



Office of  
Environment  
& Heritage

Your reference: DA 251-09-01 MOD 12  
Our reference: DOC16/20420  
Contact: Michael Todd (03) 5021 8915

Ms Phillipa Duncan  
Senior Planner  
Resource Assessments  
Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Dear Ms Duncan,

**Re: Ginkgo Mineral Sands Mine - Southern Extension Modification (DA 251-09-01 MOD 12)**

Thank you for your electronic mail to the Office of Environment and Heritage (OEH) dated 15 January 2016 inviting comment on this proposed modification to the Ginkgo Mineral Sands Mine. OEH's response is limited to statutory matters relating to application of the *National Parks and Wildlife Act 1974* and the *Threatened Species Conservation Act 1995*.

We have considered the Environmental Assessment (EA) for the proposed modification and also information from a presentation made by Cristal Mining and Resource Strategies staff to OEH in Albury on 27 November 2015. Attachment A lists recommendations in regard to the impacts on biodiversity, including threatened species, and Aboriginal cultural heritage (ACH), which are summarised below.

The two key issues regarding the current modification relate to:

1. The proposed offset is considered by OEH to be inadequate; particularly the lack of like for like vegetation communities, and the poor recorded condition of the proposed offset area.
2. The assessment and mitigation of impacts on the Bolam's Mouse and in particular the absence of identified habitat for this species in any of the offsets associated with the Ginkgo Mineral Sands Mine.

This assessment has also raised two concerns regarding the assessment method undertaken for the two areas identified in this modification for which we seek further discussion with your Department:

- A lack of information associated with the compliance action undertaken for the 333 hectares described in the EA as "*existing surface development that has not been accounted for in previous Ginkgo Mine biodiversity offset area calculations.*" Further clarification on the outcomes of this compliance action, and any offset penalties associated with the clearing of vegetation outside the original consent area is sought.
- Why the assessment of the remaining 32 hectares was not done in accordance with the NSW Biodiversity Offsets Policy for Major Projects (and in particular using the Framework for Biodiversity Assessment (FBA)). It is our understanding that this project does qualify as a Major Project, and that modifications to such projects should also use the FBA as a standardised methodology to determine the quantum of both the overall impacts and of any offset required to mitigate these impacts.

OEH notes that the Murray Basin Mines Flora and Fauna Environmental Management Plan and the Crayfish Offset Management Plan will also need to be updated to include any new areas of clearing and additional offset, and would expect that this will form a condition of approval.

The impacts on ACH within both the areas of proposed modification are within the area of the s87 Permit and s90 Consent issued in 2003 as part of the original approval. Whilst the conditions within these documents are adhered to, OEH has no additional requirement for existing ACH sites. The current Cultural Heritage Management Plan should be implemented if any further discoveries of ACH are made within the clearing associated with the southern extension.

If you have any further questions on these matters please contact me on 6022 0606 or by email at [peter.ewin@environment.nsw.gov.au](mailto:peter.ewin@environment.nsw.gov.au).

Yours sincerely

Handwritten signature of Peter Ewin, consisting of the letters 'PE' followed by a horizontal line and the date '15/2/16'.

**PETER EWIN**  
**Senior Team Leader, Planning**  
**Regional Operations Group**  
**Office of Environment & Heritage**

Encl: Attachment A – OEH Comments on and Recommendations for the Gingko Mineral Sands Modification (MOD 12)



## **Attachment A: OEH Comments on and Recommendations for the Ginkgo Mineral Sands Modification (MOD 12)**

### **Biodiversity**

#### **Assessment Method**

The application identifies two areas of vegetation to be cleared as part of the modification. The majority (333 hectares) has already been cleared, and is represented in the EA as *"existing surface development that has not been accounted for in previous Ginkgo Mine biodiversity offset area calculations."* We understand that this unapproved clearing was subject to compliance action by your Department, although advice to manage an implied additional offset has not been sought of OEH. The EA does not describe the relationship between this compliance action and the current offsets being sought and it is unclear if any penalty is to be contained in the offset calculation. Additionally, the advice that OEH provides on biodiversity impacts during the assessment process is based upon the extant biodiversity and surveyed information. OEH advice was not sought for the compliance action, and relevant information is now partly unavailable for the current offset calculation as result of the clearing. Your clarification of this matter is requested.

The remaining 32 hectares within the modification has yet to be cleared and much of the information within the EA refers to this area. It is noted that neither the area to be cleared nor the proposed offset has been assessed in accordance with the NSW Biodiversity Offsets Policy for Major Projects (and in particular through use of the Framework for Biodiversity Assessment (FBA)). The use of the FBA would provide a greater certainty of the adequacy of the proposed offset, and is to be preferred.

Instead, the EA addresses the adequacy of the proposed offset by using the *Principles for the Use of Biodiversity Offsets in NSW* (Table 10 Pages 31-33). OEH does not consider that this is the appropriate method to address the modification, as these principles are clearly identified on the OEH website as *"intended to be used for proposals other than those for state significant development."* This current modification is part of a project that we would consider is state significant under the current planning legislation. We seek your advice on a direction to the proponent to apply this method.

#### **Offset Adequacy**

Without a reliable metric assessment such as the FBA it is difficult to determine the adequacy of the proposed offset. The proponent has incorporated OEH advice to improve the design and area of proposed offset, however the overall quality of the offset offered is still not considered adequate.

There are a number of instances where there has not been a like-for-like offset proposed, particularly for the vegetation type of the cleared area. Appendix C, page 3-5 (3.6.3.2 Vegetation Communities) states that the two dominant communities in the area that have already been cleared, were 135 hectares of Black Oak-Pearl Bluebush woodland (LM107) and 106 hectares of Pearl Bluebush shrubland (LM138). Neither of these vegetation communities occur in the offset area proposed for this modification.

Additionally we note that the Subject Area was mostly considered to have been in good condition (Appendix C, Figure 7), in contrast with large areas of the offset proposal area which are considered to be in poor condition (Appendix C, Figure 8). More than one third of the proposed offset (461.5 of 1255 hectares) is of derived vegetation communities, which have reduced biodiversity values and increased management requirements. Pre-clearance surveys demonstrated that the Subject Area had high numbers of fallen logs (Appendix C, Table C-1), further supporting the observation that this area was high quality fauna habitat.



## **Bolam's Mouse**

The Endangered Bolam's Mouse (*Pseudomys bolami*) has been recorded very rarely in the vicinity of the Ginkgo Mineral Sands Mine - one record from a rehabilitation area of the mine in late 2013 (Atlas of NSW Wildlife) and the two records from within the assessment of the current modification in November 2015 (Appendix B, page 24). This is despite a number of fauna surveys being conducted within ML1504 between 2001 and 2015 (Appendix D, page 25), though it is noted that the survey for the modification was undertaken a year after the surveys of the proposed offset (Appendices B and D). Given that this species was captured in Black Oak-Pearl Bluebush woodland it is likely that further habitat has been cleared without adequate assessment for this species. Previous surveys of the cleared area showed that it had high numbers of fallen logs (Appendix C, page C-1), similar to what was found at site D2a where Bolam's Mouse was captured in November 2015 (Appendix B, page 24).

By assuming that a range of different vegetation communities can provide habitat for Bolam's Mouse, the authors have combined Bluebush shrubland and derived grassland. This has been used to give the impression that the modification area and the offset area are comparable in extent of what is described as "Grassland/ Shrubland habitat and Black Oak Woodland" (Appendix D, Table 9). However, there is evidence to suggest that it is Black Oak with Pearl Bluebush understorey that provides habitat for Bolam's Mouse. There is, as of yet, no evidence to suggest that it occurs in anything else other than the one record within a rehabilitated section of the Ginkgo mine.

As these vegetation communities do not occur in the proposed offset areas, OEH considers that the loss of Bolam's Mouse habitat is not being offset. The position that the species probably occurs in neighbouring areas or in the Southern Mallee offset, is not supported by available evidence. Bolam's Mouse is a Species Credit species within the FBA, so if this assessment method had been implemented for the modification it would have been a requirement to identify an offset that contains the species, not just potential habitat.

OEH considers the impacts of the proposal on this species have not been adequately addressed and an offset has not been offered for the loss of its habitat. It is recommended that further consideration, including additional targeted survey, of Bolam's Mouse be made to identify appropriate offsets, either prior to approval of the modification, or as a condition thereof.

## **Winged Peppercreess**

Offset Area 1 includes part of a large population of the Endangered Winged Peppercreess (*Lepidium monoplocoides*) (Appendix E, page 32) which extends into the adjoining Travelling Stock Route. Though the inclusion of part of this population within the offset offers the potential to enhance the species' long term survival, the impact associated with the construction of a fence along the eastern boundary of the offset needs to be considered. Mitigation for any disturbance here, including pre and post implementation assessment, and long-term monitoring of the population is recommended.

## **Management Plans**

Approval of the modification will trigger amendment of the Murray Basin Mines Flora and Fauna Environmental Management Plan (EMP) and the Crayfish Offset Management Plan (OMP). This will require inclusion of management arrangements for the additional offset area(s), specific protection for Bolam's Mouse and the minimisation of impacts on Winged Peppercreess. Where there are inconsistencies between the current OMP and the actual on-ground management activities (including water point management) OEH considers that our recent comments on the OMP should prevail.

**Aboriginal Cultural Heritage**

OEH has undertaken a review of the archaeological assessment for the Ginkgo Mineral Sands Mine Southern Extension Modification (Appendix G of the EA). The Aboriginal Cultural Heritage Assessment Report (ACHAR) has been developed to identify and manage ACH constraints and also to support the application for an Aboriginal Heritage Impact Permit (AHIP), or variation to the existing AHIP: s87 Permit (#1810) and s90 Consent (#1811).

We have reviewed both the Consent and the Permit issued in 2003 that cover the proposed extension areas and contain the previously recorded sites.

The proponent should adhere to the recommendations contained in the EA and the unexpected finds protocols and heritage management programme and plans, as contained within the existing EMP and Cultural Heritage Management Plan for mine operations at Ginkgo Mineral Sands Mine.

It is an offence under state and federal legislation to knowingly, or through ignorance, destroy, damage, compromise or in any other way modify Aboriginal and Historic Cultural heritage values without appropriate permits, consents and authorities.

If surface and sedimentary disturbance of the upper most 'cultural units' (those geological units which may contain archaeological deposits), is within the existing disturbance footprint and consent area there should be no additional harm to cultural heritage values.

Should surface and sedimentary disturbance occur outside the current disturbance footprint and consent area, then additional archaeological assessments should be undertaken, and if necessary, the conditions of approval modified to reflect the findings of these assessment. This is in relation to both the mine proper and associated activities and infrastructure.

