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**Marulan South Limestone Mine Continued Operations Project - Adequacy of the
Environmental Impact Statement (EIS) – SSD_7009**

Dear Lauren,

I refer to the Department of Planning and Environment – Resources Assessments (DPE – Resources & Assessment) email dated 4 April 2019 inviting the Resources Regulator to provide advice regarding the adequacy of the Environmental Impact Statement (EIS) for Project **Marulan South Limestone Mine – Continued Operations Project – SSD_7009**.

Development Details

The **Marulan South Limestone Mine** is an open cut operation located approximately 10 kilometres from Marulan village and 35kilometres east of Goulburn, NSW. The **Marulan South Limestone Mine Continued Operations Project** proposes:

The continuation of mining extracting approximately 120 Mt of limestone at a rate of up to 4 Mtpa for a period of up to 30 years. Approximately 5 Mt of shale will be extracted at a rate of up to 200,000tpa. The 30-year mine plan will generate approximately 108 Mt of overburden. Overburden will be emplaced within in-pit and out-of-pit overburden emplacements.

The Resources Regulator has previously provided the following advice:

- Recommendation of SEARs (OUT15/11507) dated 19 May 2015.

Environment and Rehabilitation

The Compliance Operations unit within the Resources Regulator has responsibility for providing strategic advice for environmental issues pertaining to the proposed project in so far as they relate to or affect rehabilitation.

That Resources Regulator advises the Department of Planning and Environment – Resources Assessments that SEARs for rehabilitation have been adequately addressed in

the Environmental Impact Statement (EIS) for the Marulan South Limestone Continued Operations (SSD 7009), dated March 2019.

The Resource Regulator has determined that sustainable rehabilitation outcomes can be achieved as a result of the project and that any identified risks or opportunities can be effectively regulated through the conditions of mining authorities issued under the *Mining Act 1992*.

Rehabilitation is addressed in Section 4 of the EIS document and in Volume 3 - Appendices I – “Soil, land resources and rehabilitation assessment”.

Rehabilitation is summarised as follows:

The continuation of mining following the 30-year project life is most likely and post mining land is currently considered in conceptual terms, particularly with regard to the mine void. The 30-year mine development considers both “above ground” and “in pit” options for overburden emplacement to achieve a balance between resource utilisation and long-term environmental considerations with a high emphasis on visual impact and rehabilitated landform. mine development. Overburden emplacement developed or expanded during the project operations, including the Western overburden emplacement area (WOBE), Northern overburden emplacement Area (NOBE), western and southern sections of the Southern overburden emplacement area (SOBE) and existing eastern batter sloped will occupy approximately 242ha of the total 598ha disturbance footprint at the end of the 30-year project. Post mining land use goal for the overburden emplacements is the re-establishment and development of native woodland vegetation communities.

Landform Establishment – will comprise of reshaping resulting in a stable landform, incorporating slopes, benches and drainage features that blend in with the surrounding natural topography. For overburden emplacements, this consists of three main activities – bulk shaping, final trim and drainage construction. The final void treatment will be considered subject to geotechnical assessment report (PSM 2018). Where revegetation is proposed as part of void treatment, surfaces will be ripped or notched to de-compact surface material suitable for root growth and enhance water filtration.

Table 17: Recommended void slope design (PSM, 2018).

UNIT	BENCH SLOPE ANGLE	BENCH HEIGHT	BERM WIDTH	INTER-RAMP SLOPE ANGLE
Extremely Weathered Sediments	50°	15m	9m	35°
Eastern & Western Sediments	60°	15m	9m	40°
Highly Weathered Limestone*	65°	15m	8m	45°
Eastern Limestone East wall North of 614 7300 N	65°	15m	8m	45°
Eastern Limestone elsewhere to above	75°	15m	7m	54°

(Excerpt from Appendix I)

The conceptual final landform design details that if the operation were to cease at the end of the 30-year project that closure planning would commence midway through stage 4 (5 to 6 years prior to closure). This would allow sufficient time to develop final closure plan details. In the interim, the overburden emplacement schedule allows for some final land use flexibility, while maintaining public safety.

The rehabilitation is considered to have addressed the Department's SEARS recommendations.

The Resources Regulator notes that the adjoining Peppertree Quarry PA 06_0074 also proposes to utilise the proposed NOBE identified in the Marulan South Limestone Continued Operations EIS documentation. Should Marulan South Limestone Mine operate in this area, it will require approval under the Mining Act 1992.

The Resources Regulator requests a review of the draft development consent conditions prior to finalisation and any granting of development consent.

It should be noted that this review does not represent the Resources Regulator's endorsement of the proposed rehabilitation methodologies as presented in the EIS. Under the conditions of a mining authority granted under the *Mining Act 1992*, the Resources Regulator, requires an authority holder to adopt a risk-based approach to achieving the required rehabilitation outcomes. The applicability of the controls to achieve effective and sustainable rehabilitation is to be determined based on the site-specific risk assessments conducted by an authority holder. This risk assessment should be used to not only establish a basis for managing risk when planning an activity, but it should also be used and updated (as required) to continuously evaluate risk and the effectiveness of controls used to prevent or minimise impacts. An authority holder may also be directed by the Resources Regulator to implement further measures, where it is considered that a risk assessment and associated controls are unlikely to result in effective rehabilitation outcomes.

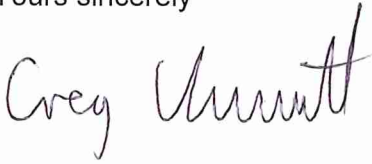
Mine Safety

The Resource Regulator Mine Safety Operations is responsible for ensuring mine operators manage the risk to worker health and safety through compliance with the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and the subordinate mining legislation. In particular the effective management of risk associated with the principal hazards as specified in the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014*.

The Resource Regulator Mine Safety Operations have not identified any risk that would require comment in relation to this matter.

For enquiries regarding this matter please contact me on (02) 4063 6444 or
minres.environment@planning.nsw.gov.au

Yours sincerely

A handwritten signature in dark ink, appearing to read 'Greg Kininmonth', with a stylized, cursive script.

Greg Kininmonth
Manager Environmental Operations (Southern)

On behalf of
Matthew Newton
Director Compliance Operations
Resources Regulator
NSW Department of Planning and Environment

27 May 2019