a position to provide advice with respect to varying *AHIP # 2222* to include the Modification Project Area until such time as an AHIP Variation application is submitted for review and assessment.
3. OEH supports the inclusion of the location of the Aboriginal sites located within the Modification Project Area in the WCPL environmental management framework.

In addition to the above suggestions, OEH recommends that the following standard conditions pertaining to Aboriginal cultural heritage are considered in any consent issued:

### **Recommended Conditions of Approval for Aboriginal Cultural Heritage**

1. The proponent must consult with and involve all the registered local Aboriginal parties for the project, in the ongoing management of the Aboriginal cultural heritage values. Evidence of this consultation must be collated and provided to the consent authority upon request.
2. The proponent must update the existing Aboriginal Cultural Heritage Management Plan for the project area in consultation with the registered Aboriginal parties to detail procedures for managing all Aboriginal cultural heritage values associated with the project area. This process must be undertaken prior to commencing any ground disturbance or development works subject to the development.
3. In the event that ground disturbance locates previously unidentified Aboriginal object/s within the project area, all works must halt in the in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and representatives of the local Aboriginal community must be contacted to determine the nature, extent and significance of the finds. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) and the management outcome for

the site included in the information provided to AHIMS. The proponent must consult with representatives of the local Aboriginal community, and the archaeologist to develop an appropriate management strategy for all objects/sites which complies with the requirements of the *National Parks and Wildlife Act 1974*.

4. If any human remains are located, all works must halt in the immediate area to prevent any further impacts to the remains. The NSW Police are to be contacted immediately. No action is to be undertaken until the NSW Police provide written notification to the proponent. If the skeletal remains are identified as Aboriginal, the proponent must contact OEH's Environment Line on 131 555 and representatives of the local Aboriginal community. No works are to continue until OEH provides written notification to the proponent.
5. All Aboriginal sites impacted by the project must have an Aboriginal Site Impact Recording form completed and be submitted to OEH's AHIMS Register within three months of being impacted.
6. An Aboriginal Cultural Education Induction Program must be developed for the induction of all personnel and contractors involved in the construction activities on site. Records are to be kept of which staff/contractors were inducted and when for the duration of the project. The program should be developed and implemented in collaboration with the registered Aboriginal parties.
7. The nine (9) AHIMS registered sites in the project area must remain in-situ unless any mine impact is unavoidable. Each site must be clearly marked and fenced to ensure such sites are protected from any unintended harm.
8. Aboriginal sites within the existing *Aboriginal Heritage Impact Permit (AHIP) # 2222 boundary* continue to be managed in accordance with the terms and conditions of that AHIP, and that such works must be undertaken in consultation with the Registered Aboriginal Parties.

## **FLOODING AND FLOODPLAIN ASSESSMENT**

Due to resource constraints, OEH has not been able to assess the possible effect of mine subsidence on flood behaviour.

## **THREATENED BIODIVERSITY ASSESSMENT**

OEH has reviewed the EA in relation likely impacts on threatened biodiversity by this project, particularly 'North Wambo underground – Longwall 10A Modification Flora Assessment' prepared for Wambo Coal Pty Limited by FloraSearch (August 2014), and 'North Wambo Underground Mine: Longwall 10A Modification – Fauna Assessment: Prepared for Wambo Coal Pty Limited' by Niche Environment and Heritage, both of which comprise Appendices E and F of the EA respectively.

OEH notes that proposed Longwall panel 10A occurs to the east of approved Longwall Panels 1 to 10, all of which target the Wambo coal seam, and that no above-ground works or clearing are required to mine this new panel of coal. Vegetation mapping of the area has identified two endangered ecological communities and one Endangered Population:

1. Hunter Lowland Redgum Forest in the Sydney Basin and New South Wales North Coast Bioregions (Community 2) (about 3 ha).
2. Central Hunter Grey Box – Ironbark Woodland in the New South Wales North Coast and Sydney Basin Bioregions (Community 3) (about 7 ha).
3. Endangered Population: *Acacia pendula* population in the Hunter catchment (occurs in three discrete clumps on the site).

The EA acknowledged that these areas of threatened biodiversity would be affected by mine subsidence. Section 6 of Appendix E of the EA discusses previous impacts of mine subsidence on different native vegetation communities on the Wambo Mine mining lease and concludes that mining Longwall Panel 10a would unlikely have a significant impact on threatened biodiversity and therefore that no biodiversity offsets are proposed as part of the project. However, the requirement for the provision of any biodiversity offsets is contingent on a development harming threatened biodiversity and is thus independent on the threshold of significance, and where the size of the offset is proportional to the amount of harm caused.

The statement (in Section 6.3 of appendix E of the EA) that vegetation condition of vegetation communities already undermined on the Wambo site does not appear to be based on the collection of site data, of floristic composition and structural formation measured from fixed quadrats or transects, and its analysis (by ANOSIM or cluster analysis, as appropriate) that was collected before and after undermining. In the absence of such data and analysis it appears premature to indicate that mine subsidence has not, and will not adversely affect vegetation condition on any time frame. Given the longevity of trees and shrubs in native vegetation communities it may be too early to tell if surface cracking, or surface tilting or ponding that is also often generated by mine subsidence, will adversely affect the successful recruitment and establishment of key species in the medium to long term, particularly in areas of *Melaleuca decora* low forest where periodic inundation may be required to maintain most of the component species. It would also be informative to know whether mine subsidence has adversely impacted any Slaty Red Gum (*Eucalyptus glaucina*) trees through the mining of Longwall Panel 8 of the Wambo North Underground Mine. The same also applies to impacts of mining on local threatened fauna where statements of 'negligible' harm do not appear to be supported by data.

OEH notes that cracks up to 10 centimetres across may be produced by mining Longwall Panel 10A and notes that such cracks may act as elongate pitfall traps for small animals (Lee and Abel, 1983). The EA does not appear to have adequately considered how these mine subsidence cracks may affect the local population of the threatened New Holland Mouse *Pseudomys novae-hollandiae*, for which there is a record about seven kilometres north-west of the longwall panel (EA Appendix F, Figure 3, c.f. Appendix 1, pg. 28 of Appendix F). Significant surface cracking in the habitat of small terrestrial animals is likely to lead to animal death and can also lead to fragmentation of habitat, changes to home ranges and changed access to food resources, which may compromise the on-going viability of subpopulations. OEH also notes that the proponent intends to use earthworks to fill the larger subsidence cracks and reshape the more mine-affected parts of the land surface. OEH recommends that this is done with consideration to risks and impacts on local threatened fauna.

OEH has identified some deficiencies in consideration of all records of threatened species in the local area, and in the timing of recent biodiversity survey work for this project. The impact of the proposal does not appear to have considered all threatened species with records in the NSW Wildlife Atlas within 10 kilometres of the site; particularly Slaty Red Gum (*Eucalyptus glaucina*), the Black-chinned Honeyeater *Melithreptus qularis* subsp. *qularis*, Flame Robin *Petroica phoenicea* and Olive Whistler *Pachycephala olivacea*. Similarly, threatened fauna records from biodiversity surveys conducted for DA 305-7-2003 MOD 13 are not included in Figure 3 of Appendix F, even though it was produced by the same environmental consultant (and it is not clear why these records are not yet in the NSW Wildlife Atlas). It is not clear why these records were omitted for consideration in the EA. The timing of the recent biodiversity surveys done for this project (10 June 2014 for fauna; and 13 June 2014) is not conducive to detecting all of the local threatened species. This is due to both time of year of flowering for seasonal herbs (such as *Diuris pedunculata*) and also that many animal species are either less active or are seasonally absent from the area in winter months (such as the New Holland Mouse). OEH acknowledges that the environmental assessment has relied on other recent biodiversity surveys done in recent years in their assessment, but does not include details as to why surveys this year were conducted in June for this project.

In conclusion, OEH acknowledges that the proposed modification does not plan to remove any native vegetation, and that the mining of the new longwall panel would be done using existing infrastructure. However, OEH notes that extraction of Longwall 10A is predicted to subside the current surface by up to 2.5 metres, and when combined with multi-seam mining is forecast to lower the local land surface by up to 9.7 metres, and this will also result in surface cracking, tilting and ponding. Given that the area above



Longwall Panel 10A includes part of a local threatened population and at least two endangered ecological communities and habitat for threatened fauna OEH recommends that any consent issued includes the requirement to adequately monitor impacts on local threatened biodiversity before and after undermining and that where any harm occurs to threatened biodiversity that it is offset appropriately and fully offset in accordance with OEH offsetting policy (OEH, 2014).

### **Recommended Conditions of Approval for Threatened Biodiversity**

1. That any vegetation clearing that impacts on threatened species, populations or communities, or their habitats, for this development outside any other existing consents must be offset in accordance with OEH offsetting policy. That is the '*NSW Biodiversity Offsets Policy for Major Projects*' (OEH, 2014);
2. That any monitoring programme to measure the impacts of mine impacts includes control sites in which data on vegetation composition and structure, soil surface features, and other variables as appropriate are collected in the same vegetation communities and in the same position in the landscape as the areas to be undermined; that data collection in all sites commences more than 12 months prior to undermining of any sites; and that appropriate statistical analysis of the data is conducted; and
3. That within four months of the date of this approval, the Proponent shall make publically available a copy of the Flora and Fauna Management Plan for Wambo (2005; and any subsequent revision); and copies of the reports generated by the Flora and Fauna Monitoring Program (as per Condition 48 in Schedule 4 of DA 305-7-2003) within six months of completion of each monitoring period on the proponent's website, to the satisfaction of the Director General (Department of Planning and Environment).

### **References:**

- OEH (2014) *NSW Biodiversity Offsets Policy for Major Projects*. September 2014. NSW Office of Environment and Heritage, Sydney. [www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm](http://www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm)
- Lee, F.T. and Abel J.F. Jnr. (1983) *Subsidence from Underground Mining: Environmental Analysis and Planning Considerations geological Survey Circular 876*. United States Department of the Interior: United States Geological Survey, Alexandria, Virginia, USA. <http://pubs.usgs.gov/circ/1983/0876/report.pdf>

