Department of Planning and Environment

Our ref: OUT22/11819

James McDonough
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NSW Department of Planning and Environment

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2 September 2022

Subject: **Dalswinton Quarry (SSD-9094) - Response to Submissions (RtS)**

Dear Mr McDonough

I refer to your request for advice sent on 2 August 2022 to the Department of Planning and Environment (DPE) Water about the above matter.

The proposed development will occur across 89 hectares of the quarry site including expansion towards the east in an area of approximately 39 ha as well as reworking of the previously extracted areas to recover the discarded fines and larger aggregates in the currently approved foot print. The operation will have a maximum production capacity of 500,000 tonnes per annum over an expected 25 years of operational period. The proposed quarry expansion will involve up to 5 hectares of excavation area at any given time.

DPE Water has reviewed the Response to Submissions, and provides the following recommendations:

- The proponent should ensure that sufficient entitlements are held in a water access licence/s to account for the maximum predicted take for each water source, prior to the take occurring.
- The proponent should detail whether or not there is a risk of erosion (including whether this includes any potential failure of the levee/bund) to the existing or final form of the quarry and if this will impact any watercourses, riparian land or water quality.

Please see Attachment A for more recommendations and detail.

Please note that the licensing and approval function has now moved from NRAR to DPE Water. Should you have any further queries in relation to this submission please do not hesitate to contact DPE Water Assessments water.assessments@dpie.nsw.gov.au. or to the following coordinating officer within DPE Water:

Simon Francis – Senior Project Officer
E: simon.francis@dpie.nsw.gov.au
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Yours sincerely

E Rogers

Liz Rogers
Manager, Assessments, Knowledge Division
Department of Planning and Environment: Water

Attachment A

Detailed advice to DPE Planning & Assessment regarding the Dalswinton Quarry (SSD-9094) - Response to Submissions (RtS)

1.0 Water Licensing

1.1 Recommendation – Prior to Determination

The proponent should provide clarification of the maximum groundwater and surface water take, site water demands and the ability to obtain additional water entitlement where required for the project.

1.2 Recommendation – Post Approval

The proponent must ensure sufficient water entitlement is held in a Water Access Licence/s (WAL) to account for the maximum predicted take for each water source prior to take occurring, unless an exemption under the Water Management (General) Regulation 2018 applies.

Explanation

- As noted in Figure 2 – Existing Water Management System Schematic found in Appendix D – Letter Surface Water Impact Assessment groundwater will seep into the Extraction Area Sump and seepage from the Hunter River will be occurring, these are both classified as take.
- The Guidelines for Groundwater Documentation for SSD/SSI Projects has explanations on how to account for water take with surface water and groundwater interaction. C3 Fact Sheet 3 – Accounting for water and Figure D-3 show these interactions and demonstrated take types and how they should be accounted for. These guidelines can be found at:

  https://www.industry.nsw.gov.au/water/licensingtrade/major-projects
- Estimated volumes of water take should be based on inflows into the pit, these inflows can be caused by factors such as evaporation or take for processing. Water within the removed material is also counted in take and any inflows into the pit caused by the removal of this material.
- While the RtS states there will be no surface water take for the project, it is noted in Appendix E – Letter Ground Water Impact Assessment that there will be take from the Hunter River. Any baseflow losses to the Hunter River should be accounted for.
- It is acknowledged that the proponent currently holds WAL 36474 which has 20ML in the Hunter Regulated River Alluvial Water Source and WAL 18372 which has 50ML in the Lower Goulburn River Water Source.

2.0 Surface Water

2.1 Recommendation – Prior to Determination

The proponent should detail whether or not:

- There is a risk of erosion to the existing or final form of the quarry and if this will impact any watercourses, riparian land or water quality.
- A failure of the levee/bund would lead to an increased risk of erosion or diversion of flow from the current watercourse and any associated impacts to watercourses, riparian land or water quality.

Note – these recommendations below are repeated from DPE Water's EIS Response (OUT22/44), as they have not been addressed by the RtS.

Explanation

The response to the above-mentioned recommendations by DPE Water in section 5.1.7 at the top of page 25, (Report 19/047 Rev B) is:

> *The following comments have been addressed in section 6.4 of the Flood Impact Assessment submitted with the EIS.*

This section has addressed the impact of erosion for events greater than 10% AEP (1 in 10 yr ARI).

In the event the bund is breached it could cause a scour to a width of 50 to 200m and may scour down to a depth of 92m AHD. This will be repaired back to the current condition should the bund be breached.

Furthermore, it should also be noted that the chance of bund failure is same for the existing and future developed conditions.

Please refer to section 6.4 of previously submitted Appendix M – Flood Impact Assessment.

Section 6.4 of Appendix M only explains the likely failure and erosion of the bund/embankment. No further information has been provided in the EIS (including Appendix M) that address our recommendations. Flood inundation, velocity and hazard maps are included but no assessment of the risk of erosion in the existing and proposed works is included, particularly the unvegetated and more erosive active working areas. Nor is there any assessment of the possible impacts to any watercourses, riparian land, or water quality as a result of erosion associated to flood waters entering the site or the failure of the bund.

Explanation – from DPE Water's EIS Response (OUT22/44)

In DPE Water's response to the EIS (OUT22/44, letter dated 3 March 2022) the explanation for these recommendations was provided. It is provided again as follows:

- The EIS (6.15 p.71) and Flood Impact Assessment (Appendix M – 1.3, p.2-3) note that its objectives (appropriately) include:
    - *Risk of erosion in the quarry due to flooding.*
    - *Risk of the river diverting its current course should the quarry be subject to flooding and erosion.*

  The flood impact assessment presents no assessment of the risk of erosion to the existing or final form, particularly the unvegetated and more erosive active working areas and if this will impact any watercourses, riparian land or water quality.

  Details on the erosion associated to the likely levee/bund failure are not discussed other than to note that if a failure is unacceptable then it should be armoured, or the levee's height increased. The assessment should identify whether or not the erosion and conveyance of the sediment of the levee/bunt will have any adverse impacts on watercourses, riparian land or water quality. The assessment should also detail whether or not such an event would lead to an increased risk of erosion in the operational area, or diversion of flow from the current watercourse and any associated impacts to watercourses, riparian land or water quality.

3.0 Groundwater

3.1 Recommendations – Post Approval

The proponent should:

- consult DPE Water during the development of the Water Management Plan.
- conduct an independent review of the groundwater model.
- document the review and all updates and commitments for model improvement in the Water Management Plan.

Explanation

An independent review of the groundwater model has not been undertaken and only cursory information on model development is presented in the RtS. A commitment is made by the proponent to conduct an independent review of the groundwater model and make any required updates or suggested improvements to the groundwater model post approval.

End Attachment A