



OUT19/8880

Lauren Evans
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NSW Department of Planning, Industry and Environment

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Dear Ms Evans

**Marulan South Limestone Mine Continued Operations Project (SSD-7009)
EIS Exhibition**

I refer to your email of 1 April 2019 to the former Department of Industry Lands & Water and Department of Primary Industries (DPI) about the above matter.

The following advice for consideration is from the Department of Planning Industry & Environment (DPIE) Water including the Natural Resources Access Regulation (NRAR). This is in addition to Crown Lands & Fisheries advice already provided (OUT19/4318) in April 2019.

Pre-approval Recommendations

We recommend that the proponent identifies:

- An alternative to the proposed dam located on Marulan Creek, for securing a suitable water supply because the current location does not comply with: (a) the rules of the Water Sharing Plan for the Greater Metropolitan Unregulated River Water Sources 2011; and (b) the Guidelines for Controlled Activities on Waterfront Land Riparian Corridors (NRAR, 2018). Please see **Attachment A** for detailed comments.
- An alternative method of water take, other than the proposed harvesting of sediment-laden water.

This method of water take is not covered under the *Water Management Act 2000*. To avoid a potential breach of the *Protection of the Environment Operations Act 1997*, the harvesting of sediment-laden water should not be permitted.

Post-approval Recommendations

We recommend that the proponent:

- Remediate and rehabilitate channel degradation along Marulan Creek and other watercourses within its ownership. Prioritisation and development of rehabilitation options should follow the procedure set out in *A Rehabilitation Manual for Australian Streams* (Cooperative Centre for Catchment Hydrology, Land and Water Resources Research and Development Corporation, 2000).
- Reviews the site water balance upon the commencement of operations and update every three years. This must include a review of all forms of take of water as set out in section 60I of the *Water Management Act 2000*.
- Develops alternate water quality trigger threshold values to ensure impacts from mining operations at each surrounding watercourse are detected at an early stage.

- Devises release measures for Tallong weir and Talarang dam to increase flow variability downstream into Barbers Creek gorge. This should be designed around downstream ecosystem flow requirements, following review of likely and potential ecological niches within Barbers Creek to the Shoalhaven River junction.
- Prepares a groundwater monitoring and management plan in the first year that includes:
 - Continuation of data gathering from the existing monitoring network throughout the project lifetime.
 - Establishment of a groundwater level and quality monitoring network in and around Mt Frome Middle Limestone within one year from the granting of the approval. Formations hydraulic parameters are required to be characterised during that program.
 - Monitoring of seepage from the overburden emplacements and mine inflows.
 - Model validation by verification and update of the groundwater model within three years of approval and every three years ongoing throughout the project lifetime. The model is to be informed by the data collected on formation characterisation and groundwater levels.
 - Definition of a trigger threshold identifying if the capture of water and impact prediction remain within predictions specified in the environmental assessment. A response plan must be prepared to define the management and mitigation actions to be implemented if site observations or model update predictions are above that trigger.

Any further referrals to DPIE – Lands, Water and Primary Industries can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

Yours sincerely



Liz Rogers
Manager, Assessments
Water – Strategic Relations
4 July 2019

ATTACHMENT A

Marulan South Limestone Mine Continued Operations Project (SSD-7009) EIS Exhibition

DPIE - Water does not support the request for additional on-line dam located on Marulan Creek, and recommends the proponent locate an alternative water supply because:

- Water Sharing Plan for the Greater Metropolitan Unregulated River Water Sources 2011

Marulan Creek is within the Barbers Creek Management Zone, where new in-river dams are prohibited under Clause 62(5) of the *Water Sharing plan for the Greater Metropolitan Unregulated River Water Sources 2011*. This is part of a general prohibition on new in-river dam construction in the Shoalhaven and Sydney Basin water sources, apart from a limited range of town water supply or major water utility access licence structures.

- Guidelines for Controlled Activities on Waterfront Land Riparian Corridors (NRAR, 2018)

As per the guidelines, online detention basins are not permissible on 3rd order streams and above (see Table 2 'Riparian Corridor Matrix', in the guidelines), and Marulan Creek is classified a 4th order stream.

- Impacts of Proposed Dam

The proposed dam will likely reduce total flows downstream into the Barbers Creek gorge and flow variability and ecological resilience within the channel and fringing zone. Additionally, likely cumulative impacts on flow dependent species have not been assessed. The EIS does not present analysis of reducing flow variability on sediment transport or interruption of geomorphic processes in Barbers Creek.



Department of Industry

OUT19/4318

Lauren Evans
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Resource Assessments
NSW Department of Planning and Environment

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Dear Ms Evans

**Marulan South Limestone Mine Continued Operations Project (SSD-7009)
EIS Exhibition**

I refer to your email of 1 April 2019 to the Department of Industry (DoI) about the above matter.

The following advice for you to consider is from relevant branches of Lands & Water and Department of Primary Industries. Please note DoI Water advice is not included. This advice will be sent separately when available.

DoI Crown Lands

- The proponent should make an application to the Department of Industry (DoI) – Crown Lands to close and purchase any Crown roads impacted by this proposal. The proponent should consult with the Department and Goulburn Mulwaree Council regarding any alternate legal access that may be required to ensure parcels of land benefiting from the current Crown road network do not become land-locked by this process.
- Crown reserves including; R95804 (Part Lot 282//750029) and R750029 Parish or County Reserve (Lot 98//750029) are currently subject to Aboriginal Land Claims which are incomplete, being ALC38823 lodged 9 June 2015 and ALC38751 lodged 20 April 2015. The department cannot support a development proposal where the Crown land is the subject of undetermined or incomplete Aboriginal Land Claims. The proponent should consult with the Claimant in each case to seek possible removal of the claim over the Crown land before any approvals for works can be given.
- The proponent should consider the potential for impacts on the Crown Waterway reserve south of Lot 3 DP 247199 and north of Lot 282 DP 750029 to ensure that all measures are taken to avoid damage or pollution to these areas.
- A licence will be required by the proponent to use or occupy Crown land within the project area before works within these areas or occupation of these areas can proceed.
- The department cannot provide any guarantee of outcome in respect to road closings, the sale of any Crown land, removal of any Aboriginal Land Claims occurring within the project area or the granting of a licence to authorise proposed activities.

- All Crown land and Crown roads within a Mining Lease must be subject to a Compensation Agreement issued under Section 265 of the *Mining Act 1992*, to be agreed and executed prior to any mining activity taking place and within 12 months of Project/ Modification Approval. The Compensation Agreement may include conditions requiring the Mining Lease Holder to purchase Crown land impacted on by mining activity.
- All Crown land and Crown roads located within an Exploration Licence, where subject to exploration activity, must be subject to an Access Arrangement issued under Section 141 of the *Mining Act 1992*, to be agreed and executed prior to any exploration activity taking place.

DPI Fisheries

- Marulan Dam should be constructed to be a leaky structure so that it maintains environmental flows to the aquatic habitats downstream.
- DPI Fisheries requests the opportunity to review the draft Construction Environmental Management Plan for the construction of Marulan Dam. Erosion and sediment control measures should be implemented in accordance with Landcom's (2004) *Managing Urban Stormwater: Soils and Construction*.
- DPI Fisheries request the opportunity to review the draft Water Management Plan.
- DPI Fisheries requests some justification as to why it is only proposed to monitor aquatic biodiversity for one year following the commencement of the 30-year mine plan.

Please send any further referrals to Department of Industry by email to landuse.enquiries@dpi.nsw.gov.au.

Yours sincerely



Liz Rogers
Manager, Assessments
Lands and Water – Strategic Relations
6th June 2019