Our ref: DOC21/554869-3
Your ref: SSD-10418

Ms Tegan Cole

Senior Environmental Assessment Officer
Energy, Industry & Compliance
Planning and Assessment Division
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Dear Ms Cole

Mount Pleasant Optimisation Project (SSD-10418) – Review of Response to Submissions Report

I refer to your e-mail dated 5 July 2021 in which the Planning and Assessment Division (P&A) of the Department of Planning, Industry and Environment (the Department) invited Biodiversity and Conservation Division (BCD) to provideadvice in relation to the Response Submissions Report for the Mount Pleasant Optimisation Project (SSD-10418).

BCD have reviewed the Response to Submissions Report in relation to biodiversity and flood risk matters identified in BCD's letter of 25 March 2021, and meeting with the proponent on 23 June 2021.

BCD'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 Crick, Acting Senior Team Leader Planning, on 4927 3248 or via email at huntercentralcoast@environment.nsw.gov.au

Yours sincerely

Joe Thompson
Director Hunter Central Coast Branch
Biodiversity and Conservation Division

Date: 23/7/21

Enclosure: Attachments A and B

BCD's recommendations

Mount Pleasant Optimisation Project (SSD-10418) – Review of RTS

Biodiversity

1. BCD recommends that the existing offsets for the Mount Pleasant Mine are secured by Biodiversity Stewardship Sites.

2. The proponent should provide a list of all Plant Community Types considered as potential matches to on-ground vegetation that were matched to PCTs 483 and 618 and describe the selection process to determine the final PCT match

Matters of National Environmental Significance

3. BCD recommends that additional information on the assessment of Matters of National Environmental Significance is provided to enable the bilateral assessment to be completed.

Flooding and flood risk

4. A water management plan should be developed for the project that includes monitoring of water and riparian vegetation condition to establish baseline conditions and assess impacts of changes to surface and groundwater flows to Sandy Creek riparian ecology including freshwater mussels noted by the local indigenous community. Appropriate trigger values and compensatory works should be developed.

5. Clarification is required regarding installation of the seepage flow management measures for the fines emplacement area and ED2. Management measures need to be developed to ensure that surface and seepage flows are contained on site for all stages of the project including post rehabilitation.

6. Further water quality testing should be undertaken outside of areas currently impacted by the project. Water quality trigger values should be based on levels which will provide adequate protection to the ecology and users of Sandy Creek.

7. During detailed design, a risk assessment should be undertaken for all proposed dams. The design of any spillway should ensure that the spillway and embankment do not cause risk to downstream receivers in the event of a local flood event. New or altered dams which are found to pose risk to life will require referral to Dam Safety NSW.

Attachment B

BCD's detailed comments

Mount Pleasant Optimisation Project (SSD-10418) – Review of EIS

Biodiversity

1. The proposed biodiversity offset proposal is not consistent with the NSW biodiversity offset scheme

Attachment H 'Biodiversity Impact Reduction and Offset Report' of the Response to Submissions Report (RTS Report) proposes to use the existing offset used to satisfy the requirements of the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) to offset most of the biodiversity impacts of the project. The EPBC Act offset for this project is a requirement of EPBC Act Referral 2011/5795..

Recommendation 1

The proponent should provide an offset that meets the requirements of the *Biodiversity Conservation Act 2016.*

2. Alternative options for the matching of on-ground vegetation PCTs 483 and 618 are required

Table 9 'Plant Community Type Assignment' in the revised Biodiversity Development Assessment Report (BDAR) includes a shortlist of Plant Community Types (PCTs) for on-ground vegetation that was matched to PCT 1691, PCT 1602, PCT 1605, PCT 1606 and PCT 1655. It also includes other data requested by BCD in our letter dated 25 March 2021. However, a short-list of possible PCTs for on-ground vegetation matched to PCT 483 and PCT 618 has not been provided, nor has a discussion on the PCT-matching process.

This is an issue for the vegetation matched to PCT 483 in particular. This PCT is not listed as occurring in the Hunter Interim Biogeographic Regionalisation for Australia (IBRA) subregion. It therefore differs in attributes, such as the extent cleared, and associated threatened species, that are linked to PCTs in the Hunter IBRA subregion.

Recommendation 2

The proponent should provide a list of all Plant Community Types considered as potential matches to on-ground vegetation that were matched to PCTs 483 and 618 and describe the selection process to determine the final PCT match.

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Matters of National Environmental Significance

3. Further information is required on the assessment of Matters of National Environmental Significance

Chapter 7 of the revised BDAR presents the Commonwealth Assessment of the impacts of both options of the Northern Link Road component of the project. The assessment includes additional information which will be required for the bilateral assessment; however, the following details will still be needed so that BCD can comply with Commonwealth requirements of the bilateral assessment process:

- A copy of the Matters of National Environmental Significance (MNES) Protected Matters Search that was undertaken at the start of the assessment. BCD acknowledges that the details of the Protected Matters Search have been provided in Table 28 in the revised BDAR, but BCD is required to see the actual Protected Matters Search Results.

- Details of any offsets proposed in relation to residual significant adverse impacts, how they provide a like-for-like outcome, and how any land-based offsets will be secured. This must include an analysis of how the proposed offsets will contribute to the conservation and long-term protection of the species and communities. This must include an assessment of any indirect impacts that may require offsetting. The assessment of the adequacy of impacts for this project will require the route of the Northern Link Road to be decided, and for the offset land to be assessed by the BAM. The text on pages 77 to 78 of the Response to Submissions Report, and Section 7.6 of the revised BDAR do not provide this information.

BCD is satisfied that the following MNES matters have been addressed:

- The statement of about the potential impact to any of the matters listed in the Referral Decision (dated 26 August 2020) was provided for six MNES entities on pages 75 to 77 of the Response to Submissions Report

- The assessment of 'significant impact criteria' for each threatened species and ecological community has been provided in Sections 7.4.1 to 7.4.7 of the revised BDAR

- A summary of the results of the BAM assessment of the impacts or likely impacts of the project on MNES has been provided in Section 7.5 of the revised BDAR. The ecosystem, and species credits generated for impacts to MNES is provided in Table 31 of the revised BDAR. The nature and significance of the impacts must be discussed in the context of any relevant Conservation Advice Recovery Plans and Threat Abatement Plans has been provided in Sections 7.4.8 and 7.4.9 of the revised BDAR.

- Sufficient detail of survey effort for EPBC Act-listed threatened species in relation to BAM requirements, and, where available, Commonwealth survey requirements.

- All EPBC Act -listed species identified in the EPBC Act referral have been assessed by the BAM

Recommendation 4

BCD recommends that additional information on the assessment of Matters of National Environmental Significance is provided to enable the bilateral assessment to be completed.

Flooding and flood risk

4. Impacts to Sandy Creek and downstream areas have not been adequately assessed

Sandy Creek is an ephemeral waterway with relatively low flows and many small branches. Impacts to such a system from catchment disturbance and interception of water can be significant and the proposed modification would increase interception over three times of that already approved. The response to submissions indicates that environmental water flows are managed because the *Water Management Act 2000* is designed to ensure sufficient water remains in the environment. This does not address potential water related impacts from the project that could include reduced availability of water for riparian vegetation, changes to flow regimes and impacts to aquatic biodiversity. The Secretary's Environmental Assessment

Requirements (SEARs) dated 17 February 2020 and additional Office of Environment and Heritage (OEH) SEARS dated 8 January 2020 require an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water related infrastructure and other water users.

Table 34 in Section 8.1.2 of the EIS lists baseflow reduction to Sandy Creek as 2 megalitres per year. The groundwater assessment, Appendix C, indicates that total indirect take is 4 megalitres per year when intake from alluvium is included. Sensitivity testing undertaken in response to requests by DPIE Water and NRAR indicate that the impact of mining may result in further increases to these values. It is stated that 6 megalitres per year baseflow reduction continues post-rehabilitation of the mine due to the depth of the final void. This base flow reduction may have substantial implications for Sandy Creek and these have not been assessed. Sandy Creek is used as farm water supply. The Wanaruah Local Aboriginal Land Council note the importance of Sandy Creek for water supply and as home to freshwater mussels. Local landholders have also noted significant reductions in water availability due to mine infrastructure.

Baseflow is considered critical in agricultural land as it provides water for perennial crops and pastures and assists in drought resilience. Permanent removal of baseflow on an ongoing basis, continuing post-mining can have a significant impact on the hydrological cycle, productivity and drought resilience of the land.

Figure 3 of Appendix I of the EIA (Agricultural Impact Assessment) shows that the Sandy Creek Catchment includes strategic agricultural land, strategic equine land and strategic viticulture land.

Appendix E of the response to submissions indicates water available to the Gilgai agricultural property could be reduced by up to 15%. This is substantially greater than the 5% reduction quoted in the original EIS and highlights the importance of consideration of local scale impacts together with global scale impacts. Similar or greater reductions in flow to Sandy Creek immediately downstream of the mine can be expected and the impacts of these have not been assessed.

The response to submissions indicates that stream condition is currently inspected and monitored by the proponent, however; the nature of this monitoring program is not disclosed and no baseline information has been provided on stream bank condition or riparian corridor condition in the Sandy Creek area.

Recommendation 5

A water management plan should be developed for the project that includes monitoring of stream and riparian vegetation condition to establish baseline conditions and assess impacts of changes to surface and groundwater flows to Sandy Creek riparian ecology including freshwater mussels noted by the local indigenous community. Appropriate trigger values and compensatory works should be developed.

5. Modelling outputs of overflow from environmental dam 2 (ED2) in the surface water assessment are inconsistent with water quality monitoring results and issues raised by stakeholders

The response to submissions outlines that monitoring occurred in Sandy Creek prior to construction of ED2 and the fines emplacement area, however; the water quality results show that samples were taken after construction of these facilities. The sampling sites are within mine impacted land and their water quality does not provide a good baseline for setting of discharge parameters. It is understood that the EPA has requested additional information

regarding management and monitoring of discharge water quality as such BCD will defer to the EPA on these matters.

Ground water modelling expanded in the response to submissions clarifies that seepage water from ED2 and the fines emplacement area will flow towards the final mine void once it reaches final depth. During the meeting held on 23 June 2020 between BCD and the proponent, BCD sought clarification on the management of seepage flows and this appears to be covered by page 59 of the response to submissions.

The fines emplacement area and ED2 were already installed when the EIS was prepared and it was not clear if the proposed seepage management actions are existing or are to be retrofitted. The response to submissions does not clarify this matter as requested.

Section 8.5 of the groundwater assessment indicates that water quality impacts were predicted to Sandy Creek from seepage discharge from the fines emplacement area. Overflow from the fines emplacement area and ED2 are also directed to Sandy Creek. Until such time as the final void reaches maximum depth seepage flow management may be required.

Recommendation 6

Clarification is required regarding installation of the seepage flow management measures for the fines emplacement area and ED2. Management measures need to be developed to ensure that surface and seepage flows are contained on site for all stages of the project including post rehabilitation.

6. The proposed threshold water quality trigger limits for Sandy Creek are too high

BCD remains concerned about thresholds proposed in the EIS, as was outlined in our letter of 23 March 2021 (DOC21/72048-16). It is noted that similar concerns were raised by the EPA.

Recommendation 7

Further water quality testing should be undertaken outside of areas currently impacted by the project. Water quality trigger values should be based on levels which will provide adequate protection to the ecology and users of Sandy Creek.

7. Flood risks from new dams have not been considered

It does not appear that any flood assessment has been undertaken for proposed dam infrastructure associated with the project.

Environmental dams have been primarily assessed using water balance methodology and a 1% probability of overtopping. This does not reflect the impact of a 1% annual exceedance probability (AEP) flood.

Recommendation 8

During detailed design, a risk assessment should be undertaken for all proposed dams. The design of any spillway should ensure that the spillway and embankment do not cause risk to downstream receivers in the event of a local flood event. New or altered dams which are found to pose risk to life will require referral to Dam Safety NSW.