DOC18/154609-04

Department of Planning and Environment
Resource Assessments
GPO Box 39
SYDNEY NSW 2001

Attention: Jack Murphy

Dear Mr Murphy

RE: Project Approval 06_0074 Modification Request No. 5
Boral Peppertree Quarry - Marulan

I refer to your email of 1 November 2018 in which you requested the NSW Environment Protection Authority's (EPA) comments and suggested approval conditions on Boral Resources (NSW) Pty Ltd's Modification 5 proposal for the Peppertree Quarry at Marulan (Project Approval 06_0074). I apologise for the delay in the submission of the EPA's response.

The EPA has reviewed the Environmental Assessment (EA) titled 'Peppertree Quarry Modification 5 – Environmental Assessment', prepared by Element Environment, dated 31 October 2018. The EPA has identified a number of issues in relation to the noise impact assessment and provides further comment in **Attachment A** to this letter regarding this. Please note however, the identified issues do not prevent the EPA from providing recommended conditions for noise, in line with the requirements of the Noise Policy for Industry (EPA 2017), with these detailed in **Attachment B** to this letter. These comments and recommended conditions of approval are provided to assist the Department of Planning and Environment in its decision whether or not to approve the modification.

I trust these comments are of assistance. If you have any queries regarding this letter, please contact Michael Heinze at the EPA's South East Region office in Queanbeyan on (02) 6229 7002.

Yours sincerely

Press. 12/12/18

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Attachment A – EPA Comments – Peppertree Quarry Mod 5

Noise

The EPA has reviewed the noise impact assessment contained within the EA, titled 'Noise Impact Assessment – Peppertree Quarry Mod 5' (NIA), prepared by Wilkinson Murray and dated September 2018.

The EPA considers that the NIA is adequate for the purposes of providing recommended noise conditions which are detailed in **Attachment B**. The recommended noise conditions include Lot and DP numbers for receiver identification, and in order to provide these are fully correct these details need to be confirmed by the proponent. It is recommended that this occur as part of any response to submissions by the proponent or prior to any approval of Modification 5 by the Department of Planning and Environment (DPE).

The recommended conditions also nominate monitoring points for meteorological parameters, and it is understood that the proponent operates a weather station on the premises. The addition of this point to Environment Protection Licence 13088 (EPL) will need to be negotiated between the proponent and the EPA and is relevant to recommended conditions L6.4, M7.1 and M7.2 as detailed in Attachment B.

The EPA does note the NIA should have included an analysis of wind data in accordance with Fact Sheet D2 of the Noise Policy for Industry to assess impacts under any applicable prevailing winds. The NIA adopts standard meteorological conditions in Section 6.1, although a wind data analysis has not been undertaken. The wind roses in Appendix C of the NIA suggest that some prevailing winds may be applicable to the assessment.

The EPA considers that the proposal as presented in the NIA will most likely be able to comply with the recommended conditions in Attachment B under any applicable prevailing winds and has recommended noise-enhancing meteorological conditions in Condition L6.3, which is also consistent with the existing EPL for the premises. However, for completeness DPE may wish to consider whether it requires the proponent amend the NIA to include an analysis of wind data in accordance with Fact Sheet D2 of the Noise Policy for Industry and assess impacts under any applicable prevailing winds.

Attachment B – Recommended Conditions – Peppertree Quarry Mod 5

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. The locations referred to in the table below are indicated by Appendix 3 of the Consolidated Project Approval (06_0074 Mod 4). <Proponent to check all references and Lot/DP numbers for accuracy>

Location	Noise Limits in dB(A)			
	Day	Evening	Night	Night
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	L_{AFmax}
R3 (5) - 113 Green Hills Road Marulan (Lot 2, DP 1060897)	40	35	35	52
R2 (6) - 90 Green Hills Road Marulan (Lot 11, DP 881240)	40	35	35	52
R8 (16) - 381 Marulan South Road, Marulan (Lot 1, DP 1190667)	40	35	35	52
Any other noise sensitive residential receiver location	40	35	35	52

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, D and E with wind speeds up to and including 3m/s at 10m above ground level.
Evening	Stability Categories A, B, C, D and E with wind speeds up to and including 3m/s at 10m above ground level.
Night	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.

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 (*to be determined*).

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) 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) within 50 metres of the boundary of a National Park or Nature Reserve.

(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 location other than the locations referred to in condition L6.5 (a) or L6.5 (b).

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 sound pressure level measurements.

Monitoring Conditions

M7.1 The meteorological weather station identified as (*to be determined*) must be maintained so as to be capable of continuously monitoring the parameters specified in condition M7.2.

M7.2 For each monitoring point specified in the table below the licensee 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.

Point (*to be determined*)

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Air temperature	°C	Continuous	1 hour	AM-4
Wind direction	°	Continuous	15 minute	AM-2 & AM-4
Wind speed	m/s	Continuous	15 minute	AM-2 & AM-4
Sigma theta	°	Continuous	15 minute	AM-2 & AM-4
Rainfall	mm	Continuous	15 minute	AM-4
Relative humidity	%	Continuous	1 hour	AM-4

M8 Requirement to Monitor Noise

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

a) at each location listed in Condition L6.1:
b) occur 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.

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 suitably qualified and experienced acoustical consultant 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 L6.7.

- $L_{Aeq\ (15\ minute)}$ - 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 (AS1055.1-1997).

- L_{AFmax} – the maximum sound pressure level of an event measured with a sound level meter satisfying AS IEC 61672.1-2004 set to 'A' frequency weighting and fast time weighting.