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

Submitted via Planning Portal

Attention: James Mcdonough

**Stone Ridge Quarry Project (SSD-10432)  
EPA Advice on Environmental Impact Statement**

Dear Mr Mcdonough

Thank you for the request for advice from Public Authority Consultation (PAE-59329964), requesting the review by the NSW Environment Protection Authority (EPA) of the Environmental Impact Statement (EIS) for the proposed Stone Ridge Quarry Project (Application SSD-10432) at Italia Road, Balickera.

The EPA has reviewed the following documents:

- *Environmental Impact Statement (Final)*- prepared by Umwelt (Australia) Pty Limited- May 2023
- *Stone Ridge Quarry Noise Impact Assessment (Final)*- prepared by Umwelt (Australia) Pty Limited- May 2023
- *Stone Ridge Quarry- Blasting Impact Assessment (Report No. UM-2210-250523)*- prepared by Enviro Strata Consulting Pty Ltd- 25 May 2023
- *Surface Water Impact Assessment (Final)*- prepared by Umwelt (Australia) Pty Limited- May 2023
- *Air Quality and Greenhouse Gas Assessment (Final)* – prepared by Jacobs- 31 May 2023

The EPA understand the proposal is for the Stone Ridge Quarry Project, which involves:

- Establishing a new quarry to extract and process up to 1.5 million tonnes of hard rock per annum for up to 30 years;
- Extraction of the resource using drilling, blasting and hauling methods;
- On site processing using mobile crushing and screening equipment, with provision for a future fixed processing plant;
- Stockpiling, product loading and storage areas;
- Clearing of approximately 89 hectares of native vegetation;

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- Site access and product haulage via Italia Road and the Pacific Highway;
- A weighbridge and administration area (offices, parking, amenities).

Based on the information provided, the proposal will require an environment protection licence under section 43 of 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 notes that the EIS does provide the information required by the Secretary's Environmental Assessment Requirements.

The EPA has the following additional comments and recommendations:

## **1. Matters to be addressed with conditions**

### **a. Water Quality**

The EIS has identified that the project has the potential for the following impacts on surface water resources:

- A reduction in Grahamstown Dam catchment yield due to the capture of surface runoff.
- Degradation of downstream water quality as result of ground disturbing activities leading to erosion and transport of sediment and nutrients to watercourses
- Changes in catchment hydrology resulting in changes to receiving watercourse flow regimes
- Impacts on stream stability associated with quarry discharges

Sediment basins are proposed, sized to minimise the risk of uncontrolled discharges in storm events not exceeding the 24-hour duration, 0.2% AEP storm event in conjunction with water treatment plants for the removal of solids and nutrients prior to discharge.

Proposed conditions are included at Attachment A.

### **b. Noise Impacts**

The EIS states that the site is located within a rural environment with typically low background noise levels. Existing noise sources include local road traffic, traffic from the Pacific Highway, agricultural activities and expected industrial contributions from Boral Seaham Quarry and Ringwood Park Motor Complex.

Proposed conditions are included at Attachment A.

### **c. Air Impacts**

Air dispersion modelling was completed with the air dispersion model CALPUFF and meteorological data for 2021 from Williamstown Airport and Beresfield. The pollutants assessed in the AQIA, include total suspended particles (TSP), PM<sub>10</sub>, PM<sub>2.5</sub>, deposited dust and crystalline silica. Background air quality data has been referenced from the monitoring station in Beresfield, located approximately 15 km to the southwest of the project area.

The results of the modelling show that there are no predicted exceedances of the EPA's impact assessment criteria for 24-hour average and annual average, TSP, PM<sub>10</sub>, PM<sub>2.5</sub> and dust deposition due to the Project alone or cumulatively accounting for background. Annual average respirable crystalline silica was predicted to comply with the EPA Victoria's criterion of 3 ug/m<sup>3</sup> at the identified sensitive receptors.

Further assessment has been conducted considering cumulative impacts as result of the Project, and other quarries in the area. The Eagleton, Brandy Hill and Seaham quarries have been considered, with reference to impact assessments that have been previously prepared for these

projects. Exceedances of the EPA's impact assessment criteria are not predicted when the predictions from the various quarries are combined.  
The Air Quality Impact Assessment is considered adequate to enable recommended conditions of approval.

Proposed conditions are included at Attachment A.

## **2. Other matters**

### **a. Traffic Noise**

While noise from vehicle movements on public roads is not licensed by the EPA, we provide the following comment on the relevant section of the NIA (Section 6) for The Department's consideration. The EPA recommends that "The Department should consider how low traffic flows were addressed in the road traffic noise modelling prior to accepting the conclusion that traffic noise impacts will comply with the Road Noise Policy (DECCW, 2009)."

If you have any questions about this request, please contact Johanne Hunt on (02) 9860-1476 or via email at [Johanne.hunt@epa.nsw.gov.au](mailto:Johanne.hunt@epa.nsw.gov.au)

Yours sincerely



**SIMON TAYLOR**  
**Unit Head**  
**Regulatory Operations**

1 August 2023

**ATTACHMENT A:**  
**NSW Environment Protection Authority (EPA) Recommended Conditions of Approval for proposed Stone Ridge Quarry Project (Application SSD-10432) at Italia Rd, Balickera, NSW**

**Water Quality**

1. Before the commencement of any work, erosion and sediment controls must be installed and maintained. When implementing such controls, any relevant guidance in the Managing Urban Stormwater, Soils and Construction Vol.1 (Landcom, 2004) and Vol. 2E Mines and Quarries (DECC, 2008) must be considered.
2. The SSD must be designed, constructed and operated so as to maintain the *NSW Water Quality Objectives* where they are being achieved as at the date of this approval, and contribute towards achievement of the *NSW Water Quality Objectives* over time where they are not being achieved as at the date of this approval, unless an EPL in force in respect of the SSD contains different requirements in relation to the *NSW Water Quality Objectives*, in which case those requirements must be complied with.

**Note:** *If it is proposed to discharge stormwater to waterways, a Water Pollution Impact Assessment will be required to inform licensing, consistent with section 45 of the POEO Act. Any such assessment must be prepared in consultation with the EPA and be consistent with the National Water Quality Guidelines, with the level of detail commensurate with the potential water pollution risk.*

**Air Quality**

**Air Quality Management Plan**

1. For all emission sources at the site the proponent must prepare an air quality management plan that includes, but is not limited to:
  - Proactive and reactive management strategies
  - Site specific benchmarking of emission controls and management strategies with best management practice
  - Key performance indicator(s)
  - Monitoring method(s);
  - Location, frequency and duration of monitoring;
  - Record keeping;
  - Response mechanisms; and
  - Compliance reporting.
2. The air quality management plan must be implemented prior to the commencement of any dust generating activities at the site.

**Operating Conditions**

1. The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.
2. Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission of dust from the premises.

**Meteorological monitoring**

1. The proponent must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

Parameter	Units of measure	Frequency	Averaging Period	Sampling Method
Rainfall	mm/hour	continuous	1 hour	AM-4
Siting	-	-	-	AM-1
Temperature at 2 metres	degrees Celsius	continuous	10 minute	AM-4
Temperature at 10 metres	degrees Celsius	continuous	10 minute	AM-4
Total solar radiation	watts per square metre	continuous	10 minute	AM-4
Wind Direction at 10 metres	degrees	continuous	10 minute	AM-2 and AM-4
Wind Speed at 10 metres	metres per second	continuous	10 minute	AM-2 and AM-4

Note 1: Sampling methods are defined in the EPA's Table of AM-coded methods for ambient air monitoring, as per the *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW*

### **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)		
	Morning Shoulder	Day	Evening
	L <sub>Aeq</sub> (15 minute)	L <sub>Aeq</sub> (15 minute)	L <sub>Aeq</sub> (15 minute)
241 Italia Road, Balickera (Lot 223, DP 605928)	35	40	35
16 Italia Road, Balickera (Lot 32, DP 787250)	35	40	35
17 Nine Mile Creek Road, Ferodale (Lot 302, DP 632130)	35	45	35

- L6.2** For the purposes of condition L6.1:
- Morning Shoulder means the period from 6am to 7am Monday to Friday.
  - Day means the period from 7am to 6pm Monday to Friday and 7am to 3pm Saturday.
  - Evening means the period from 6pm to 10pm.

### **L6.3 - Meteorological Conditions**

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

Assessment Period	Meteorological Conditions
Day & Evening	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level

Morning Shoulder	Stability Categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m above ground level; or Stability category F with wind speeds up to and including 2m/s at 10m above ground level.
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- 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 identified as **Bureau of Meteorology AWS at Williamtown RAAF (Station 061078)**
- 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  $L_{Aeq(15\text{ minutes})}$  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  $L_{Aeq(15\text{ minutes})}$  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.

**M8 Requirement to Monitor Noise**

**M8.1** Attended noise monitoring must be undertaken in accordance with Condition L6.5 and must:

- a) occur at each location specified in Condition L6.1;
- b) occur within 3 months of product production and then quarterly, in a reporting period;
- c) occur during each day, evening 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 evening; and
  - 1 hour during the night.
- d) occur for three consecutive operating days
- e) or as otherwise required in an Environment Protection License issued by the Environment Protection Authority.

Note: Subject to any express provision to the contrary in this licence, measurement and analysis of noise required by this licence must be done in accordance with the Approved Methods for the Measurement and Analysis of Environmental Noise in NSW.

### **Reporting Conditions**

#### **R4 Noise Monitoring Report**

A noise compliance assessment report must be submitted to the EPA within 30 days of the completion of the quarterly monitoring. 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 exceedences 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.
- Noise – 'sound pressure levels' for the purposes of conditions L6.1 to L6.8.
  - $L_{Aeq(15\text{ minute})}$  - 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.

#### **L3 Hours of Operation**

**L3.1** Activities at the premises must only be conducted between 7.00am and 6.00pm Monday to Friday and 7.00am to 3.00pm Saturday. No activity at the premises may be carried out during Sundays and public holidays unless otherwise stipulated by another condition in this licence.

**L3.2** Truck movements to and from the site be restricted to Monday to Friday 6.00am to 10.00pm and Saturdays 7.00am to 3.00pm.

## **Construction Noise**

### **Hours of Construction**

**L6.11** All construction work at the premises must be conducted between 7am and 6pm Monday to Friday and between 8am and 1pm Saturdays and at no time on Sundays and public holidays.

### **Minimise noise and vibration impacts on noise sensitive receivers.**

- All works and activities must be undertaken in a manner that will minimise noise and vibration impacts on noise sensitive receivers.

## **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-5:00pm Monday to Saturday. Blasting is not permitted on 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** Blasting at the premises is limited to 1 blast on each day on which blasting is permitted.

### **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;

**This concludes the EPA's submission on the proposal.**