

**BEFORE AN INDEPENDENT HEARINGS PANEL
OF THE WAIKATO DISTRICT COUNCIL**

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of the proposed Waikato
District Plan (Stage 1)
Hearing 25

**EVIDENCE OF CRAIG MICHAEL FITZGERALD ON BEHALF OF HYNDS PIPE
SYSTEMS LIMITED AND THE HYNDS FOUNDATION**

NOISE

17 February 2021

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1. INTRODUCTION

1.1 My full name is Craig Michael Fitzgerald.

1.2 I am an Associate with Marshall Day Acoustics (**MDA**), specialising in environmental noise and vibration assessments. I have a Bachelor of Engineering (Mechanical) from the University of Auckland. I am a Chartered Engineer (CEng) registered with the Engineering Council (UK). I am a Member of the Acoustical Society of New Zealand and the Institute of Acoustics (UK).

1.3 I have 17 years' experience as an engineer. For the past 14 years I have worked in the field of acoustics in New Zealand and England. My work has a focus on the acoustic effects of proposals for development, and environmental acoustics for large infrastructure projects, including appearing as an expert witness for Council and Environment Court Hearings, and Environment Court mediation. I also have experience in architectural acoustics, and have provided advice on sound insulation, room acoustics and mechanical services noise.

1.4 Some of my relevant project experience includes:

(a) Consenting and noise management of numerous port industrial facilities, including Ports of Auckland (coastal terminal and their Waikato Freight Hub inland port), Port Napier, Port Taranaki, Port Marlborough, Lyttelton Port and Port Otago.

(b) Major infrastructure consents including City Rail Link, Americas Cup 36 infrastructure and the KiwiRail's Wiri to Quay Park Third Main Line. I prepared the noise and vibration assessments in each case and presented evidence at the subsequent Council Hearings and Environment Court where relevant.

1.5 I have read the Code of Conduct for Expert Witnesses (**Code**) outlined in the Environment Court's Consolidated Practice Note 2014 and confirm that I will comply with it in preparing my evidence. I confirm that the issues I will address are within my area of expertise, except where I state that I rely upon the evidence of other expert witnesses. I also confirm that I will not omit to consider material facts known to me that might alter or detract from my opinions.

2. SCOPE OF EVIDENCE

2.1 I have been asked to provide evidence on behalf of Hynds Pipe Systems Limited and the Hynds Foundation in relation to their submissions/further submissions on the Proposed Waikato District Plan (**Proposed Plan**). Hynds Pipe Systems Limited and the Hynds Foundation are referred to collectively as **Hynds** in this evidence unless the distinction is made between the two organisations.

2.2 The Proposed Plan applied the Rural zone to the land at 62 Bluff Road, adjoining the Hynds plant. This land has recently been purchased by Hynds. The focus of this evidence is Hynds' request that the lower portion of the 62 Bluff Road site (**Expansion Land**) be zoned Heavy Industrial whilst retaining the proposed Rural zone on the upper portion of the land.

2.3 My evidence will cover the following matters:

- (a) Compare the relevant performance standards;
- (b) Summarise the existing noise environment;
- (c) Assess effects of the proposed zone change; and
- (d) Conclusions.

3. SUMMARY OF EVIDENCE

3.1 The key matters relevant to this evidence are as follows:

- (a) The Expansion Land at 62 Bluff Road is proposed to be rezoned from Aggregate Extraction and Processing (**AEP**) under the Operative Plan to Rural under the Proposed Plan. Hynds requests that the lower portion of the site is zoned Heavy Industrial instead to enable a natural extension of yard activities, warehouse storage, or similar;
- (b) The AEP and Heavy Industrial zones enable similar activities (from a noise perspective) and have similar noise limits. Therefore, noise character expectations of nearby residents would be unchanged;

- (c) I predict the receiving noise environment would continue to be controlled by State Highway 1 (**SH1**) (rather than Hynds' activities);
- (d) I predict Hynds' activities on the Expansion Land will comply with the Proposed Plan's noise rules; and
- (e) I predict the rezoning request would result in a negligible change to cumulative noise levels from Hynds' sites received at the adjacent Village and Rural zone interfaces.

4. PERFORMANCE STANDARDS

Zoning

4.1 The Operative and Proposed planning provisions are described in the Planning evidence of Sarah Nairn and Dharmesh Chhima on behalf of Hynds. In summary:

- (a) Operative Zoning: The Hynds site is Industrial 2 and the Expansion Land at 62 Bluff Road is AEP with Rural beyond.
- (b) Proposed Zoning: Hynds' site is Heavy Industrial and the Expansion Land is Rural along with the land beyond. Hynds requests that the lower portion of the Expansion Land be zoned Heavy Industrial to enable a natural extension of yard activities, warehouse storage, or similar.

Noise Rules

4.2 Resource Consent LUC0017/13.01 sets noise limits for the existing Hynds site in Condition PC6, reproduced below. Note that District Planning Map 107 is no longer publicly available, but it identified the 'High Background Noise Area' as an area on the south side of the motorway, near the old town interface. It did not extend to the new *Village* zone across, on the northern side of, the motorway.

PC6 All activities other than construction noise activities shall be conducted, and buildings located, designed and used to ensure that the following noise limits are not exceeded at or within the boundary of any other site where the other site is:

- (a) Industrial 2 Zone: 70 dB $L_{Aeq(15\ min)}$
- (b) Residential, Residential 2, Rural-Residential, Village or within the notional boundary of any existing dwelling house as of 18 December 2008 in the Rural Zone (Note: the notional boundary means a line 20 metres from any side of a dwelling or the legal boundary where this is closer to the dwelling):

Area	The noise level measured within the boundary of a site within the area described in column 1 of this table shall not exceed the following limits:		
	7.00am – 10.00pm	10.00pm – 7.00am	
	(dB $L_{Aeq(15\ min)}$)	(dB $L_{Aeq(15\ min)}$)	(dB L_{AFmax})
High Background Noise Area (refer District Planning Maps 107)	55	45	75
All other areas	50	40	70

- (c) Business Zone:

7.00am – 10.00pm	10.00pm – 7.00am	
(dB $L_{Aeq(15\ min)}$)	(dB $L_{Aeq(15\ min)}$)	(dB L_{AFmax})
60	50	75

- (d) Light Industrial Zone: 65 dB $L_{Aeq(15\ min)}$

Noise shall be measured in accordance with New Zealand Standard NZS 6801:2008 *Acoustics - Measurement of environmental sound* and assessed in accordance with NZS 6802:2008 – *Environmental Noise*.

- 4.3 The requirements of Condition PC6 generally align with the Operative Industrial 2 and AEP noise rules¹, and Proposed Heavy Industrial and Rural noise rules², as received at Residential, Village and Rural sites. They all enable 50 – 55 dB L_{Aeq} during the day and 40 – 45 dB L_{Aeq} during the evening / night.
- 4.4 The existing Hynds site operates primarily during the day, but regularly extends operations into the evening and night, albeit with reduced intensity. In all cases, the most stringent, and thus the most relevant, noise limit is 40 dB L_{Aeq} applying in the Rural and Village receiving environments at night.
- 4.5 The noise limits applying to the proposed extension site would remain consistent with Condition PC6. Furthermore, the Operative AEP and Proposed Heavy Industrial zones enable similar activities from a noise perspective. Therefore, noise character expectations of nearby residents would be unchanged.

¹ Refer Operative Plan rules 29.5.1 and 35.5.7 respectively.

² Refer Proposed Plan rules 21.2.3.1 (P3), 22.2.1.1 (P2) and 24.2.1 (P2) respectively.

5. EXISTING NOISE ENVIRONMENT

5.1 My colleague (Micky Yang) undertook noise measurements on Wednesday 10 February 2020, between 2330 and 0130 hrs. I understand the period was representative of busy night operations at the Hynds site. Three community measurement locations were undertaken:

- (a) Village zone interface (6 Cricket Lane on northern side of SH1). The noise environment was dominated by SH1 road traffic. Between traffic movements, the 'hum' from Hynds' site measured 37 dB L_{Aeq} and 42 dB L_{AFmax} .
- (b) Rural zone interface (at the northern end of Pioneer Road). The noise environment was dominated by SH1 road traffic. Between traffic movements, the 'hum' from Hynds' site measured 32 dB L_{Aeq} . The highest noise event measured 50 dB L_{AFmax} from birds and insects.
- (c) Residential 2 interface (at the southern end of Walter Rodgers Road). The noise environment was dominated by SH1 road traffic. Between traffic movements, the 'hum' from Synlait's activities appeared to dominate the measured noise level of 40 dB L_{Aeq} . The highest noise event measured 52 dB L_{AFmax} from birds and insects.

5.2 Overall, the existing noise environment is controlled by SH1. The measured noise levels are high for typical residential environments during the night-time, but are normal for receivers near major infrastructure. Hynds' activities were audible at times but complied with the Condition PC6 noise limits. The noise effects were negligible due to masking from SH1 road traffic noise.

5.3 As an aside, in my opinion the 55/45 dB L_{Aeq} (day/night) 'High Background Noise Area' noise limits in Condition PC6 are more appropriate for the immediate receiving environment, but I understand that this is a matter that is outside the scope of this hearing.

6. NOISE EFFECTS ASSESSMENT

6.1 The Expansion Land at 62 Bluff Road would enable a natural extension of yard activities, warehouse storage, or similar. These activities are primarily undertaken during the day and are generally quieter than the factory activities undertaken on the existing site. I also note that the Expansion Land is small in scale relative to Hynds' existing site and so the noise contribution from the extension would be small compared to the existing operations.

6.2 Based on our monitoring and modelling of existing operations, I predict:

- (a) The receiving noise environment would continue to be controlled by SH1 (rather than Hynds' activities);
- (b) Hynds' activities on the Expansion Land would comply with the noise rules in the Proposed Plan; and
- (c) There would be a negligible change to cumulative noise levels from Hynds' sites received at the Village and Rural zone interfaces.

6.3 Therefore in my opinion, the noise effects of the rezoning of the smaller lower portion of 62 Bluff Road as sought by Hynds will comply with the noise rules and will be acceptable.

Craig Michael Fitzgerald

17 February 2021