

MINUTES

Boral Dunnstown Community Reference Group – November 2023

Date: 22 November 2023

Time: 4.00pm – 5.30pm

Venue: Dunnstown Recreation Reserve

Attendees:	Dina Jones, Chairperson	Premier Strategy
	Simone Bellears, Secretariat	Premier Strategy
	Blair Mather, Project Manager – Quarries Development	Boral
	Liam Riordan	Boral
	Jake McClellan	Boral
	Gustaf Reutersward	SLR noise consultant
	James O'May	Community Member
	Rick Stephens	Community Member
	Rohan Bryan	Neighbour
	Margo and Michael	Neighbour
	John and Heather McMahan	Neighbour
		Neighbour
Apologies:	Craig Tanner – Quarry Manager	Boral
	Mike Stephens	Community Member
	Shane Murphy	Community Member
	Dominic Hanrahan	Community Member

Discussion

Actions

Apologies noted.

Introductions of attendees. Rohan self-nominated as Jane's replacement on the CRG.

Invite Rohan to all future CRG meetings.

As this was an out of session meeting, the previous minute, actions and other standing business items were held over to the next full agenda CRG meeting, planned for December.

Out of session meeting to discuss the noise report

John suggested the report had been read and understood by community members, and requested we move direct to questions to allow time for these.

Consensus of the group preferred an overview of the report be presented as a refresher (5 mins).

Gustaf presented the report. Copy of the report has been tabled at previous meeting. Presentation attached for further reference.

Note: Noise mitigation installation (ie bund construction) is exempt from noise limits protocol during the day. Community can anticipate an elevated noise level during this time (elevated receptors at 3,4,5 all on Dunnstown-Yendon Rd).

Questions and discussion points:

Chair opened the discussion to questions.

John and Heather had a series of questions:

Q. In the cover email from Blair, there was reference to the EPA reviewing assessment and requesting additional information on the alternate assessment location – are there any updates on that?

A. Blair confirmed additional modelling was requested by the EPA due to atmospheric conditions and water saturations of adjoining paddocks affecting the effective noise level at the noise sensitive area.

Gustaf provided further context to the alternative assessment point:

To measure for neutral conditions, as per EPA requirement, an alternative reference location at the south west location of the site was identified as elevated enough to have clear view of the site, close enough that we don't have much in the way of meteorological enhancement.

In simple terms, you are evaluating the predictive difference between alternative location and receptor.

Q. The issue the group wants to understand is when there is cloud hanging over, which is not a rare event, impact on noise levels needs further explanation, ie. temperature inversion - How does this relate to noise?

A. Temperature inversion occurs when air temperature increases with height from the ground surface. ie layer of cool, still air, being trapped below warmer air.

In a temperature inversion, sound energy 'gets bent down' and can be heard from further distance during a temperature inversion. Amount of enhancement you get depends on the amount of inversion.

SLR looked at nearest data set, which was Ballarat airport (15km away) to determine the weather stability class profile for those occurrences. Weather stability classes range from A – G.

Class E is a mild temperature inversion and F&G classes more stable high temperature inversions.

Class F&G temperature inversion occasions appear to be very rare as a 0.2% of daytime and also rare for mornings (7am – 9am), ie less than 0.8% across a year might be considered 2-3 days of the year.

The presence of cloud is not representative of a temperature inversion however if the inversion is near the surface fog can be trapped.

Q. Have you removed data due to temperature inversion?

A. No data has been removed – in the above regard, all data is presented in the report.

Q. Are you leaving in temperature inversion data or taking it out of your assessment?

A. No – the modelling includes a mild propagation conditions typical of Class E stability conditions (temperature inversion)

Q. John: Our home is 2.4km from noise source and the road is 2km – topography beyond 2km is excluded from this measure, which in this case, would exclude the hill. A big part of the problem is we have a concave hill (that has been raised with Boral before but this report does not answer this). Referring to Receptor 8. (Referenced noise modelling from the wind farm displayed a deviation in the visual noise graph.

A. Gustaf – I would be surprised if the topography did not include the hill in its report. Will take on notice to confirm.

[Comment from Boral – The digital elevation model extends to a radius of 3 km and includes the property and topography (including the hill) at 66 Buchanans Rd.]

Q. John: The assumed ground hardness (absorption factor) is 'open farmland' of 0.6. What do you mean by open farmland?

Gustaf - Not a forest, and not city area/ concrete/ etc

John questions whether 0.6 is the appropriate factor throughout the year, as it can get very dry and wet.

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- A. Gustaf - **0.6 is the appropriate factor throughout the year** and is representative of a medium with limited to no built form comprising predominantly grass and other vegetation.

CRG Comment: Very dry happens very often and that's the season we hear the most noise. Shouldn't we target the 3-4 weeks/ months we are really annoyed rather than other times.

Gustaf - This is not considered to be a major or determinant variable.

Clarification: Not physical hardness of ground – it's the acoustic hardness (known as ground absorption)

CRG Comment - Issue from group is they feel, the entire time of the studies, were during wet and windy time of year.

Response - Gustaf - to the contrary we were measuring these rare occasions as well at that time.

Q. Rohan: Please clarify exclusion conditions for wind and exclusion of weather conditions.

A. Gustaf - The main reason we would discount data in windy conditions is because wind creates turbulence in the microphone. That is primary reason for excluding the data. The wind can also affect background noise, but less relevant to this report.

Q. Rohan: What is the condition at which wind is excluded?

A. Approximately 5m per second (18km an hour) ground level

Wind and rain are excluded in data due to weather enhancements. The other reason is invalidated data (unusually loud background noise i.e. lawn mowing etc)

Q. Rohan: Why are we modelling for noise bunds when Ben said they would not make any difference.

Do Noise bunds make a difference?

A. Yes, they would, but any barrier will break the noise. i.e. the higher the bunds the greater the noise break, but also the position of the bund matters (closest to the source, or closest to the receptor is best spot). Boral has since worked on some of the gaps in the bunds, where it is safe to do so.

Q. Rohan: Above lake on his property, a fog sits about 3-5 metres band above the lake. Would this make a difference to sound impact? Enhance or reduce?

A. This would be an example of an inversion. Fog and snow might reduce noise levels, but others enhance, ie open water. If is it located very low in the atmosphere it is likely probably inconsequential to noise propagation.

This would more likely be classified as a 'micro climatic' condition.

Q. Dina: Has Boral changed the timing of your crushing?

Jake/ Blair - Breaking is now at post 10am – CRG notes this is much better.

Q. Heather: Why the blank spaces in the report data?

Unless a Sunday, other reasons include equipment out of battery etc.

Sundays are excluded under EPA time periods. EPA suggests Sunday is effectively an 'evening period' but not relevant to the Boral noise report as non-operational on Sundays.

Q. Heather: If you want to measure 'non quarry noise' why not use Sunday data?

A. Daily raw data is captured in the report, in the tables. You can review.

(Rick departed meeting 5.33pm)

Q. Heather: Why, was a lot of data for receptor 180 (near Rick's house) removed?

- A. When Ben got out there, the solar panel had been blown away and therefore wasn't charging batteries, stopped recording.
June was also the time we were doing the alternative locations, with 3-4 local weather stations at that site, it was deemed too windy to take decent measurements.

Q. Heather: On page 16 low frequency noise guidelines. Which quarry equipment produces noise in that bandwidth?

- A. All to some extent, but crusher and rock breaker are the loudest, not so much at low frequency, but distinct.

Chair: thanked everyone for their questions and noted we were over time.
Invited further questions to be sent through to Blair.

Next meeting 6 December 2023, at Boral Dunnstown Quarry.

CRG invited to site tour (optional) before normal meeting time of 4pm – 5.30pm

Meeting closed, 5.45pm
