

MEMO

Project:	District Plan Review	Document No.:	Mm 006		
To:	Waimakariri District Council	Date:	9 March 2020		
Attention:	Bev Bray	Cross Reference:			
Delivery:	by email	Project No.:	20181370		
From:	Stuart Camp	No. Pages:	3	Attachments:	No
Subject:	Business 3 Zone – Noise Control Boundary				

In section 5.1 of our Issues and Options report (Rp 003 20181370 dated 17 April 2019), we discussed noise issues which we consider need to be addressed around the Daiken MDF plant in the Business 3 zone at Ashley. In our Memo of 1 August 2019 (Mm 003 20181370), we suggested an indicative location for a noise control boundary.

Subsequent to the issue of these two documents, Daiken have engaged Acoustic Engineering Services (AES) to undertake additional noise monitoring on and around their site, to assist in refining the noise control boundary. AES emailed their recommendations to Marshall Day Acoustics on 21 February 2020. We have reviewed their proposal and make the following comments.

1. The AES proposal is based on noise measurements along Upper Sefton Road, and measurements close to key noise sources on site. This follows industry best practice.
2. AES have established a 45 dB L_{Aeq} noise contour, acknowledging that some noise control treatment needs to be implemented for the Daiken plant to fully comply with this contour. The contour is therefore calibrated to the current compliance location at the notional boundary of 126 Beatties Road.
3. Based on the 45 dB contour, AES have proposed a noise control boundary which largely follows easily identifiable features such as roads and fence lines. This is also industry best practice.
4. For completeness, AES have also proposed that the noise control boundary extends around the west, south, and east boundaries of the Business 3 zone. We had originally considered this option and support the proposal. The complete noise control boundary ensures that activity within the Business 3 zone is controlled by a noise rule around the entire zone.
5. Overall, we are satisfied that the proposal by AES, on behalf of Daiken, addresses the concerns which we originally raised. The proposed noise control boundary would provide an assurance to residents in the area that future development within the Business 3 zone would always have to comply with appropriate noise rules. In addition, the contour would give some protection to Daiken's existing operation by restricting the ability of landowners to the north to build new dwellings in close proximity to the Business 3 zone.

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On the basis of the above, we recommend that Council incorporate the noise control boundary proposed by AES into the District Plan (copy attached). In addition, we recommend:

- a. That the noise rules for the Business 3 zone remain unchanged with respect to hours and noise limits, but are modified to reflect the noise control boundary, along the lines of the following;

Noise generated within the Business 3 zone shall not exceed the following standards at or beyond the noise control boundary shown in [insert reference]:

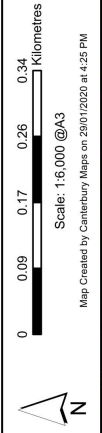
<i>0700—1900 Monday to Saturday</i>	<i>55dB L_{Aeq}</i>
<i>0900—1900 Sundays and Public Holidays</i>	<i>55 dB L_{Aeq}</i>
<i>All other times</i>	<i>45 dB L_{Aeq}</i>
<i>2200—0700 on any day</i>	<i>75dB L_{Amax}</i>

- b. That there is an additional rule added to make new dwellings within the noise control boundary a non-complying activity.

Suggested location of control boundary based on further AES monitoring Dec 19



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Further notes regarding night time prediction:

- Distance calculation based on ISO 9613 using close proximity measurements of key night time sources (rooftop extracts, Z-sifter breakout, other transfer fans)
- Assumes complying levels have been achieved at 126 Beatties Road
- Assumes minimal screening to rooftop extract fans and Z-sifter house

Location of 45 dB L_{Aeq} night time contour which drives the location of the control boundary (only valid to the north across Upper Sefton Road)

Appendix A to Marshall Day Acoustics
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