

**In the matter of the
Melton Planning Scheme Amendment C162
Planning Panels Victoria**

**Expert Witness Statement of
Christophe Frederic Delaire**

Expert of Boral Construction Materials

1 Name and address

CHRISTOPHE FREDERIC DELAIRE

Associate

Marshall Day Acoustics Pty Ltd

6 Gipps Street, Collingwood.

Victoria 3066

2 Area of expertise

For over 14 years I have worked in the field of acoustics and noise control. I have a special interest in environmental noise.

My qualifications and experience are detailed in Annexure A.

I am sufficiently experienced to make this statement because I have been involved in environmental noise impact assessments for major environmental projects such as power stations, wind farms and other industrial plants.

3 Scope

3.1 Instructions

Marshall Day Acoustics Pty Ltd (MDA) was commissioned by Boral Construction Materials (Boral) undertake a noise assessment of quarry operations from the Boral site at Deer Park to the proposed residential area within the proposed Mt Atkinson and Tarneit Plains Precinct in accordance with the *State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1* (SEPP N-1).

A noise assessment from the Boral operations was undertaken in 2015 with the findings presented in report *Rp001 r03 2014549ML Deer Park Quarry Plant Replacement* (Boral Quarry Report) dated 15 May 2015.

3.2 Persons assisting with this work

My colleague Gillian Lee (Senior Consultant) has undertaken the noise predictions and the statement of evidence was reviewed by Ross Leo (Associate).

4 Noise assessment

Noise predictions have been undertaken to examine the impact of quarrying activities from the Boral site at the proposed Mt Atkinson and Tarneit Plains Precinct. This investigation is general in nature, and is based on previous work detailed in the Quarry Report.

The model scenario considered for this assessment uses the same noise sources and terrain profile detailed in the Boral Quarry Report, but with quarry pit operations, including mobile plant and truck paths, relocated to the western boundary. No changes to the terrain have been made, therefore quarry operations have been conservatively assumed in this case to occur at ground level. Further, no screening has been taken into account between the sources and receivers.

4.1 Noise criteria

Preliminary SEPP N-1 noise limits have been calculated on the basis of existing zoning types in the vicinity of the Mt Atkinson and Tarneit Plains Precinct, assuming that land marked for dwellings would be rezoned as Residential Land.

Background data collected for the Boral Quarry Report has also been used to calculate the limits, which may change once the Mt Atkinson and Tarneit Plains Precinct has been constructed.

The anticipated lowest noise limits are shown in Table 1.

Table 1: Anticipated SEPP N-1 noise limits, Mt Atkinson development

Receiver location	Direction from Boral site	SEPP N-1 noise limit, L_{eff} dB		
		Day	Evening	Night
Mt Atkinson residential areas	West	48	41	39

4.2 Predicted noise levels

Table 2 presents predicted results at two noise sensitive receivers representative of northern and southern residential locations within the proposed Mt Atkinson and Tarneit Plains Precinct, west of the Boral site. The Mt Atkinson and Tarneit Plains Precinct Structure Plan proposes a 'buffer' between the Boral quarrying lease and noise-sensitive residential areas within the development site. The two modelled receivers are located within the proposed residential area at a distance of approximately 600 m from the Boral quarrying lease.

Table 2: Predicted noise levels

Description	Day/Evening Period	Night Period
Northern receiver	37 dB L_{eff}	37 dB L_{eff}
Southern receiver	40 dB L_{eff}	39 dB L_{eff}

Noise levels from Boral operations are predicted to be close to the night-time SEPP N-1 noise limit at the assessed receivers within the Mt Atkinson and Tarneit Plains Precinct.

4.3 Commentary on Mt Atkinson Buffer Zone

In the event that the Mt Atkinson and Tarneit Plains Precinct is constructed, any non-sensitive buildings (e.g. retail or commercial uses) or barriers constructed between the residential areas at the Mt Atkinson and Tarneit Plains Precinct and the Boral quarrying lease would provide a degree of screening from Boral operations. Such screening has not been taken into account in the model.

Without intervening screening, a buffer distance of approximately 500-600m is likely to be required between Boral quarrying operations and noise-sensitive receivers to allow compliance with SEPP N-1 noise limits.

The location of noise-sensitive receivers at distances closer than this buffer distance may require engineering controls or restrictions placed on Boral operations in order to allow compliance with SEPP N-1 noise limits.

5 Declaration

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Planning Panel.

Signed 

Dated 2 September 2016

Annexure A – Qualifications

Qualifications

M.Eng – Masters' Degree in Engineering (French Equivalent), France 2001

Professional associations

MAAS – Member of the Australian Acoustical Society

Employment history and achievements

2002- Present Associate
Marshall Day Acoustics Pty Ltd, Melbourne, Australia.

Consultants in acoustics and noise control.

Responsibilities include consulting work in industrial noise control, environmental noise impact and architectural sound insulation.

2001 Vacation Employment
Marshall Day Acoustics Pty Ltd, Melbourne, Australia