



12 October 2011

Boral Property Group
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George Mobayed
Planning Officer
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001
Emailed to: george.mobayed@planning.nsw.gov.au

Dear Mr Mobayed,

**Peppertree Quarry Project Approval (PA 06_0074) MOD 2
Response to OEH submission**

I refer to the letter from the Office of Environmental & Heritage (OEH) on 27 September 2011 responding to Boral's Response to Submissions document for the Peppertree Quarry Modification 2. This letter responds to the two main matters of noise and threatened species and proposed draft conditions raised by OEH in order to satisfy the Department of Planning & Infrastructure to enable modification to proceed to determination.

Noise

OEH has not supported the adoption of proposed minor increases to existing noise limits for a number of receiver locations. Boral had proposed these limits within the modification to provide flexibility with construction and operation of the quarry. Following OEH's comments, Boral has reviewed the noise modeling in light of real-field data that has been collected in recent months since commencement of construction activities. A letter from ERM Australia is attached to this letter presenting the results of further modeling and additional mitigation measures.

Through selection of different equipment and feasible mitigation to fixed and mobile plant, the noise modeling has indicated that Boral can comply with the existing noise limits within Project Approval 06_0074 under prevailing weather conditions. Section 11.1.3 of the *NSW Industrial Noise Policy* (EPA 2000) has been taken into consideration in determining compliance.

Boral therefore accepts the adoption of the existing noise limits within the Project Approval for the proposed modification.

Threatened Species

OEH has proposed draft conditions to reduce the potential impact to threatened species and their habit from the modification.

Boral accepts the adoption of the proposed conditions and notes that most of the proposed conditions are already implemented as part of the Peppertree Quarry Landscape and Rehabilitation Management Plan.

I trust that the information above is satisfactory to enable the modification to proceed to determination. If you have any further queries, please contact me on the details below.

Yours sincerely



Rod Wallace

Project Manager – NSW Planning & Development

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12 October, 2011

Rod Wallace
Boral Property Group
Greystanes House, Level 4 South
Lot 107, Clunies Ross Street
PROSPECT NSW 2148

Our Reference: 0118026L07 - 75W MOD.DOC

Attention: Rod Wallace

Dear Rod,

**RE: PEPPERTREE HARD ROCK QUARRY - SECTION 75W
MODIFICATION**

The proposed increases to noise limits at several receivers in the Section 75W modification submitted by Boral in September 2011 was not supported by the OEH and hence the existing noise limits will remain applicable.

The original noise mitigation measures implemented in the quarry design are attached to the letter, refer *Annex A*.

Boral has since reviewed the significant noise contributing mobile equipment and their respective noise emissions and operational needs with respect to loading and overburden operations. Upon this review, ERM has implemented the following amendments into the noise model for the site:

- introduction of in pit crushing from commissioning, reducing the need for haulage out of the pit;
- substitutions of quieter loading equipment for overburden and extraction operations, to achieve an approximate reduction of 2 dB per item of equipment; and
- application of additional mitigation to mobile equipment, to achieve an approximate reduction of 2 dB per item of equipment.

These amendments have resulted in overall noise reductions which indicate that the existing noise limits can be achieved, given the conservatism built into the noise model and that the predicted levels are within 2 dB of the noise limits.

A detailed compliance assessment is presented here as *Annex B. Table B.1* presents the compliances and the range of exceedence, which is dependent on the specific overburden operational scenario assessed (i.e. East and West, East or West). Details of the mitigations measures applied are shown in *Table B.2*.

Yours sincerely,
for Environmental Resources Management Australia Pty Ltd

Handwritten signature of Rod Linnett in black ink.

Rod Linnett
Acoustics Engineer

Handwritten signature of Mike Shelly in black ink.

Mike Shelly
Partner Director

Annex A

INCLUDED MITIGATION
(AS PER S75W MODIFICATION)

A.1 PROCESSING PLANT

The minimum noise mitigation measures incorporated into the plant design and input into the noise model are:

- partial enclosure of the in-pit primary;
- enclosure of the secondary, tertiary processing plant;
- enclosure of the rail loading to rail wagons;
- enclosure of overhead bins for rail loading; and
- partial enclosure for loading of raw material into the jaw crusher.

Due to the proximity of the plant to receptors, the acoustic performance of the processing plant and train loading enclosures is required to be better than that of standard metal cladding. The enclosures will be required to be achieving a transmission loss of approximately 20 dB.

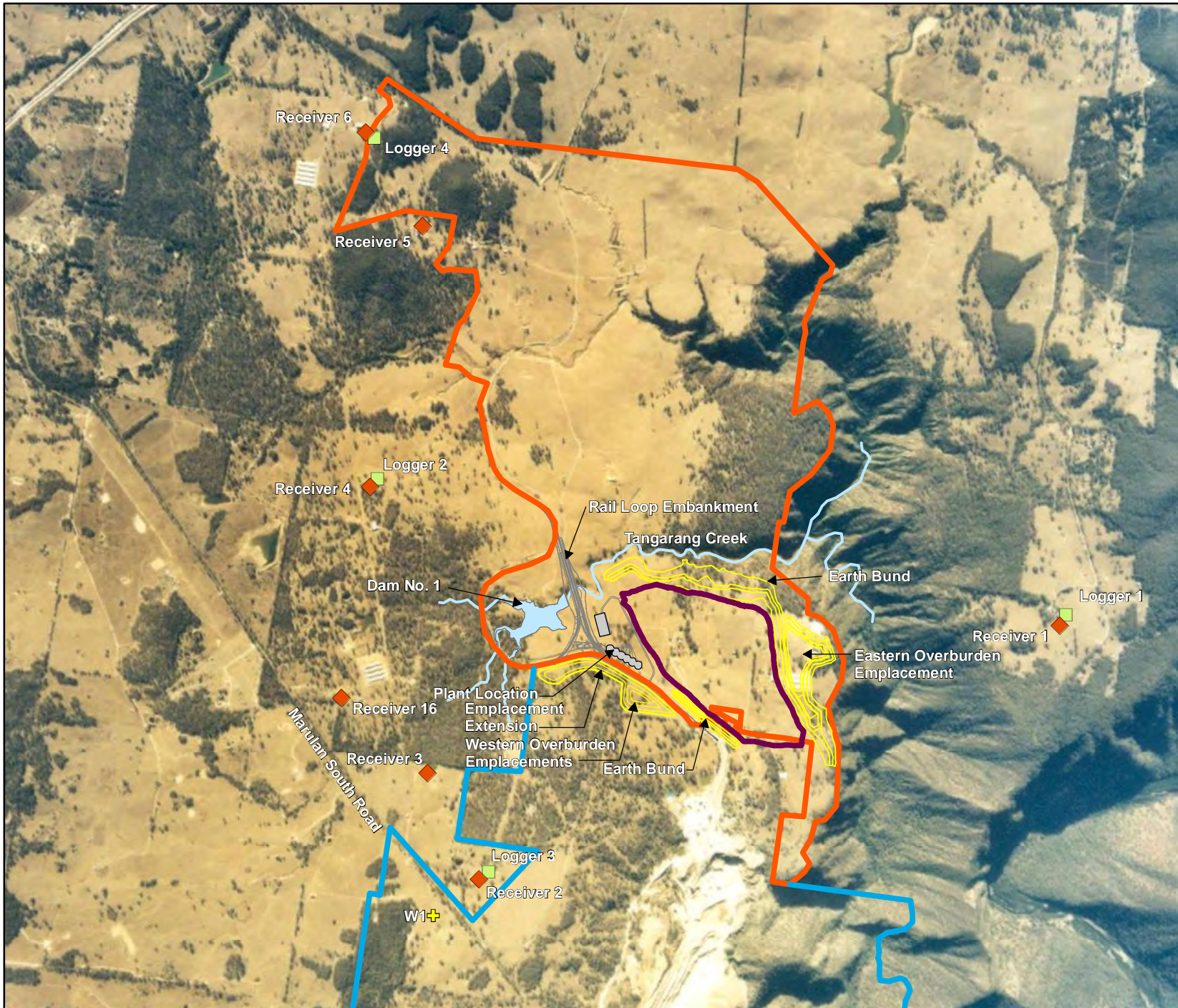
A.2 MOBILE EQUIPMENT

Similarly, the standard or minimum noise mitigation applied to all mobile equipment is:

- haul truck noise suppression (-5 dB) to a resultant L_w of 116 dB(A);
- dozer track mitigation (-7dB) resulting in a resultant L_w of 112 dB(A); and
- overburden haul truck noise suppression (-2dB) to a resultant L_w of 111 dB(A).

A.3 BUNDING AND BARRIERS

A 10 metre high earth bund will be constructed around the perimeter of the quarry pit and supplemented by the additional shielding provided by the emplacement areas, the emplacement extension along the rail line and the new rail embankment as shown on *Figure 5.1* of '*Boral Peppertree Quarry - Section 75w Modification Report*' dated June 2011 (Reference: 0118026RP10) and reproduced below.



Legend

- ◆ Receiver Locations
- Noise Logger Locations
- + Weather Station
- Quarry Location
- Boral Cement Property Boundary
- Boral Peppertree Property Boundary
- Proposed Dam Location
- Proposed Plant Location
- Tangarang Creek

Figure 5.1

Location of Noise Receivers

Client: Boral

Project: Peppertree Quarry

Drawing No: 0118026s_Sect75W_G009_R2.mxd

Date: 5/05/2011

Drawing Size: A4

Drawn By: SW

Reviewed By: RS

Projection: GDA 1994

Scale: Refer to scale bar



0 250 500 750m

Maps and figures contained within this document may be based on third party data, may not be to scale and is intended for use as a guide only. ERM does not warrant the accuracy of any such maps or figures.

Environmental Resources Management Australia Pty Ltd

Brisbane, Canberra, Hunter Valley, Melbourne, Perth, Port Macquarie, Sydney



Annex B

COMPLIANCE ASSESSMENT

Table B.1 S75W Modification Predicted Noise Level

ASSESSMENT V'S CRITERIA AND PREDICTED EXCEEDENCES							
East & West Overburden Operations	Calm		NE		E		Inv
	Day	Night	Day	Night	Day	Night	Night
Montgomery	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Pace	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Ordasi	Comply	Comply	1	Comply	1	Comply	Comply
Brown	Comply	Comply	Comply	Comply	Comply	1	1
Armitt	Comply	Comply	2	Comply	2	Comply	Comply
Cooper	Comply	Comply	Comply	Comply	3	Comply	Comply
Bartolo	Comply	Comply	Comply	Comply	Comply	Comply	Comply
East Overburden Operations	Calm		NE		E		Inv
	Day	Night	Day	Night	Day	Night	Night
Montgomery	1	Comply	Comply	Comply	Comply	Comply	Comply
Pace	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Ordasi	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Brown	Comply	Comply	Comply	1	Comply	1	1
Armitt	Comply	Comply	1	Comply	1	Comply	Comply
Cooper	Comply	Comply	Comply	Comply	2	Comply	Comply
Bartolo	Comply	Comply	Comply	Comply	Comply	Comply	Comply
West Overburden Operations	Calm		NE		E		Inv
	Day	Night	Day	Night	Day	Night	Night
Montgomery	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Pace	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Ordasi	Comply	Comply	2	Comply	2	Comply	Comply
Brown	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Armitt	Comply	Comply	2	Comply	3	Comply	Comply
Cooper	1	Comply	Comply	Comply	4	Comply	Comply
Bartolo	Comply	Comply	Comply	Comply	Comply	Comply	Comply

Table B.2 S75W Modification Predicted Noise Levels with additional mitigation

ASSESSMENT V'S CRITERIA AND PREDICTED EXCEEDENCES							
East & West Overburden Operations	Calm		NE		E		Inv
	Day	Night	Day	Night	Day	Night	Night
Montgomery	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Pace	Comply	Comply	Comply	Comply	Comply	Comply	1
Ordasi	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Brown	Comply	Comply	Comply	Comply	Comply	Comply	1
Armitt	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Cooper	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Bartolo	Comply	Comply	Comply	Comply	Comply	Comply	Comply
East Overburden Operations	Calm		NE		E		Inv
	Day	Night	Day	Night	Day	Night	Night
Montgomery	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Pace	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Ordasi	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Brown	Comply	Comply	Comply	Comply	Comply	Comply	1
Armitt	Comply	Comply	1	Comply	1	Comply	Comply
Cooper	Comply	Comply	Comply	Comply	1	Comply	Comply
Bartolo	Comply	Comply	Comply	Comply	Comply	Comply	Comply
West Overburden Operations	Calm		NE		E		Inv
	Day	Night	Day	Night	Day	Night	Night
Montgomery	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Pace	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Ordasi	Comply	Comply	1	Comply	1	Comply	Comply
Brown	Comply	Comply	Comply	Comply	Comply	Comply	Comply
Armitt	Comply	Comply	1	Comply	2	Comply	Comply
Cooper	Comply	Comply	Comply	Comply	2	Comply	Comply
Bartolo	Comply	Comply	Comply	Comply	Comply	Comply	Comply