



Office of
Environment
& Heritage

Your reference: PA 09_0176 MOD1
Our reference: DOC13/14037; FIL13/4124
Contact: Robert Gibson, 4908 5851

Ms Elle Donnelly
Planner, Mining & Industry Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Ms Donnelly

RE: NARAMA WEST OPEN CUT MODIFICATION (PA 09_0176 MOD1), RAVENSWORTH OPERATIONS PROJECT– REVIEW AND REQUEST FOR FURTHER INFORMATION

I refer to your email dated 8 April 2013 seeking comment and recommended conditions of approval for the proposed modification to the Narama West Open Cut, which is part of the Ravensworth Operations Project.

The Office of Environment and Heritage (OEH) understands that the proposed modification involves the following:

- develop the Narama West Open Pit over an area of about 89 hectares to recover about 2.7 million tonnes of Run-Of-Mine coal from the Bayswater Seam over a two year period in an area used for overburden emplacement in the Narama mining area
- enlarge the Approved Operations Boundary of the Ravensworth Operations in the north by about two hectares in order to include the Newdell substation on Lot 10-0 DP 700429
- include additional commitments to the blast plan requirements
- change the peak vibration blast criteria from 30mm/s to 175mm/s with respect to protecting Aboriginal grinding grooves
- remove the requirement for a specific company's Aboriginal archaeologist in Condition 6.10.1 of PA 09_0176 for one from any company.

OEH has reviewed the Environmental Assessment (EA) for the proposed modification with regards to Aboriginal cultural heritage and threatened biodiversity and has found the information on Aboriginal cultural heritage provided so far to be insufficient. The main problems OEH has identified are the lack of details of Aboriginal cultural heritage investigations in the proposed expansion area for the Approved Operations Boundary, and the findings of those investigations. OEH has concerns regarding the lack of data to support statements in the EA about the predicted negligible impacts of increasing the blast peak vibration limit on the grinding groove site ('REA 86'). OEH also requires details on the Speckled Warbler record made in the Narama West project area during fieldwork on which the EA is based.

OEH's review of this proposal is provided in **Attachment 1**. OEH requires additional information from the proponent before it is able to complete its full assessment of this project before being able to provide recommended conditions of approval.

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

Yours sincerely

A handwritten signature in dark ink, appearing to read 'R Bath', with a long horizontal flourish extending to the right.

23 APR 2013

RICHARD BATH
Head – Hunter Planning Unit
Regional Operations

Enclosure: Attachment 1

ATTACHMENT 1

ASSESSMENT OF THE PROPOSED NARAMA WEST OPEN CUT MINE (PA 09_0176 MOD1) AND RECOMMENDED CONDITIONS OF APPROVAL

OEH has reviewed the Environmental Assessment titled 'Narama West Modification: Environmental Assessment for Xstrata Coal Pty Limited' dated April 2013 ('the EA'), including 'Appendix E: Ecological Impact Assessment', and 'Appendix H: Aboriginal Consultation Records'.

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

Aboriginal cultural heritage values

OEH acknowledges the significance of the local environment to the local Aboriginal community. OEH notes the existence of numerous registered Aboriginal sites in the immediate locality and acknowledges that the proposed modified project area contains landforms which have yielded a significant volume of evidence of Aboriginal occupation. These sites include artefact scatters, camp sites, grinding grooves, potential archaeological deposits (PADs) and culturally modified trees. There is also a strong possibility that currently undetected cultural material may be present within the project area in those areas where Aboriginal objects have not been previously identified and it is expected that the proponent would develop management strategies to appropriately address this matter.

Management of Aboriginal cultural heritage

OEH acknowledges the proponent proposes to manage any previously unidentified Aboriginal objects subject to the proposed modification in accordance with the approved Aboriginal Cultural Heritage Management Plan (ACHMP). OEH encourages the proponent to take this opportunity to review the content of the current ACHMP to ensure it addresses all the implications on Aboriginal cultural heritage for this project proposal.

Proposed amendment to approved operations boundary

OEH refers to the discussions between Ravensworth Operations and OEH on 27 July and 27 August 2012 concerning the Newdell substation augmentation works program and the location of the approved project boundary. It is noted that Aboriginal cultural heritage values are located in this area and the immediate surrounds. This includes Aboriginal sites 'LID6' (site # 37-3-0448) and 'LID4' (site # 37-3-0451) and associated PADs. It was understood that there was a possibility that the substation augmentation works program had the potential to disturb Aboriginal objects and this disturbance may occur outside of the currently approved 'project disturbance area' in an area to be protected and monitored only.

OEH also understands that the proponent committed to investigating this matter further in accordance with the approved ACHMP, in consultation with the Aboriginal community following advice from DP&I (in letter dated 21 August 2012) and prior to any augmentation works being undertaken. However, the current modification proposal has not included any additional details of the investigations undertaken or any of the results obtained in support of this proposal. It is therefore strongly recommended that the proponent provides additional details documenting the Aboriginal cultural heritage values associated with this additional area in support of the proposed development modification. This should include:

- details of any additional Aboriginal cultural heritage investigations undertaken within the proposed amendment to the approved operations boundary
- details of any Aboriginal sites and/or PADs associated with this area
- in the event that any additional development activities likely to occur in this area have the potential to, or, are likely to impact or harm Aboriginal objects, detailed management strategies developed in consultation with the registered Aboriginal parties for this project.

OEH therefore is not in a position to support the proposed amendment to the approved operations boundary until the above matters are addressed by the proponent.

Blast vibration assessment for site 'REA 86'

OEH refers to Section 6.1 and Appendix G of the EA. It is noted that the proponent has discussed the proposed amendment to incrementally increase the vibration limit at Aboriginal site: 'REA 86' (site #37-3-0982) with OEH during February 2013. Following the recent discussions on 21 February, OEH was still concerned with the details of the documentation provided by the proponent in support of the proposed increase to the vibration limit and the potential detrimental impact this proposal may have on the 'REA 86' site. OEH has raised the following issues which remain outstanding following these discussions:

- The case studies provided by the proponent provide non-specific examples with completely differing geo-matrixes (plasterboard vs sandstone) with limiting relevance to the discussion concerning site 'REA 86'.
- The proponent has indicated that there is limited relevant scientific literature available concerning this topic. However, a brief search of relevant international publications by OEH revealed numerous examples of studies targeting similar scenarios. Some studies have specifically targeted the degradation of sandstone following hysteresis and overlapping wave forms. OEH would welcome contact with the proponent to assist in providing further details of these studies.
- OEH requires a summation of relevant scientific literature to clarify/determine what acceptable vibration limit is appropriate in these or similar circumstances, in particular to limit any potential impact on site 'REA 86'.
- OEH understands that repeated blasting of a sandstone outcrop weakens the integrity of the sandstone matrix over time. Repeated blasts may cause damage to the surface of the stone, particular as a result of hysteresis in the sandstone structure. OEH therefore requires additional details and clarification from the proponent regarding the cumulative impact on the sandstone matrix by repeated blasting cycles.
- Editorial matter. OEH refers to Figure 1 of the letter from Terrock Consulting Engineers (dated 19 February 2013). Further information is required by the proponent to clarify the source of the data presented in this figure.

Given the above concerns, OEH is not in a position to support the current findings of the blast vibration assessment for site 'REA 86' and recommends that the above matters are appropriately addressed by the proponent prior to any consideration of the determination of the proposed modification proposal. Any additional information provided should also be appended to the approved ACHMP as required.

Local Aboriginal community consultation

Effective heritage management requires knowledge of values or cultural significance. An understanding of what makes a place culturally significant and why, enables appropriate decisions to be made about the management of that place. OEH recognises and acknowledges that Aboriginal people are the primary source of information about the value of their heritage and how this is best protected and conserved and must have an active role in any Aboriginal cultural heritage planning process.

OEH also encourages the proponent to maintain continuous consultation processes with the Aboriginal community for the entire life of the project and for all Aboriginal cultural heritage matters associated with the project area. As a general rule, gaps in the consultation process of six months or more will not constitute a continuous consultation process. Where a proponent envisages a gap of more than six months it is recommended that representatives of the local Aboriginal community are regularly informed of any progress.

THREATENED BIODIVERSITY

OEH understands that the footprint of the proposed Narama West Open Pit is about 89 hectares in size, of which about 72 hectares comprises rehabilitated overburden, and the remaining 17 hectares comprises disturbed vegetation beside the Bayswater Creek diversion channel (EA, s.7.8 & Appendix E). A Speckled Warbler, a declining woodland bird species listed as 'Vulnerable' under the *Threatened Species Conservation Act 1995* was reported on the boundary of the proposed open pit area during the site inspection in October 2012.

The Speckled Warbler was observed in rehabilitated woodland on overburden in vegetation not (yet) considered to contain suitable nesting habitat (EA, Appendix E, pg 22), but details of this record were not provided, particularly date, number of animals and location. OEH requires the provision of this information in order to complete its assessment of the impact of this proposal on threatened biodiversity before recommended conditions of approval can be provided.

