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15 February 2024

Polina Golberg  
Department of Planning Industry and Environment

Dear Ms Golberg

**Subject: Gunlake Quarry Continuation Project (SSD-12469087) MOD 1  
Response to Modification Report**

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Thank you for the opportunity to review and provide comments in relation to the Modification report prepared by EMM for the Gunlake Quarry Continuation Project.

The Modification report has been reviewed in detail by Council's Environment and Biodiversity Assessment Officer. As a result, there are a number of issues that Council wishes to raise. These are:

- Age of the original Biodiversity Survey upon which the Biodiversity Assessment has been based.
- Inappropriate timing of the BAM plots.
- Appropriateness of the survey location noting that approximately two thirds of the subject land has been disturbed and subject to a level of clearing.

A detailed assessment has been provided as an attachment.

Nevertheless, if the matters identified in Council's assessment can be suitably addressed, Council acknowledges that the proposed Modification has the potential to provide improved environmental outcomes and an improvement to the biodiversity values of the site.

Should you require any further information, please contact Council's Environment and Biodiversity Assessment Officer, Dr Brian Faulkner on (02) 4823 4519.

Yours faithfully

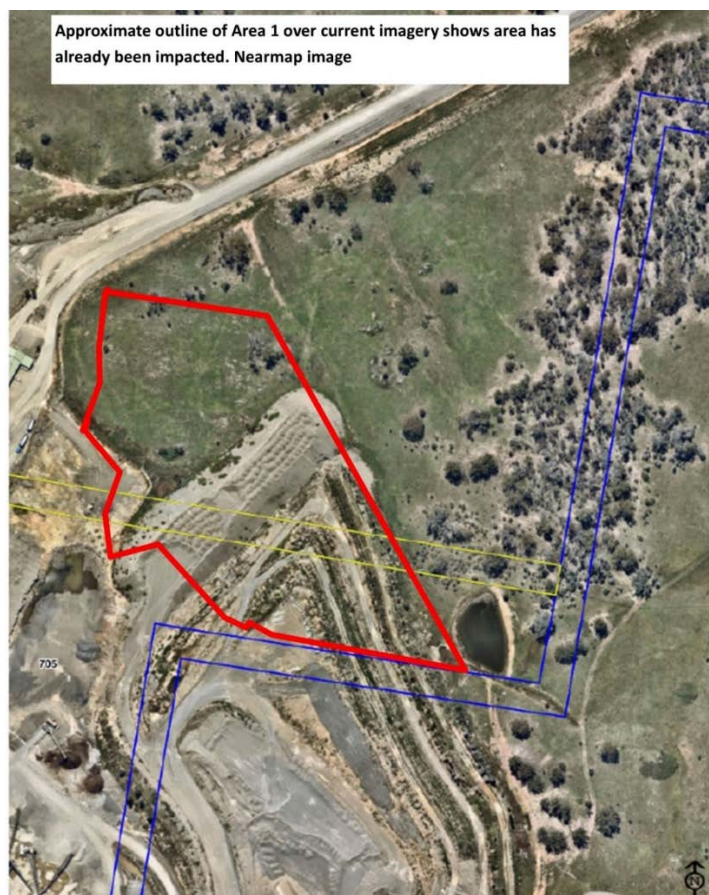
A handwritten signature in dark ink, appearing to read 'SA M', is written over a horizontal line.

Scott Martin  
**Director Planning & Environment**

## ATTACHMENT

### COMPONENT 1: Biodiversity Values of land identified as Area 1

The plant community type is “assumed to be *PCT 3376 Southern Tableland Grassy Box Woodland* and this appears to be correct.



The part of the land identified as Area A is to be entirely cleared and this will involve removal of approximately 4.52 hectares of PCT 3376. In fact, approximately 2/3 of this area appears to have already been cleared (refer image above).

#### Modifications that require further biodiversity assessment

According to the NSW Department of Climate Change, Energy the Environment and Water (DCCEEW) website:

*Under Part 7 of the Biodiversity Conservation Act 2016 (NSW), biodiversity assessment requirements apply to planning applications to modify proposed developments or activities.*

*If the consent or approval authority decides that a modification will increase the impact on biodiversity values, a Biodiversity Development Assessment Report is required.*

*This applies irrespective of whether the original project was approved under the Biodiversity Conservation Act 2016 (NSW) or former planning provisions.*

*Proposed modifications that result in direct or indirect impacts on biodiversity values not assessed and authorised in the original approval are considered to increase impacts. This includes:*

- impacts to different biodiversity values to those assessed in the original approval*
- expanded impacts.*

Original surveys appear to have been undertaken in 2009, which is 14 years prior to the current report. Biodiversity assessment reports are considered to have a valid lifespan of 5 years maximum.

Threatened species listings have changed significantly since the time of previous surveys. For example, Hoary Sunray *Leucochrysum albicans* variety *tricolor* was gazetted as a threatened species under the NSW BC Act on 27 January 2023 and Key's Matchstick Grasshopper *Keyacris scurra* on 17 July 2020. Both are listed as potential candidate species in the BAM calculator when the data provided for Area 1 are entered. These biodiversity values were not assessed in the original approval.

Threatened species have not been adequately identified and assessed for this site and activity, under the original assessments undertaken previously.

Biodiversity Offset Credits may be required for threatened species, eg Key's Matchstick Grasshopper.

### **BAM Plots**

The report states that three BAM plots were used to collect data for the BDAR. The number of plots is appropriate for the size of area and the vegetation zones.

These plots were set up and assessed on 5 May 2023 (page 16 of the BDAR). This is not an appropriate time of year for conducting biodiversity assessments in Box Gum Grassy Woodland & Derived Grassland communities in the Goulburn Mulwaree LGA.

- Many grassland forb species are dormant and not easily detectable at the is time of year. This includes for example *Diuris* (several species), *Calochilus*, *Wurmbea*, *Burchardia*, *Hypoxis*, *Thysanotus*, *Arthropodium*, *Dichopogon*, *Tricoryne*, *Thelimytra* & *Microseris*.
- May is also not the optimum time of year for identifying many locally occurring grasses as they will have completed their annual cycle and will not be in flower at this time of year.

According to NSW Department of Planning Industry & Environment *Biodiversity Assessment Method 2020 Operational Manual – Stage 1 (Page 20)* “the assessment of ground cover should be conducted at a time when indigenous vegetation is most abundant and is easiest to identify.” In the local area, the optimum time for surveys of grassland communities is in spring and early summer, ie September to December.

Inappropriate survey time has significant implications for the VIS (Vegetation Integrity Score) values generated by the BAM calculator. Using the plot data supplied, the BAM C shows that the VIS for the grassland area is 11.4 (verified). The BDAR has correctly identified that if a CEEC has a VIS of less than 15, biodiversity offset credits are not required. The BDAR has identified on this basis that no credits are required for clearing of 4.06 hectares of native vegetation.

VIS is influenced both by species richness (number of species) and by % cover. Both of these may have been significantly underestimated by conducting the biodiversity field assessment at an inappropriate time of year. The BDAR shows that the vegetation zone identified as PCT 3376 Remnant Woodland has a VIS of 58.9 and has calculated that an area of 0.46 hectares will be cleared, requiring the proponent to obtain and retire 17 ecosystem credits. However, this too may be an underestimate.

A secondary concern is that, as noted approximately 2/3 of the subject land has already been cleared and developed and it is likely that the remainder of Area A and immediately adjacent areas have been significantly disturbed. Weed infestation are likely to be increased because of this. Amount of High Threat Weed cover reduces the final VIS score. The BDAR aims to assess the biodiversity values of Area A as it would have been prior to disturbance, but it is unlikely that this can be done by using BAM plots in the area as it now exists.

There is an interesting error in BAM Site – Field Survey Forms, Plot AA01, AA02 & AA03. The PCT is recorded on the forms as being “3376 Blue Gum Bangalay – Turpentine/Cheese Tree – Lilly Pilly moist forest on coastal flats of the northern Sydney Basin.” However, species recorded as being present in the BAM plots are generally those that would be expected on this land and it is reassuring that there were no records of Sydney Blue Gum, Bangalay, Turpentine, Cheese Tree or Lilly Pilly.

Another potential concern is that a SIX maps image of the subject land from 11 December 2013 appears to show a significant number of trees being present prior to clearing.

The BDAR maps only a relatively small area of remnant woodland being present on the subject land and considers most of it as being grassland cleared of canopy trees (Figure 4.1) but based on the SIX maps image this is likely to be a significant underestimate. As the vegetation zone identified as being remnant woodland has a VIS of 58.9, the number of offset credits may have been significantly under-calculated by assuming cleared areas were grassland with a lower VIS score when they should actually be assessed as woodland.

For comparative purposes, an extract from SIX Maps is presented below for comparison with Figure 4.1 of the BDAR, as reproduced below.







**Figure 4.1 of the BDAR reproduced for comparative purposes.**

## Summary of Concerns with the BDAR

Threatened species have not been adequately identified and assessed for this site and activity, under the original assessments undertaken previously. Biodiversity Offset Credits may be required for threatened species.

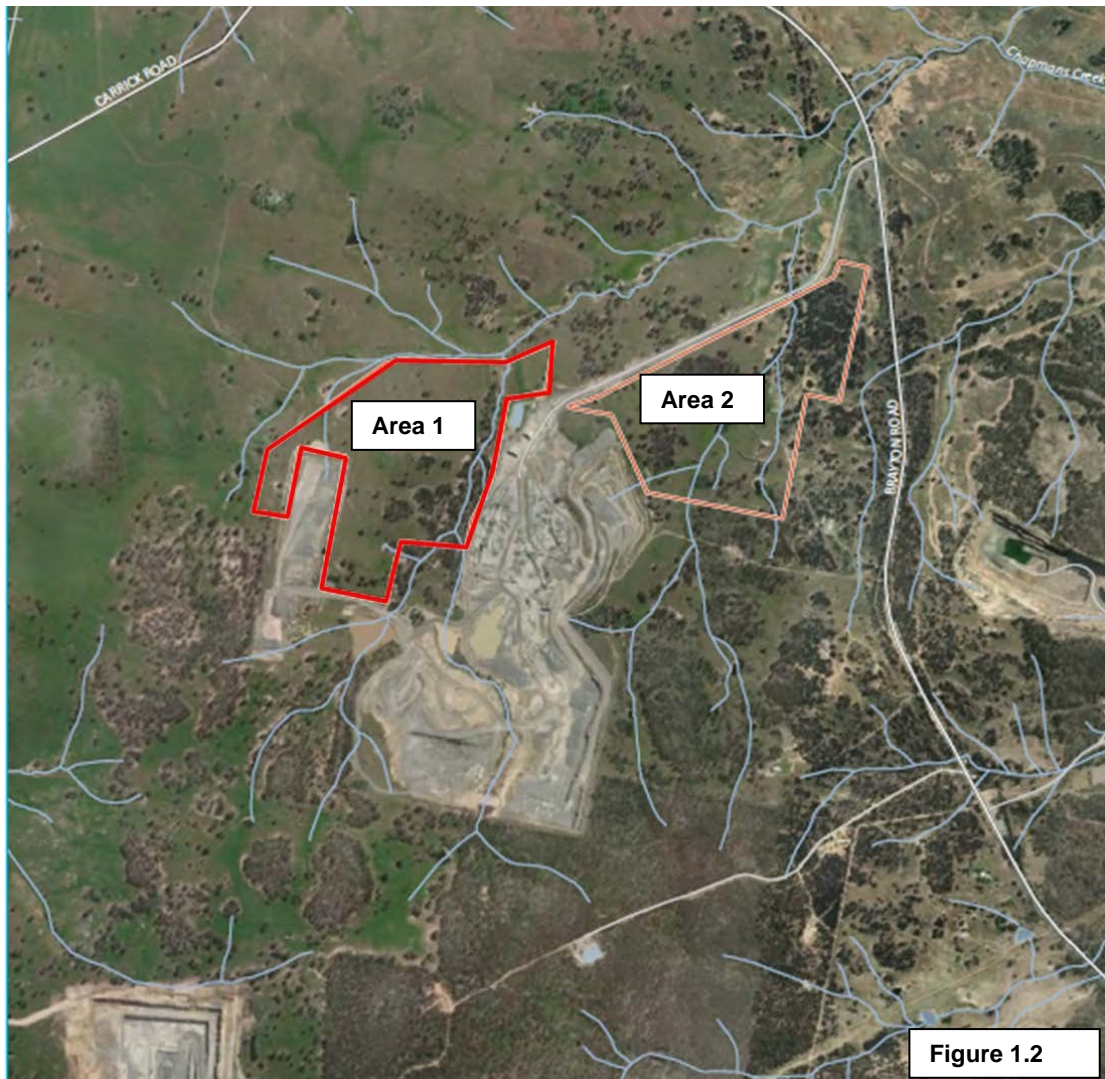
BAM plot data has not been collected at the appropriate time of year. Native vegetation species richness and % cover in the impact area are both likely to have been significantly underestimated.

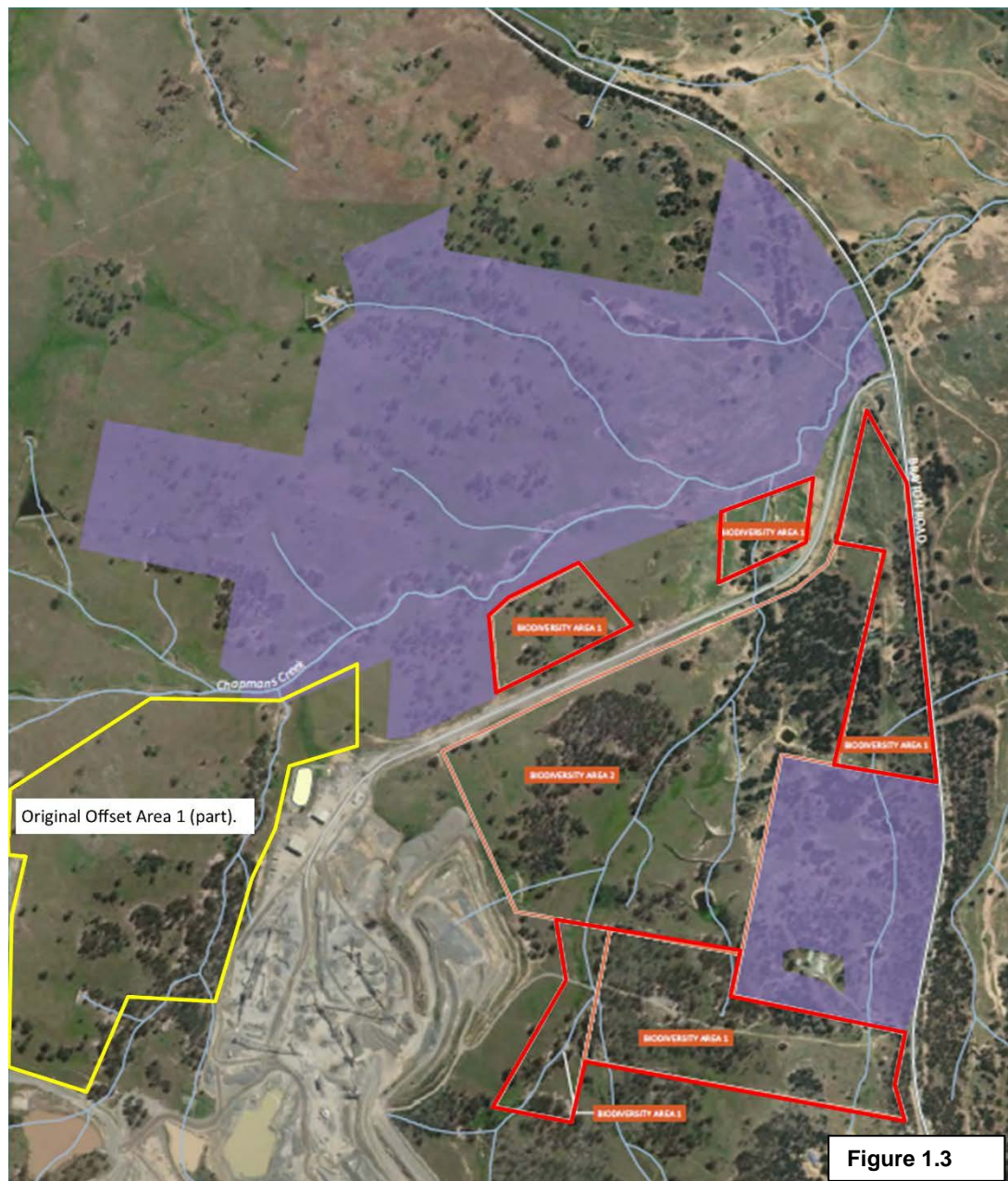
Locations of BAM plots in or close to a significantly disturbed area may not be valid if the intention is to calculate biodiversity values of Area A prior to any disturbance. Weed infestations are likely to have increased with disturbance.

Based on available SIX Maps imagery, the area of the vegetation zone identified as woodland appears to have been underestimated. It is likely that the VIS for 4.06 hectares of grassland and 0.46 hectares of remnant woodland have been significantly underestimated and this may have resulted in inaccuracy in calculating required Biodiversity Offset Credits. The requirement to retire 17 Ecosystem Credits for PCT 3376 Southern Tableland Grassy Box Woodland (or equivalent) is likely to be a significant underestimate.

## **COMPONENT 2: Biodiversity values of proposed Biodiversity Conservation Areas**

Under its original Development Consent, Gunlake is currently required to “*protect, enhance and maintain the Biodiversity Areas described in Table 7 and shown conceptually on the plan in Appendix 5, to achieve the objectives in Table 7 to the satisfaction of the Secretary and OEH.*” Two Biodiversity Areas are involved, described as Area 1 and Area 2, and shown in Figure 1.2 on page 5 of the report (reproduced below). The proposed modification is to remove Area 1 and replace this with an alternative configuration, as shown in Figure 1.3 of page 6 of the report. Original Area 2 is to be retained.





Justification is provided for proposed revision of Biodiversity Area 1:

- The original area is heavily infested with Serrated Tussock, making it challenging to manage and restore. The new proposed area is less infested and will be easier to manage and restore.
- Comparison of credits generated by each area suggests the new area will generate significantly more credits, as shown in Table 4.1 of the report (and reproduced below).



If the proposed modification is approved the applicant commits to establish a formal Biodiversity Stewardship Site comprising the revised Biodiversity Offset Areas.

Page 22 of the report states:

*“The BSA will be prepared and submitted to the Credit Supply Taskforce within 12 months of the approval of the modification.”*

Based on the information provided, it is likely that the proposed revision will lead to a better environmental outcome and an improvement in biodiversity values of the site. This is contingent on the proposed Biodiversity Areas, as shown in Figure 3 of the report, being established and managed as a formal Biodiversity Stewardship Site.

As there is already a significant infestation of Serrated Tussock in the locality, it is important that the areas be managed appropriately, including development and implementation of a weed management program.

It is also essential that all fencing in and around the proposed conservation areas is wildlife friendly. There have been recent sightings of Koalas near the Marulan area, and there is therefore the likelihood of Koalas at times being present. Barbed wire fences are a significant hazard to Koalas (and other wildlife including bats and gliders) and it is strongly recommended that barbed wire must not be used in or adjacent to remnant woodland areas.