DOC21/1019813-28

Department of Planning, Industry and Environment
Planning and Assessment Division
Attention: James McDonough
Returned via the Major Projects Portal

17 December 2021

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

EPA Advice on Environmental Impact Statement

Dear Mr McDonough

Thank you for the request for advice from Public Authority Consultation (PAE- 31981223), requesting the review by the NSW Environment Protection Authority (EPA) of the Environmental Impact Statement (EIS) for the proposed Deep Creek Quarry (Application SSD-11591659) at 279 Deep Creek Road, Limeburners Creek NSW 2324.

The EPA has reviewed the *Deep Creek Quarry Environmental Impact Statement* (Kleinfelder, 4 November 2021), including the following appendices:

- *Air Quality Impact Assessment Deep Creek Quarry* (Todoroski Air Sciences Pty Ltd, 24 September 2021)
- *Deep Creek Quarry Surface Water Impact Assessment* (Engeny, 15 September 2021)
- *Noise and Vibration Impact Assessment Deep Creek Quarry* (Spectrum Acoustics, October 2021)

The EPA understand the proposal is for a hard rock quarry with production capacity of up to 500,000 tonnes per annum (tpa) operating for a period of up to 30 years.

Based on the information provided, the proposal will require an Environment Protection Licence (EPL) under the *Protection of the Environment Operations Act 1997* (POEO Act) for *Extractive activities* clause 19 of Schedule 1 of the POEO Act.

The EPA has reviewed the EIS and has provided recommended conditions in **Attachment 1** to this letter.

The EPA notes that the EIS states that the proposal will need to discharge water from the dirty water management system to the environment and that these discharges will be subject to EPL conditions. If the development is approved, the proponent must not pollute waters as defined by section 120 of the POEO Act.

However, the EPA may not be able to licence the development as currently proposed. In reviewing a licence application, in accordance with section 45 of the POEO Act, the EPA will not consider issuing a licence where practical measures can be taken to conduct the activity without polluting waters.

The EPA considers that the proposal can implement additional practical measures that will effectively restore or maintain the relevant environmental values of the receiving waters.

The proponent may wish to consider modifying the proposed surface water management system as part of the current development application to ensure that any changes required to obtain an EPL are documented and approved within the consent. The EPA has discussed these matters with the proponent.

The EPA notes that an application for a licensed discharge point must consider the environmental values of the receiving waters with reference to downstream water users and the NSW Water Quality and River Flow Objectives (https://www.environment.nsw.gov.au/ieo/).

In relation to the predicted noise impacts, the EPA expects the relevant planning authority to carefully consider the suitability of any new residential development near the proposal in terms of mitigating land use conflicts.

If you have any questions, please contact Anthony van der Horst on 4908 6808 or via email at EPA.Northopsregional@epa.nsw.gov.au.

Yours sincerely

ANDREW BEACH
A/Unit Head - Regulatory Operations

Attachment 1 – Recommended Conditions

General Conditions

L1.1 The proponent must comply with section120 of the Protection of the Environment Operations Act 1997.

Hours of Operation

L3.2 Hours of operation are restricted to the following hours:

Activity	Operating Hours
Quarrying Operations (crushing and processing)	7:00am to 5:00pm Monday to Friday, 8:00am to 1:00pm on Saturday No quarrying on Sunday or a Public Holiday
Loading and dispatch of product trucks	6:00am to 6:00pm Monday to Friday, 6:00am to 1:00pm Saturday No works on Sunday or public holidays.
Maintenance	Anytime, provided that these activities are not audible at any privately-owned residence if outside of the operational hours.

Dust Conditions

O3.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

O3.2 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

O3.3 Trucks entering and leaving the premises that are carrying loads of dust generating materials must have their loads covered at all times, except during loading and unloading.

Noise Limit Conditions

L6.1 Noise generated at the premises must not exceed the noise limits at the times and locations in the table below.

Location	Noise Limits in dB(A)			
	Day	Evening	Night	Night
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	L_{AFmax}
All existing residential receivers (residences)[1] at the date of issue of the consent	40	35	35	52

Note 1: The term *residential receivers* and *residences* is defined by the Noise Policy for Industry (EPA, 2017).

L6.2 For the purposes of condition L6.1:

a) Day means the period from 7am to 6pm Monday to Saturday and the period from 8am to 6pm Sunday and public holidays.
b) Evening means the period from 6pm to 10pm.
c) Night means the period from 10pm to 7am Monday to Saturday and the period from 10pm to 8am Sunday and public holidays.

L6.3 Noise-enhancing meteorological conditions

a) The noise limits set out in condition L6.1 apply under the following meteorological conditions:

Assessment Period	Meteorological Conditions
Day	Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level.
Evening	Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level.
Night	Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level; or Stability category E and F with wind speeds up to and including 2m/s at 10m above ground level.

b) For those meteorological conditions not referred to in condition L6.3(a), the noise limits that apply are the noise limits in condition L6.1 plus 5dB.

L6.4 For the purposes of condition L6.3:

a) The meteorological conditions are to be determined from meteorological data obtained from the meteorological weather station.
b) Stability category shall be determined using the following method from Fact Sheet D of the *Noise Policy for Industry* (NSW EPA, 2017):
    i. Use of sigma-theta data (section D1.4).

L6.5 To assess compliance:

a) with the $L_{Aeq(15\ minutes)}$ or the L_{Amax} noise limits in condition L6.1 and L6.3, the noise measurement equipment must be located:
    (i) approximately on the property boundary, where any residence is situated 30 metres or less from the property boundary closest to premises; or where applicable,
    (ii) in an area within 30 metres of a residence façade, but not closer than 3 metres where any residence on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable,
    (iii) in an area within 50 metres of the boundary of a National Park or Nature Reserve,
    (iv) at any other location identified in condition L6.1
b) with the $L_{Aeq(15\ minutes)}$ or the L_{Amax} noise limits in condition L6.1 and L6.3, the noise measurement equipment must be located:
    (i) at the reasonably most affected point at a location where there is no residence at the location; or,
    (ii) at the reasonably most affected point within an area at a location prescribed by condition L6.5 (a).

L6.6 A non-compliance of conditions L6.1 and L6.3 will still occur where noise generated from the premises is measured in excess of the noise limit at a point other than the reasonably most affected point at the locations referred to in condition L6.5 (a) or L6.5 (b).

NOTE to L6.5 and L6.6: The reasonably most affected point is a point at a location or within an area at a location experiencing or expected to experience the highest sound pressure level from the premises.

L6.7 For the purpose of determining the noise generated from the premises, the modifying factor corrections in Table C1 in Fact Sheet C of the *Noise Policy for Industry* (NSW EPA, 2017) may be applied, if appropriate, to the noise measurements by the noise monitoring equipment.

L6.8 Noise measurements must not be undertaken where rain or wind speed at microphone level will affect the acquisition of valid measurements.

Transport Noise

L6.9 The Proponent shall ensure laden truck movements exiting the site do not exceed 25 per hour and no more than 110 per day.

Note: In this condition, "per hour" means within any period of 60 minutes following the change of hour.

Construction Noise

Hours of Construction

L6.11 All construction work at the premises must be conducted between 7am and 5pm Monday to Friday and between 8am and 1pm Saturdays and at no time on Sundays and public holidays.

Exceptions to construction hours

The following activities may be carried out outside the recommended construction hours:

a) construction that causes $L_{Aeq(15minute)}$ noise levels that are:
   i. no more than 5dB above Rating Background Level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009); and
   ii. no more than the Noise Management Levels specified in Table 3 of the *Interim Construction Noise Guideline* (DECC, 2009) at other sensitive land uses; or
b) for the delivery of materials required by the police or other authorities for safety reasons; or
c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

Blasting

L7 Blasting Limits

L7.1 The airblast overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

L7.2 The airblast overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

L7.3 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

L7.4 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

L7.5 Blasting at the premises may only take place between 9:00am-4:00pm Monday to Friday. Blasting is not permitted on weekends or public holidays.

L7.6 Blasting outside of the hours specified in L7.5 can only take place with the written approval of the EPA.

L7.7 The airblast overpressure and ground vibration levels in conditions L7.1 to L7.4 do not apply at noise sensitive locations that are owned by the licensee or subject to a private agreement, relating to airblast overpressure and ground vibration levels, between the licensee and land owner.

L7.8 Blast Monitoring

To determine compliance with Conditions L7.1 to L7.4:

(a) Airblast overpressure and ground vibration levels must be measured and electronically recorded in accordance with the ANZECC guidelines for all production blasts carried out in or on the premises; and

(b) The written record must include:
   i) the time and date of each blast;
   ii) the station(s) at which the noise was measured;
   iii) the ground vibration for each blast;
   iv) the airblast overpressure for each blast;
   v) evidence that during the past 12 month period, a calibration check had been carried out on each blast monitor to ensure accuracy of the reported data; and
   vi) the waveform for the ground vibration and overpressure for each blast that exceeds a ground vibration of 5mm/sec (peak particle velocity) or an airblast overpressure of 115dB(L).

(c) Instrumentation used to measure the airblast overpressure and ground vibration levels must meet the requirements of Australian Standard 2187.2 of 2006.

L7.9 Blast Management Plan

A Blasting/Vibration Management Protocol is to be prepared by the Applicant prior to blasting to demonstrate the protocol to comply with conditions set in L7. The Protocol shall include details about:

- Compliance standards;
- Measures to ensure compliance with licence limits;
- Remedial and reporting action plan;
- Monitoring methods and program;
- Notification of procedures for neighbours prior to detonation of each blast;

Monitoring Conditions

M7.1 Prior to the commencement of operation of the development, the Proponent must establish a permanent meteorological station complying with the Approved Methods for

Sampling and Analysis and the Australian Standard AS2923 - 1987, at the facility. The meteorological station must monitor the following parameters:

Parameter	Units of measure	Averaging period	Frequency	Sampling Method
Rainfall	mm/hr	1 hour	Continuous	AM-4
Sigma Theta @ 10m	degrees	1 hour	Continuous	AM-2
Siting	-	-	-	AM-1
Temperature @ 10m	Kelvin	1 hour	Continuous	AM-4
Temperature @ 2m	Kelvin	1 hour	Continuous	AM-4
Total Solar Radiation @ 10m	W/m2	1 hour	Continuous	AM-4
Wind direction @ 10m	degrees	1 hour	Continuous	AM-2
Wind speed @ 10m	m/s	1 hour	Continuous	AM-2

Note: Sampling methods as identified in the table above refer to those outlined in NSW EPA, 2001, Approved Methods for the Sampling and Analysis of Air Pollutants in NSW.

M7.2 The location of the site chosen for the station and details of equipment, measurement and maintenance service procedures and schedules to be installed and maintained must be submitted to the EPA and approved in writing by the EPA before any sampling or analysis is carried out.

M7.3 The meteorological monitoring station must be calibrated at least once every 12 months. The EPA is to be provided with data on request in a Microsoft Office software compatible format.

M8 Requirement to Monitor Noise

M8.1 Attended noise monitoring must be undertaken within the first 12 months of extractive operations in accordance with Condition L6.5 and must:

a) occur at each location specified in Condition L6.1 or otherwise agreed to by the EPA;
b) occur, during each day and night period as defined in the *Noise Policy for Industry* for a minimum of:

- 1.5 hours during the day;
- 30 minutes during the night (being the loading and dispatch period of 6:00AM to 7:00AM).

c) occur for three consecutive operating days.

Reporting Conditions

R4 Noise Monitoring Report

A noise compliance assessment report must be submitted to the EPA with the annual return. The assessment must be prepared by a competent person and include:

a) an assessment of compliance with noise limits presented in Condition L6.1 and L6.3; and
b) an outline of any management actions taken within the monitoring period to address any exceedances of the limits contained in Condition L6.1 and L6.3.

Additions to Definition of Terms of the licence

- Noise Policy for Industry - the document entitled "*Noise Policy for Industry*" published by the NSW Environment Protection Authority in October 2017.

- Residence - A lawful and permanent structure erected in a land-use zone that permits residential use (or for which existing use rights under the EP&A Act apply) where a person/s permanently reside and is not, nor associated with, a commercial undertaking such as caretakers' quarters, hotel, motel, transient holiday accommodation or caravan park.

- Noise – 'sound pressure levels' for the purposes of conditions L6.1 to L6.8.

    - $L_{Aeq\ (15\ minute)}$ - the value of the A-weighted sound pressure level of a continuous steady sound that, over a 15 minute time interval, has the same mean square sound pressure level as a sound under consideration with a level that varies with time (Australian Standard AS 1055:2018 *Acoustics: description and measurement of environmental noise*).

    - L_{AFmax} – the maximum sound pressure level of an event measured with a sound level meter satisfying Australian Standard AS IEC 61672.1-2013 *Electroacoustics - Sound level meters - Part 1: Specifications* set to 'A' frequency weighting and fast time weighting.