Department of Planning and Environment

Our ref: OUT23/11945

Mr James Mcdonough

Email: james.mcdonough@dpie.nsw.gov.au

03 August 2023

Subject: **Stone Ridge Quarry Project (SSD-10432) – advice on EIS**

Dear Mr McDonough

I refer to your request for advice sent on 16 June 2023 to the Department of Planning and Environment (DPE) Water about the above matter.

Australian Resource Development Group Pty Limited (ARDG) is seeking to develop a new hard rock quarry, known as Stone Ridge Quarry, located within Wallaroo State Forest at Balickera NSW, approximately 30 km north of Newcastle.

DPE Water has reviewed the Environmental Impact Statement (EIS) and has recommendations regarding water supply security, impact assessment of groundwater extraction/interception and water licensing. Please see **Attachment A** for more detail.

Should you have any further queries in relation to this submission please do not hesitate to contact DPE Water Assessments at water.assessments@dpie.nsw.gov.au

Yours sincerely,

Rose-Anne Hawkeswood

A/Manager, Assessments, Knowledge Division
Department of Planning and Environment: Water

Attachment A

Detailed advice regarding the Stone Ridge Quarry Project – Environmental Impact Statement (SSD-10432)

1.0 Water licensing and take

1.1 Recommendation – Prior to approval

That the proponent clarifies the volume to be obtained for a water access licence noting this must cover the maximum potential water take, and demonstrate the ability to obtain entitlement in accordance with the requirements of the NSW Aquifer Interference Policy.

Explanation

Based on the EIS predictions, groundwater take is between 26.7 ML/year and 183.9 ML/year for the Main Pit and between 6.1 ML/year and 42.4 ML/year for the Northern Pit during stage 8 (section 6.5.2.3 of the EIS). This would result in a maximum of 226.1 ML/year. An additional maximum potential take of 134 ML/year from a proposed bore is also noted. However, the proponent notes the proposal to obtain a water licence for between 33 ML/year and 57 ML/year (Section 6.5.2.3 of the EIS and noting this conflicts with 27-47 ML/year stated in Appendix 10) which would be insufficient to account for the maximum predicted water take as required by the NSW Aquifer Interference Policy. The relevant water source to obtain entitlement is the New England Fold Belt Coast Groundwater Source.

1.2 Recommendation – Prior to approval

That the proponent provides an assessment of the ability to obtain the proposed water supply volume from a bore to meet the water supply requirements of the project.

Explanation

No assessment has been provided to confirm the availability of the 134ML/year water demands from a bore proposed for the project. The information in the Groundwater Impact Assessment (Appendix 10) indicates indicative bore yields of less than 1 L/s and has not clearly demonstrated the security of water supply. This represents a significant risk for the project.

1.3 Recommendation – Prior to approval

That the proponent provides an impact assessment of the installation and operation of the proposed bore on the aquifer, water users and dependent ecosystems. This needs to include the location of the bore and to determine if the impacts overlap with groundwater impacts from the quarry excavation. Where impacts from the bore overlap with the quarry excavation impacts, the assessment needs to address the minimal impact considerations of the NSW Aquifer Interference Policy.

Explanation

No impact assessment has been provided of the proposed bore installation and operation. It is recommended this be completed to ensure an understanding of impacts as part of the project assessment and to enable the bore to be excluded from relevant approval requirements under the *Water Management Act 2000*. It is recommended the location of the bore meets the rules of the relevant Water Sharing Plan for water supply works.

1.4 Recommendation – Prior to approval

That the proponent confirms the design of the sediment dams meets the criteria to be exempt from a water access licence.

Explanation

Sediment dams must be solely for this purpose to meet the exemption listed in Schedule 1 Clause 3 of the Water Management (General) Regulation 2018. According to Table 3.1 of the Surface Water Assessment these will be a higher capacity than is required by the Managing Urban Stormwater guide so confirmation that they meet this exemption is requested.

1.5 Recommendation – Post approval

That works within waterfront land are designed and constructed in accordance with the Guidelines for Controlled Activities on Waterfront Land (DPE 2022).

Explanation

The proposed development includes works on waterfront land (including the quarry, outlets and roads) which will need to be designed and constructed in accordance with the Guidelines for Controlled Activities on Waterfront Land found at https://water.dpie.nsw.gov.au/licensing-and-trade/controlled-activity-approvals/guidelines

1.6 Recommendation – Post approval

That the proponent revises the groundwater inflow predictions and Water Access Licence (WAL) requirements at Stage 5 of the project when additional groundwater monitoring data is gathered.

Explanation

Due to the significant range and resultant uncertainty in the modelling predictions associated with groundwater inflows to the pit, a more accurate inflow estimate is required as the project proceeds from Stages 6 to 9.

1.7 Recommendation – Post approval

The proponent must ensure sufficient water entitlement is held in a water access licence/s to account for the maximum predicted take for each water source prior to take occurring.

1.8 Recommendation – Post approval

The proponent should be aware of the rules of the relevant Water Sharing Plans and how they may impact the project and ability to trade or take water.

2.0 Groundwater

2.1 Recommendation – Prior to approval

That the proponent investigates and includes the water supply bore under approval 20WA214724 (with a linked WAL), which is located 1.5 km southwest of the project, in the groundwater impact assessment.

Explanation

The EIS has not included water supply work approval 20WA214724 which has a linked WAL and is located 1.5 km southeast of the project. DPE Water has noted this work approval is current and therefore potential impacts and necessary mitigation requirements for this bore must be considered.

2.2 Recommendation – Prior to approval

That the proponent provides information on root zone depths for vegetation types in and around the assessment area mapped as high probability Groundwater Dependent Ecosystems (GDEs).

Explanation

The EIS states that groundwater levels are below the root zone therefore terrestrial vegetation depends only on direct rainfall recharge. However, no information is provided on likely root zone depths for vegetation types to support this statement.

2.3 Recommendation – Post approval

That the Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP) includes a monitoring program for groundwater developed in consultation with DPE Water prior to the commencement of the quarrying operations. It should include:

a. Monitoring of pit inflows including a pit water balance.

b. Monitoring of groundwater levels and quality during and post project closure.

c. A list of water quality parameters to be monitored.

d. A Trigger Action Response Plan (TARP) for groundwater levels and quality.

e. Make good provisions

Explanation

Monitoring and management of impacts is required to verify impact predictions and to manage impacts within approved limits. The CEMP and OEMP are relevant plans to include a monitoring program and appropriate measures to address reviews of groundwater inflows and impacts and to inform impact mitigation as appropriate.

2.4 Recommendation – Post approval

That the proponent undertakes additional survey and investigation to find the nature and extent of groundwater dependency of vegetation including the development of a GDE monitoring and management plan. The development of this plan should be undertaken in consultation with DPE Water and prior to quarry activities progressing below the water table (i.e. Stage 5).

Explanation

Section 8.3.7.3 of the Biodiversity Development Assessment Report (Appendix 11) recommends additional survey and investigation work to be undertaken to determine the nature and extent of groundwater dependency of vegetation within the zone of predicted drawdown and updated predictions of groundwater drawdown are developed prior to quarry activities progressing below the water table (i.e. Stage 5). It also recommends the development of a GDE monitoring and management plan based on the updated information.

End Attachment A