



Office of
Environment
& Heritage

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SSD_6395

Ms Melissa Anderson
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Dear Melissa

Bobs Farm Sand Mine Project (SSD_6395)

I refer to your e-mail dated 22 November 2018 in which the Department of Planning and Environment invited the Office of Environment and Heritage (OEH) to review and comment on the Environmental Impact Statement for the proposed Bobs Farm Sand Quarry.

OEH has reviewed the EIS and relevant annexes and appendices: Annex C - *Bobs Farm Sand Project Aboriginal Cultural Heritage Assessment* (AECOM, 2015); Appendix A of Annex C - *Bob's Farm Geomorphological Assessment of Proposed Sand Mining Site* (Fanning 2014); Annex F – *Surface Water Management Plan: Nelson Bay Road, Bobs Farm, NSW* (Martens consulting engineers, 2015); and Annex N – *Biodiversity Assessment Report for Proposed Sand Mine at Bobs Farm, NSW* (Wildthing Environmental Consultants, 2018).

OEH's recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**. If you require any further information regarding this matter, please contact Steven Cox, Senior Team Leader Planning, on 4927 3150 or via email at rog.hcc@environment.nsw.gov.au.

Yours sincerely

Sharon Molloy 25/01/2019

SHARON MOLLOY
Director Hunter Central Coast Branch
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Enclosure: Attachments A and B

Attachment A

OEH's recommendations

Bobs Farm Sand Quarry (SSD_6395)

1. OEH recommends that the proponent clarify the development footprint of the project
2. Changes are required to the BioBanking calculator file, and the calculation re-run.
3. OEH requests that copies of the field data sheets and GIS shapefiles created for the assessment are provided to the Newcastle office of OEH to meet the requirements of the Biodiversity Assessment Report.
4. OEH is satisfied that the assessment has met OEH's project-specific assessment requirements for this project, and no further assessment is required for impacts of the project on Mahony's toadlet (*Uperoleia mahonyi*) and the Tall Rustyhood (*Pterostylis chaetophora*).
5. OEH recommends that the biodiversity offset package for this project is defined so that it can be assessed against the offsetting requirements of the project .
6. OEH recommends that subsurface testing be undertaken in the relatively undisturbed Aeolian soil profiles associated with the Ridge 1 transgressive dune sheet identified in the geomorphological and archaeological assessments and at the previously recorded Aboriginal sites BF-SC4-14 and BF-SC5-14. Testing should be undertaken prior to project approval under the provisions of an Aboriginal Heritage Impact Permit.
7. OEH recommends that the results of the subsurface testing should inform the development of an Aboriginal cultural heritage management plan. The Management Plan should be developed in consultation with the registered Aboriginal parties and OEH.
8. OEH recommends that protocols for the management of previously unrecorded Aboriginal objects should be included in the proposed Management Plan.
9. OEH has no comment on flooding issues and no further flooding assessment is required.

OEH's detailed comments

Bobs Farm Sand Quarry (SSD_6395)

1. The proposed development footprint should be clarified

OEH notes that the development footprint of the proposed sand mine varies between Annexes in the Environmental Impact Statement, particularly in the southern portion of the site where orchid species have been recorded along the easement.

Recommendation 1

OEH recommends that the proponent clarify the development footprint of the project.

Biodiversity

2. The BioBanking credit calculator will need to be re-run to correct the landscape value and vegetation zones

OEH has identified errors in the BioBanking calculation that will need to be addressed and the calculator re-run. The required changes are in the vegetation change within the outer assessment circle, the change in connectivity and the removal of the on-site offset from the vegetation zones.

The change in the percent of native vegetation cover in the outer assessment circle differs between the submitted biobanking calculator file and the Biodiversity Assessment Report (BAR; pages 71-75) which is presented in Annex N of the Environmental Impact Statement. OEH has reviewed the project using a Geographic Information System (GIS) and agrees with the reduction stated in the BAR.

The change in connectivity is given as >30m-100m in the calculation file and BAR. However, an assessment by OEH using GIS shows that the woody vegetation border along the northernmost extent of the quarry area will be about 15 metres wide. This results in the change in connectivity falling into the >5-30m category.

The vegetation zones used in the calculator file includes 3.44 hectares in Management Zone 1. This is proposed as part of the offset package and must therefore be assessed in a separate BioBanking calculation. This will reduce the total area covered by the BioBanking calculation.

Recommendation 2

Changes are required to the BioBanking calculator file, and the calculation be re-run.

3. Field data sheets for the eight BioBank plots are required to meet the requirements of the BioBanking Assessment Methodology

In order to meet the requirements of a Biodiversity Assessment Report, copies of field data sheets and the GIS files used for the assessment are required to be submitted to OEH.

Recommendation 3

OEH requests that copies of the field data sheets and GIS shapefiles created for the assessment are provided to OEH to meet the requirements of the Biodiversity Assessment Report.

4. OEH is satisfied with the assessment of Tall Rustyhood and Mahony's toadlet

OEH identified potential impacts on two threatened species (Tall Rustyhood (*Pterostylis chaetophora*) and Mahony's toadlet (*Uperoleia mahonyi*)) as project-specific requirements in the Secretary's Environmental Assessment Requirements. The proponent considered both species

in the BAR and, after consultation with experts on both species, neither species was recorded in the Study Area of the project following appropriate survey. OEH is satisfied that the assessment has met OEH's project-specific assessment requirements for this project.

Recommendation 4

OEH is satisfied that the assessment has met OEH's project-specific assessment requirements for this project, and no further assessment is required for impacts of the project on Mahony's toadlet (*Uperoleia mahonyi*) and the Tall Rustyhood (*Pterostylis chaetophora*).

5. The biodiversity offset package is unclear

Chapter 15 of the Biodiversity Assessment Report provides some details of the biodiversity offsetting strategy for the project without describing the location of all proposed offsets, or the values that they contain. OEH is unable to assess the adequacy of the proposed offsets for the project.

Recommendation 5

OEH recommends that the biodiversity offset package for this project is defined so that it can be assessed against the offsetting requirements of the project.

Aboriginal Cultural Heritage

6. Aboriginal cultural values and archaeological resource require further assessment

The landforms within a five-kilometre radius of the project area have yielded a significant volume of evidence of Aboriginal occupation and numerous previously registered sites have been recorded associated with these landforms. These Aboriginal sites include middens, isolated finds, artefact scatters, open camp sites, potential artefact deposits and culturally modified trees. Several highly significant subsurface sites in sand dunes in other project areas were only identified by test excavation. These sites comprised shell, artefact and animal bone in sand dunes and were identified by test excavation in other project areas.

The *Bob's Farm Geomorphological Assessment of Proposed Sand Mining Site* (Fanning 2014) (the Geomorphological Assessment) revealed a very high potential for preservation of archaeological materials in the areas with dense undergrowth and minimally disturbed Aeolian soil profiles associated with the Ridge 1 transgressive dune sheet.

The *Bobs Farm Sand Project Aboriginal Cultural Heritage Assessment* (AECOM 2015) (the ACHA) noted that five Aboriginal sites comprising shell midden material were recorded in this area during the archaeological field survey for this project. The ACHA identified that two of the five sites (BF-SC4-14 and BF-SC5-14) were in relatively undisturbed areas and have high potential for intact subsurface archaeological deposit. Archaeological survey focused on areas of previous disturbance (tracks and easements) and only 2.7 hectares out of a total project area of 53 hectares were surveyed.

Cultural values identified in the field by the registered Aboriginal parties were that the elevated Ridge 1 dune field forms part of a culturally significant Songline for local Worimi people and would have been a focal resource area for Aboriginal people camping or passing through the project area. The dune crests may have been used as campsites and lookouts. The ACHA states that subsurface evidence of past Aboriginal use of this area is likely to be of low to moderate archaeological significance. OEH considers that this rating for the relatively undisturbed Aeolian soil profiles associated with the Ridge 1 transgressive dune sheet is not justified.

Subsurface test excavation is required to identify and interpret the Aboriginal occupation and cultural heritage significance of the area to inform the application for the Bobs Farm Sand Project State Significant Development. OEH recommends that a subsurface test excavation program be developed to identify potential *in situ* subsurface midden deposits in consultation with the registered Aboriginal parties. Testing for the presence of subsurface shell midden deposit should be undertaken in the minimally disturbed Aeolian soil profiles associated with the Ridge 1

transgressive dune sheet identified in the geomorphological and archaeological assessments, including the previously recorded Aboriginal shell midden sites BF-SC4-14 and BF-SC5-14, under the provisions of an Aboriginal Heritage Impact Permit (AHIP) prior to project approval.

Recommendation 6

OEH recommends that subsurface testing be undertaken in the relatively undisturbed Aeolian soil profiles associated with the Ridge 1 transgressive dune sheet identified in the geomorphological and archaeological assessments and at the previously recorded Aboriginal sites BF-SC4-14 and BF-SC5-14. Testing should be undertaken prior to project approval under the provisions of an Aboriginal Heritage Impact Permit.

7. An Aboriginal cultural heritage management plan should be developed

OEH recommends that an Aboriginal cultural heritage management plan (the Management Plan) should be developed in consultation with the registered Aboriginal parties and OEH to manage and mitigate all known surface and subsurface Aboriginal sites within the project area. The results of the subsurface testing (Recommendation 4) should inform the proposed Management Plan.

Recommendation 7

OEH recommends that the results of the subsurface testing should inform the development of an Aboriginal cultural heritage management plan. The Management Plan should be developed in consultation with the registered Aboriginal parties and OEH.

8. The Management Plan should include protocols for potential unidentified Aboriginal sites within the project area

The ACHA states that those areas of remnant bushland that were not inspected may contain mature native trees with cultural scars as well as likely potential for subsurface Aboriginal archaeological material to be present. These areas will be destroyed by the proposed sand mining activities in this area. Therefore, protocols for the management of previously unrecorded Aboriginal midden and artefact sites and unidentified Aboriginal scar trees should be included in the Management Plan.

Recommendation 8

OEH recommends that protocols for the management of previously unrecorded Aboriginal objects should be included in the proposed Management Plan.

Flooding and Flood Risk

9. OEH satisfied that there are no flooding or flood risk issues in relation to this project

OEH has reviewed the Environmental Impact Statement (Bobs Farm Sand Mine EIS, AMOS Resource Management, Nov 2018) and is satisfied that there are no flooding or flood risk issues in relation to this project.

Recommendation 9

OEH has no comment on flooding issues and no further flooding assessment is required.

