



## Office of Environment & Heritage

Our reference: DOC13/35503  
Contact: Renee Shepherd  
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Director, Mining and Industry Projects  
Major Projects Assessment  
Department of Planning and Infrastructure  
GPO Box 39  
SYDNEY NSW 2001

Attn: Kane Winwood

20 August 2013

Dear Mr Winwood,

**Re: Northparkes Mine Step Change Project (MP 11\_0060) Publicly Exhibited  
Environmental Assessment**

I refer to an email received on 8 July 2013 seeking comment from the Office of Environment and Heritage on the exhibited Environmental Assessment for the Northparkes Mine Step Change Project.

Details of the OEH response to items relating to biodiversity are provided in **Attachment A**.

The current survey effort for the Pine Donkey Orchid and the Sloane's Froglet, species listed under the *Threatened Species Act 1995*, is inadequate within the area to be disturbed. OEH supports the proponent's proposal to undertake further surveys to determine whether these species are present. A suitable offset strategy will be required to be developed if these species are recorded.

The current biodiversity offset proposal for the Grey Box Grassy Woodland EEC is inadequate and the reliance on the restoration of derived native grassland to a woodland state contains risks. OEH requests that an additional area of the EEC should be secured to adequately offset the area being removed and that the quantum of the offset should be determined using a robust assessment methodology. A Biodiversity Offset Management Plan should detail the restoration targets for the offset site to clearly indicate how the ecological community will be restored over time.

The Bimble Box – White Cypress Pine Woodland vegetation type is not offset under the current biodiversity offset strategy. It is requested that a robust assessment methodology be used to determine the quantum of offset this vegetation type requires to account for its removal at the Project site.

Further details on the conservation mechanism proposed for the offset site are required. Details are required of how appropriate funding will be secured in the medium to long term to deliver agreed management actions, and how the responsibility of the delivery of management actions will be captured over time.

OEH accepts the findings within the Aboriginal cultural heritage assessment and supports the proposed recommendations as outlined in **Attachment B**. This response does not provide comment on the consultation component of the assessment.

OEH would like to acknowledge the standard of the environmental assessment for this proposal with regards to biodiversity and Aboriginal cultural heritage. The agency would also like to acknowledge the assistance of the proponents and Umwelt in providing additional information when requested in a timely and comprehensive manner.

If you have any questions regarding the items within this response please contact myself on 02 6883 5313 or Renee Shepherd on 02 6883 5358.

Yours sincerely

A handwritten signature in black ink, appearing to read 'S. Ardill'.

**SONYA ARDILL**  
**Senior Team Leader Planning**  
**North West Region**

Attachment A: Biodiversity

Attachment B: Aboriginal cultural heritage

**Attachment A: Biodiversity****Northparkes Mines Step Change Project  
Environmental Assessment Public Exhibition  
Office of Environment and Heritage Response**

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**Acronyms used within this document:**

BOS – biodiversity offset strategy

DNG – derived native grassland

EA – environmental assessment

EEC – endangered ecological community

OEH – Office of Environment and Heritage

**Summary**

The impacts of the Project on biodiversity values involve the disturbance of 239 ha including:

- 23 ha of Grey Box Grassy Woodland EEC;
- 15 ha of Grey Box Grassy Woodland DNG EEC;
- 0.28 ha of White Box – Yellow Box – Blakely's Red Gum Woodland EEC;
- 12 ha of Bimble Box – White Cypress Pine woodland;
- 1.7 ha of Bimble Box – White Cypress Pine woodland exotic understorey;
- 25 ha of plantations;
- 39 ha of exotic grassland;
- 112 ha of cultivated land; and
- 11 ha of disturbed land

Potential impacts to threatened species include:

- Removal of known habitat for two threatened fauna species, the Superb Parrot and Grey-crowned Babbler;
- Removal of likely habitat for one threatened amphibian (Sloanes Froglet), nine threatened bird species, and four threatened mammal species; and
- Removal of potential habitat for six threatened flora species (including the Pine Donkey Orchid found within the wider study area), four threatened mammals and 20 threatened bird species.

**1. The survey effort undertaken in the Project area is currently inadequate for the Pine Donkey Orchid and Sloane's Froglet.**

**Background**

The Flora & Fauna Assessment provides detail regarding surveys that have been undertaken across the wider study area however relatively little survey was undertaken in the project disturbance area. OEH acknowledges the advantages of the wider approach taken however this should not exclude a more detailed assessment of the actual Project site once the boundary had been determined. As a consequence uncertainty exists regarding the potential impact to two threatened species; the Pine Donkey Orchard and Sloane's Froglet.

The Pine Donkey Orchid (*Diuris tricolor*) has been confirmed as occurring in the wider study area with 234 plants recorded approximately two kilometres from the impact area. The Flora & Fauna Assessment states that only 2.7 ha of potential suitable habitat area for this orchid had been surveyed with up to 37 ha of suitable habitat occurring within the impact area.

Sloane's Froglet (*Crinia sloanei*) has also been confirmed as occurring in the wider study area approximately 500 metres from the impact area. The Flora & Fauna Assessment states that 130 ha of potential suitable habitat for this frog occurs within the impact area. As concluded in the EA, this species may potentially be significantly affected by the development.

A footnote to Table 7.10 indicates that further surveys will determine the presence of and/or refine the extent of habitat of these two species which will then be considered as part of the implementation of the BOS. OEH is supportive of this proposal.

**Recommendation**

- 1.1** Further survey for the Pine Donkey Orchid and Sloane's Froglet is required. Should these species be confirmed as occurring at the Project site a suitable offset strategy will be required for both the orchid and the froglet.

**2. The proposed biodiversity offset strategy does not adequately offset impacts of the removal of Grey Box Grassy Woodland EEC.**

**Background**

The EA states that 23 ha of Grey Box Grassy Woodland EEC and 15 ha of derived native grassland (DNG) will be removed from the Project area. The biodiversity offset strategy (BOS) proposes to conserve 10 ha of existing woodland and actively regenerate 96 ha of DNG.

When considering the appropriateness of offset proposals OEH refers to the principles for the use of biodiversity offsets in NSW. Principle 9 states that offsetting decisions should be based on the quantitative assessment of the loss in biodiversity from the clearing and the gain in biodiversity from the offset. Whilst it is noted that the proponent has discussed this item in Section 7.4.1.1 of the Flora and Fauna Assessment, Table 7.10 does not adequately document the quantification of the offset as required. The current BOS does not provide the quantum of offset required for the Grey Box Grassy Woodland EEC. The conservation of 10 ha of woodland at the Kokoda offset site does not provide an acceptable offset ratio (less than 0.5:1) in the short term and biodiversity outcomes that would be achieved from the proposed regeneration and restoration of woodland would only occur in the medium to long term.

The potential application of Principle 10 (of the offset policy discussed above) to this development proposal could be considered by the proponent. Whilst a “like for like” offset is preferable for ecological communities it should be noted that where this outcome is difficult to achieve offsets may include vegetation communities of a similar type or a type of a higher conservation value.

Concerns exist around the ability to restore DNG to functioning ecological communities as discussed in (3) below. If further investigations at Kokoda indicate that a smaller area of DNG is capable of restoration than originally proposed then the quantum of the offset should be adjusted appropriately to ensure the biodiversity impacts are adequately offset.

### **Recommendation**

- 2.1** An additional area of Grey Box Grassy Woodland EEC should be secured to satisfy biodiversity offset requirements. The quantum of the offset should be determined using a robust assessment methodology. The offset strategy may include the conservation of a vegetation type/s of equal or higher conservation value to the Grey Box Grassy Woodland EEC.

### **3. Restoration of derived native grassland to woodland at the Kokoda offset site requires a clear restoration plan.**

#### **Background**

The EA indicates that the Kokoda offset site has areas of derived native grassland that have a natural recovery potential ranging from poor to high. Section 7.3.4 of the Flora and Fauna Assessment indicates that areas of poor recovery potential will be planted to assist regeneration success. It is acknowledged that the proponent has implemented a successful tree planting program at the Northparkes mine site. However, the proposal to establish an ecological community at Kokoda in a different landscape context raises some concerns. Reconstruction of ecological communities involves high risks and uncertainties for biodiversity outcomes and is generally less preferable than other management strategies, such as enhancing existing habitat.

Principle 7 of the NSW offset policy states that offsets must be enduring. OEH supports the intention of the proponent to develop a Biodiversity Offset Management Plan to detail the planned improvements to the offset site as explained in Section 7.3.4. OEH requests that the plan should include a detailed restoration plan with clear targets and outcomes that will assist in the establishment of an ecologically sustainable Grey Box Grassy Woodland EEC. Targets should be created for ecologically appropriate time periods (eg. 2, 5, 10 years, etc) and the plan should also include contingencies should these outcomes not be achieved.

It is stated within Section 7.4 that management areas will be refined for the regeneration of DNG areas to woodland. OEH is supportive of this proposal and any changes to the area suitable for regeneration/restoration should be taken into account when determining the final quantum of offset and its ecological composition.

### **Recommendation**

- 3.1** A Biodiversity Offset Management Plan should be developed for the biodiversity offset strategy. OEH requests input into the development of the plan. The plan should include a detailed restoration plan with clear targets and outcomes that will assist in the establishment of an ecologically sustainable Grey Box Grassy Woodland EEC.

#### **4. The proposed biodiversity offset strategy does not offset impacts of the removal of Bimble Box – White Cypress Pine Woodland.**

##### **Background**

The EA states that 12 ha of Bimble Box – White Cypress Pine Woodland and an additional 1.7 ha of this vegetation type with an exotic understorey will be removed by the development. The current BOS does not propose to offset this vegetation type. It is requested that this vegetation type be offset by a quantum that is determined by a robust assessment methodology. As discussed in (2) above a “like for like” offset outcome is preferable but an offset into vegetation communities of a similar type or a type of a higher conservation value is acceptable.

##### **Recommendation**

- 4.1** The Bimble Box – White Cypress Pine Woodland vegetation type should be offset at a quantum to be determined using a robust assessment methodology. The offset may include the conservation of a vegetation type/s of equal or higher conservation value to the Bimble Box – White Cypress Pine Woodland.

#### **5. Further details on the conservation mechanism proposed at the Kokoda offset site are required.**

##### **Background**

As discussed above in (3), Principle 7 of the NSW offset policy states that offsets must be enduring and permanent. OEH notes that the conservation mechanism proposed by the proponent is a restrictive covenant that binds the landowner to implement a biodiversity management plan. It is understood that this covenant would operate in perpetuity and could only be released or varied with the consent of the Minister administering the *National Parks and Wildlife Act 1974*.

OEH is unclear about how this mechanism provides security for the resourcing required for the ongoing management of the offset site, particularly given that large areas of DNG are being proposed for restoration and it may take decades to achieve an acceptable biodiversity outcome. In addition it is unclear how this mechanism will reflect who is responsible for the management actions over time. For example how will the covenant deal with changes in ownership of the development, and who will be responsible for the management actions beyond the life of the mine?

OEH's preferred offsetting mechanisms include

- a BioBanking Agreement;
- addition to the NSW national parks estate; or
- purchase and retirement of biodiversity credits under the BioBanking scheme.

Second order priority offsetting mechanisms that OEH may consider include:

- establishment of a conservation agreement with the Minister for the Environment under the NPW Act;
- establishment of a trust agreement with the Nature Conservation Trust under the *Nature Conservation Trust Act 2001*;
- establishment of a planning agreement by a planning authority under the *Environmental Planning and Assessment Act 1979*; or
- establishment of a property vegetation plan under the *Native Vegetation Act 2003*.

## **Recommendation**

- 5.1** Further details are required regarding the mechanism to secure in-perpetuity conservation of the biodiversity offset. Details are required of how appropriate funding will be secured in the medium to long term to deliver agreed management actions, and how the responsibility of the delivery of management actions will be captured over time.

**Attachment B: Aboriginal Cultural Heritage****1. The Northparkes Aboriginal cultural heritage assessment (Central Queensland Cultural Heritage Management 2013) is considered adequate.****Background**

The primary cultural heritage assessment objectives of the Northparkes Mine Step Change Project (Appendix 13 pp. 6-7) have been adequately executed. OEH notes and acknowledges that Northparkes Mine is committed to comprehensive and systematic survey coverage of the footprint area and areas previously unsurveyed. Previously a sample strategy of impact areas was undertaken using a predictive model that involved an adequate review of previous studies local to the area integrated with a landscape assessment. The landscape assessment also included environmental descriptions of the mine easement whereby five areas (zones) were identified and used to assess the presence of Aboriginal heritage sites. The most sensitive of these, Bogan River and Goonumbla Creek zones, are in the most part to be avoided.

Impacts from the proposed mine on Aboriginal heritage sites consists entirely on recordings of isolated finds (individual stone artefacts), and one scarred tree. The high number of isolated finds (17 no.) across the environmental zones of flat terrain, Limestone forest, and Disturbed lands is consistent with each zone having a low sensitivity ranking confirming the previous predictive statement that site frequency and density would be low across these zones.

The results of the Aboriginal Heritage Assessment have identified the principle themes for the Aboriginal Heritage Management Plan (AHMP) post approval. The assessment report has adequately presented the expected outputs for the proposed AHMP and demonstrated that the Aboriginal people registered in the project have been adequately involved in the assessment and the development of the proposed AHMP.

**Recommendation**

- 1.1** OEH accepts the assessment findings and supports the proposed recommendations.