



Office of
Environment
& Heritage

DOC16/411442-2
DA 80/952 MOD 3

Ms Megan Dawson
Planning Officer, Resource Assessments
Department of Planning and Environment
megan.dawson@planning.nsw.gov.au

Dear Ms Dawson

RE: GLENDELL MINE MODIFICATION (DA 80/952 MOD 3) REVIEW OF ENVIRONMENTAL ASSESSMENT AND PROVISION OF RECOMMENDED CONDITIONS OF CONSENT

I refer to your e-mail dated 17 August 2016 inviting the Office of Environment and Heritage (OEH) to review a proposed modification to the Glendell Mine and provide recommended conditions of consent. OEH understands that the proposed modification involves the realignment of 2.7 kilometres of the 132 kilovolt Ausgrid powerline to move it to the west of the expanding Glendell Mine.

OEH notes that the powerline realignment has been designed to avoid areas of known Aboriginal cultural heritage value but will require the clearance (primarily by lopping) of riparian vegetation. The realigned powerline easement would require period maintenance to keep the wires clear of branches. The Environmental Assessment is short on some information in relation to impacts on threatened species, however, in this case these may be addressed through the recommended conditions of consent. Further comment and advice is provided in **Attachment 1**.

If you require any further information regarding this matter please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4927 3154.

Yours sincerely

31 AUG 2016

RICHARD BATH

**Senior Team leader Planning, Hunter Central Coast Region
Regional Operations**

Enclosure: Attachment 1

ATTACHMENT 1: OEH REVIEW OF THE PROPOSED GLENDELL MINE (MOD 3)

The Office of Environment and Heritage (OEH) has reviewed the report, '*Glendell Mine 132 KV powerline relocation Modification 2 Environmental Assessment*' (EA), prepared by Hansen Bailey, and dated August 2016. OEH's review focused on Aboriginal cultural heritage and threatened biodiversity matters. These matters are discussed below.

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

OEH has reviewed the Aboriginal heritage *Mitigation and Management* outcomes outlined in Section 8.2.3 of the EA. OEH supports the outcomes detailed below. Additional project related impacts should be managed in accordance with the mine's existing ACHMP (2014) and Mt Owen's internal Ground Disturbing Permit (GDP) Process.

Specific mitigation measures to be implemented to avoid inadvertent impacts to Aboriginal heritage (from Section 8.2.3 of EA):

- Site MCO OS-10 is to be avoided by the activities associated with the powerline relocation.
This includes not establishing any new access tracks within MCO OS-10. The existing track to the house/sheds can be used without any grading or widening;
- MCO OS-10 is to be bordered by temporary fencing with a five metre buffer and 'Do Not Enter' signs attached;
- Induction and training is to occur to ensure MC OS-10 is not accessed or disturbed by the construction workforce;
- In the event that any project related works will impact Sensitive Areas 1 to 6, Mt Owen will undertake appropriate investigation in accordance with the DECCW 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*;

Based on this review OEH is satisfied that the management measures proposed are adequate and appropriate given the nature of the archaeological record and the range of activities to be undertaken within the modification area. OEH has no additional concerns with respect to Aboriginal cultural heritage management for this project.

THREATENED BIODIVERSITY ASSESSMENT

As stated in Section 8.1 of the EA, the relocated powerline easement would require the clearing of: up to 0.06 hectares (ha) of derived grassland for the installation of foundations of new poles; temporary clearing of up to 0.06 ha of Central Hunter Swamp Oak Forest at poles P02 and P03; and the lopping of 1.4 ha of Central Hunter Swamp Oak Forest and 0.65 ha of Hunter Valley River Oak Forest at three creek crossings to prepare a new easement for the new powerline. The easement of the relocated powerline would then be maintained, which involves on-going tree trimming in the areas of new creek crossing.

The proponent wishes to follow the same pathway as the Ravensworth East Mine – Modification 6 – Tailings Pipeline project (MP09 0176 MOD3, DA 305-11-01 MOD6 & DA 52-03-00 MOD6) which was determined on 16 February 2016 (Department of Planning & Environment, 2016). This project, on three adjacent mine project areas involved the clearance of about 10 semi-mature River Oak trees (*Casuarina cunninghamiana*) along the 11 kilometre length of new pipeline. A flora and fauna survey was conducted along the route of the new pipeline in mid-2015, before the EA was submitted with the development modification. The River Oak trees did not form part of any endangered ecological community, nor were found to support any threatened species. For the Ravensworth modification, OEH recommended that 10 new River Oak trees were planted along the bank of Bowmans Creek for each River Oak tree removed. This was accepted by the proponent. It resulted in a new consent condition (Condition 33A of Schedule 4: 'Compensatory Planting') that requires 'The Applicant shall plant and maintain, until established, 10 River Oak trees for every River Oak tree removed during construction

of the tailings pipeline under MOD 6.' An 'established River Oak tree' was considered to be two or more metres in height.

In the case of the current modification, no recent threatened species survey work of the new powerline route appears to have been undertaken. Instead the proponent reviewed local records of threatened species in the Wildlife Atlas and the used the results of survey work for the Glendell Mine undertaken in December 2006 for the preparation of the EA for the Glendell MOD 2 project (Umwelt, 2007: p. 2.4). The impact of the proposed tree trimming required by the new modification was assessed by conducting a 'seven-part test' of significance, as per Section 5A of the *Environmental Planning and Assessment Act 1979*. The EA concluded that the proposed would not have a significant impact on threatened biodiversity and that no offset was required but instead proposed the following mitigation measures (as described in Section 8.1.3 of the EA):

1. Field identification by an appropriately qualified person of the *Acacia pendula* and *Eucalyptus camaldulensis* adjacent the southern existing track will occur prior to any works to be undertaken in the vicinity;
2. A due diligence assessment of each mature tree will be undertaken at the lopping stage:
 - Ten (10) trees will be planted for each mature tree within the Hunter Valley River Oak Forest vegetation type that is severely lopped within Bowmans Creek in the two mature tree areas;
 - Two (2) nesting boxes will be erected for any tree hollow identified that has to be lopped; and
3. Any tree lopping along Bowmans Creek and Swamp Creek will be undertaken manually with chainsaws to allow the root structures to remain in situ; and
4. Designation of a 4 ha area that was previously approved for disturbance in the Glendell EA to be managed by Mt Owen Pty Limited consistent with the commitments of the adjacent HMA. This area will be identified and incorporated into the Mt Owen Complex BMP; and
5. Rehabilitation of relevant areas of removed powerline.

In the absence of a recent threatened species survey (no more than five years old) it is possible that species such as Grey-crowned Babblers may now nest in trees within the path of the proposed relocated powerline easement. Typically this would be assessed by survey ahead of the preparation of an EA. In this case, given the context of the project, this may be addressed through recommended conditions (see below).

The four hectare area of land on the Glendell mine site is located along Betty's Creek and is mapped as 'Central Hunter Swamp Oak Forest'. It is located adjacent to the Habitat Management Area that was established as an offset for the previous Glendell Mine modification (DA 80/952 MOD 2). Therefore, this riparian vegetation likely contains similar values to the Swamp Oak to be cleared to make way for the new section of powerline easement.

The rehabilitation planned for land temporarily cleared for the construction of new power poles is not clearly described (Section 4.4.4 of the EA). OEH acknowledges that this comprises up to 0.06 ha of Central Hunter Swamp Oak Forest, therefore, OEH recommends that this is part of the project is conditioned to set minimum expectations of what the vegetation resulting from the rehabilitation will likely develop into.

Conclusions and Recommended Consent Conditions

OEH acknowledges that the proposed powerline relocation will involve the temporary clearance of up to 0.06 ha of Central Hunter Swamp Oak Forest, and lopping of 1.4 ha of Central Hunter Swamp Oak Forest and 0.65 ha of Hunter Valley River Oak Forest. Mitigation factors for the project include the planting of River Oaks in a ratio of 10:1 for each River Oak that is substantially lopped, and the provision of an area of four hectares of Central Hunter Swamp Oak Forest on the lower reaches of Betty's Creek to be managed as part of the Mt Owen Complex Biodiversity Management Plan. While OEH would typically require a copy of the full assessment to be provided (in this case the seven-part test) and for the assessment of biodiversity values to be based on biodiversity surveys no more than five years old, OEH considers (based on landscape context and available data), and that the woody vegetation is being offset (by compensatory plantings, rehabilitation and the provision of an on-site offset) that the

assessment has been sufficient to enable OEH to complete its review. This is also based on the following recommended consent conditions for threatened biodiversity matters:

1. That the mitigation measures described in Section 8.1.3 of the EA are included in any consent issued.
2. That the threshold of when a River Oak Tree is considered to have been 'severely lopped', and thus requires compensatory planting, is set at loss of half or more of the crown biomass.
3. That the temporary clearing of up to 0.06 ha of Central Hunter Swamp Oak Forest is replanted or naturally regenerated with a suitable mix of canopy, mid-storey and groundcover species (as described in the Section 3.2.3 of Umwelt (2007) and Peake (2006)) so that within 5 (five) years of clearance that the rehabilitated sites have at least 80 per cent of the plant species found in Central Hunter Swamp Oak Forest found elsewhere on the Mt Owen Complex and that it has the tree density and spacing that will likely mean that it will form a forest within twenty (20) years.
4. That impacts on any additional threatened species found during survey ahead of tree lopping or clearing must be suitably offset in accordance with OEH offsetting policy (OEH, 2016).

References:

Department of Planning & Environment (2016) Ravensworth East Mine – Modification 6 – Tailings Pipeline. Determined 16 February 2016. NSW Department of Planning & Environment, Sydney. http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7392

OEH (2016) *NSW Biodiversity Offsets Policy for Major Projects*. NSW Office of Environment and Heritage, Sydney. www.environment.nsw.gov.au/resources/biodiversity/140672biopolicy.pdf

Peake, T.C. (2006) *The Vegetation of the Central Hunter Valley, New South Wales. A Report on the Findings of the Hunter Remnant Vegetation Project*. Hunter – Central Rivers Catchment management Authority, Paterson.

Umwelt (Australia) Pty Limited (2007) Appendix 9: Ecological assessment. In (Umwelt (Australia) Pty Limited *Environmental assessment for Modification of Glendell Mine operations. August 2007*. Umwelt (Australia) Pty Limited, Teralba.