

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of an application for resource consent by
Woolworths New Zealand Limited for the
construction and operation of a
supermarket and associated activities at
58 Great South Road, Pokeno

**STATEMENT OF EVIDENCE OF CURT ROBINSON
ON BEHALF OF WOOLWORTHS NEW ZEALAND LIMITED**

ACOUSTICS

1. EXECUTIVE SUMMARY

- 1.1 Woolworths New Zealand Limited ("**Woolworths**") seeks resource consent for the construction of a supermarket ("**Proposal**") at 58 Great South Road, Pokeno ("**Site**").
- 1.2 I was responsible for the Acoustic Report that accompanied the resource consent application. In this evidence, I discuss the noise limits set out in the Waikato District Plan ("**District Plan**") and the noise projected to be generated from the operation and construction of the Proposal. I predict that the sound levels generated to the adjacent sites, with the implementation of the mitigation and management measures and acoustic conditions, would comply with both the day and night-time noise limits provided within the District Plan.
- 1.3 Further, I consider that compliance with the noise limits and recommended measures would ensure that the noise emission from the Proposal will be reasonable.
- 1.4 I endorse the conditions proposed by the Council's Planner, subject to the amendments in Ms Panther Knight's evidence.

2. INTRODUCTION

- 2.1 My name is Curt Robinson and I hold the position of acoustic consultant and Associate at Marshall Day Acoustics Limited. I have held this position for 12 years, and prior to that I held the position of Senior Consultant for the company.
- 2.2 I hold a Bachelors Degree in Mechanical Engineering from the University of Auckland. I am also a Member of the New Zealand Acoustics Society and the Institute of Acoustics in the United Kingdom.
- 2.3 I have over 25 years' experience in acoustic engineering, including the preparation of noise performance standards for district plans, environmental acoustic modelling of industrial sites, assessment, prediction and acoustic modelling, and the recommendation of mitigation measures when appropriate. I have provided expert evidence on acoustic matters on a number of occasions to council hearings, the Environment Court and the Environmental Protection Authority.
- 2.4 With respect to the Proposal, I was responsible for the Assessment of Acoustic Effects dated 30 April 2019 that accompanied the application for resource consent. I also prepared a response to the Council's further information request in relation to acoustic matters, dated 24 May 2019. I have reviewed the Council Officer's pre-hearing report ("**Pre-hearing Report**") (including recommended conditions), the peer review undertaken by Mr Daniel Winter on behalf of the Council, and all submissions received on the Proposal.

Code of conduct

- 2.5 I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014. I have complied with the Code of Conduct in preparing this evidence and will continue to comply with it while giving oral evidence at the hearing. Except where I state that I am relying on the evidence of another person, this written evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

3. SCOPE OF EVIDENCE

3.1 This statement of evidence will:

- (a) provide a brief description of the Site and existing ambient acoustic environment;
- (b) describe the proposed activities on the Site and the relevant noise limits in the District Plan;
- (c) discuss the noise effects of the Proposal and explain the recommended acoustic mitigation measures;
- (d) respond to the relevant submissions received and the Pre-hearing Report; and
- (e) provide overall conclusions regarding the Proposal.

4. DESCRIPTION OF SITE AND THE EXISTING AMBIENT ACOUSTIC ENVIRONMENT

4.1 The Site is zoned Business (defined in the District Plan) and is situated on the main thoroughfare for Pokeno (Great South Road). Business activities surround the Site along Great South Road with the Business zoned land behind these premises being vacant and pastoral. The land immediately north of the site is zoned as Residential. State Highway 1 is located a further 200 m to the north and east of the Site.

4.2 Acoustic measurements were undertaken during the day time between midday and 1 pm at the adjacent receivers to determine the existing acoustic ambient noise. The measured noise levels ranged between 48 and 53 dB L_{Aeq} . The quietest measurement was at the rear of the property adjacent to the residential dwelling at 15 Selby Street.

5. OVERVIEW OF THE PROPOSAL - NOISE

Proposed activities

5.1 The supermarket is proposed to operate between 7am and midnight, with deliveries and servicing of the store occurring between 7am and 10pm.

- 5.2 In the southeast corner of the Site, vehicles from Great South Road would enter and exit the Site from the newly formed Wellington Street. The customer carpark is primarily located in the south of the Site, but extends to the east, where the offices, courier delivery, and goods pick-up are also located.
- 5.3 In the north of the Site is the loading bay, where goods deliveries will take place. These involve courier vehicles, fixed-axle heavy goods vehicles, and "B-Train" articulated trucks.
- 5.4 A mechanical services plant is proposed to be installed to provide heating, ventilation, air-conditioning and refrigeration services to the supermarket. The majority of plant will be located on a rooftop plant platform. Rooftop extract and ventilation fans would also be located at roof level.

Operational noise limits

- 5.5 Pursuant to Rule 29.6.1.B in the District Plan, all activities within the boundary of the only adjacent Residential zone property at 15 Selby Street are restricted to generating no more than 55 dB L_{Aeq} in the day time (7am to 10pm) and 45 dB L_{Aeq} / 75 dB L_{Amax} for all other times.
- 5.6 The noise limit for Business zone sites is 5 decibels more permissive (ie 60 / 50 dB L_{Aeq} within the boundary).
- 5.7 Based on the existing ambient environmental sound levels, the limits are considered to be appropriate and I do not recommend any alterations to those limits.

Construction noise limits

- 5.8 The District Plan does not provide noise limits for constructive activities. However, the definitions section recommends a limit of 70 dB L_{Aeq} / 85 dB L_{Amax} from 7.30am to 6pm Monday to Saturday.¹ More stringent noise limits typically preclude external construction works at night, on Sundays and on public holidays.

¹ Assessment of Acoustic Effects at [3.2].

6. ACOUSTIC MITIGATION

6.1 The following acoustic mitigation measures were incorporated into the design of the Proposal to ensure that noise emission from the Site was as low as reasonably practicable:

- (a) goods delivery, loading dock use, and waste collection is to be limited to between 7am and 10pm;
- (b) use of LPG or electric forklifts and lift stackers to reduce engine noise;
- (c) use of broadband reversing alarms to remove the annoying tone;
- (d) design of mechanical plant to readily comply with the night-time noise limits; and
- (e) erection of acoustic screening around the rear of the site as shown in the architectural drawings. Screening shall be 2m tall and constructed of close-boarded timber with a minimum surface mass of 10 kg/m², such as 20-25mm thick timber palings or 17mm plywood.

7. NOISE ASSESSMENT

7.1 For supermarkets, the principal noise sources are:

- (a) customer vehicle movements entering and exiting the Site;
- (b) delivery vehicles and loading dock activities;
- (c) rooftop mechanical plant; and
- (d) construction of the Site.

7.2 The noise effects of the supermarket activities were considered and are discussed below.

Noise from Site vehicle movements (including customers and deliveries)

7.3 Unloading activities at the rear of the Site would only be undertaken during the day time. The predicted noise emission to the residential property at 15 Selby Street is 48 dB LAeq during quiet periods in the unloading bay to 58 dB LAeq for the highest 15 minute period with the arrival or departure of a large B-train

vehicle. The overall averaged noise level during the day time at this receiver is 53 dB L_{Aeq} . Further, the proposed acoustic screening and low noise fork lifts and stackers have been adopted to control noise emission from the Site on the adjacent residential property.

- 7.4 The arrival and departure of the large delivery vehicles would be clearly noticeable but only two to four of the B-trains are expected on the Site per day. For the rest of the day, the noise emission from the Site would be just noticeable. The overall noise emission from the Site to 15 Selby Street is considered to be compliant with the noise rules and, therefore, reasonable.
- 7.5 The main noise sources for the Business zoned premises at the front of the Site (being 44 Great South Road and the G.A.S. station) will be customer car park movements. The predicted noise at these sites range between 53 and 59 dB L_{Aeq} . This complies with the District Plan noise limits.
- 7.6 The acoustic effect of the car park movements is considered to be insignificant as the generated noise will be similar to that of the existing ambient sound generated principally from vehicle movements along Great South Road. The property with the highest predicted noise is a petrol station and therefore not noise-sensitive. The noise from the Countdown carpark is likely to be masked by vehicle movements associated with the petrol station. In relation to 15 Selby Street, this residential property is screened from all customer car park movements by the proposed building itself and the acoustic fence.

Noise from mechanical plant

- 7.7 The design of the mechanical plant has not yet been undertaken for the Site. However, it is understood that the system will be of a similar design to that used in other comparably sized supermarket premises. The Acoustic Assessment identified a suitable location for rooftop plant² and it is proposed to be conditioned accordingly. With appropriately designed acoustic attenuation, it is predicted that noise from all mechanical plant would readily comply with the day and night-time noise limits.
- 7.8 With specific consideration of the residential property at 15 Selby Street, noise levels at night at this property are predicted to be 44 dB L_{Aeq} and therefore the rooftop plant is likely to be compliant with the District Plan.

² Assessment of Acoustic Effects, Appendix B.

Noise from construction

- 7.9 I understand that the total construction duration is expected to be approximately 12 months. Initial site establishment would take two weeks, followed by four months of earthworks for both the Site and Wellington Street. Once this is complete, construction, landscaping, and site works for the supermarket can begin and is expected to take approximately eight months, with the supermarket closed in within four months of these works.
- 7.10 I consider that construction activities can generally comply with the appropriate long-term construction noise limits by:
- (a) organising the acoustic fence along the boundary at the rear of the Site (surrounding the unloading bay) and constructing a temporary acoustic screen along the north-western boundary to reduce noise from construction activities as soon as practicable; and
 - (b) prior to that, ensuring that noisy activities do not take place close to the boundary.

8. RESPONSE TO SUBMISSIONS AND PRE-HEARING REPORT

Submissions

- 8.1 I have read the submissions on the Proposal and address relevant submissions below.
- Ms Langrish*
- 8.2 Ms Langrish, the owner of 15 Shelby Street (to the rear of the Site), prepared a submission in support of the Proposal but also noted that "the noise will be highly disturbing and upsetting".
- 8.3 To reduce the noise effects within Ms Langrish's property, I have recommended the following measures:
- (a) restrict unloading activity to day-time only;
 - (b) use electric or LPG powered forklifts with broad and revering alarms fitted; and

(c) the installation of a 2m high acoustic screen along the rear boundary of the Site.

- 8.4 With the implementation of these measures, any unloading activity would be compliant with the District Plan noise rules at all times
- 8.5 I do note that the land surrounding 15 Selby Street is currently vacant and largely rural and, therefore, the day time noise levels within the residential boundary are reasonably quiet (48 dB L_{Aeq} at lunch time). The Site is zoned as Business and the Council does envisage noise generating activity on this Site.
- 8.6 In saying that, as set out above, Ms Langrish would be protected from most activity associated with the supermarket relating to customer vehicle movements. The unloading bay is only used sporadically throughout the day. This means that the noise from the supermarket will just be noticeable for the majority of time.
- 8.7 Noise levels are predicted to increase significantly during the arrival and departure of the B-trains but this would occur for only two to four movements per day and for a period of no more than five minutes each.
- 8.8 I consider that the noise emission will be noticeable for Ms Langrish but will be compliant with the District Plan and even quiet for large periods of the day and night.

Pokeno Bacon Company and Pokeno Community Committee

- 8.9 The submissions of Pokeno Bacon Company and the Pokeno Community Committee raise a concern that the construction involved in the Proposal will affect business in the town centre.
- 8.10 The majority of construction activity associated with the construction of the building is significantly set back from the front of the Site. I consider that the noise impact from this construction would be minimal to none for the Pokeno business community.
- 8.11 There may be some disruption during the earthworks at the front of the Site but this is for a limited period and would still comply with the construction noise limits.

- 8.12 Overall, I consider that the noise impact from the construction activities would be slight to the Pokeno Business community.

Pre-hearing Report

- 8.13 I have read the Council's acoustic expert's review of the noise report and agree with the conclusion that:³

...subject to conditions, the proposed supermarket can operate without exceeding reasonable noise levels in terms of section 16 of the Resource Management Act.

- 8.14 Further, I have read the Council's proposed conditions that relate to acoustics. I agree that they would ensure that the noise emission from the Site would be reasonable, subject to the amendments proposed by Ms Panther Knight in Appendix 1 to her evidence. In particular:

- (a) Condition 6: Construction Noise Management Plan. I consider that the proposed amendments by Ms Panther Knight provide greater certainty regarding the necessary mitigation and management measures identified in the acoustic assessment report.
- (b) Condition 22: Hours of Operation – Construction and Earthworks. I do not consider it necessary to restrict hours for the construction activities. Use of earthwork machinery will need to be undertaken during the day time hours specified. However, there are many activities including landscaping, painting and internal works that could be undertaken at any time and comply with the construction noise limit standards.
- (c) Condition 46: Hours of Operation. Whilst the hours of trading can be restricted between 7am and 12 midnight, I consider that other activities such as shelf stacking and baking can occur outside these hours provided they comply with the night-time noise limit.

³

Council's Pre-hearing Report, Appendix G – Acoustic Technical Report at p 3.

9. CONCLUSIONS

- 9.1 The predicted noise emission from the Proposal will comply with both day and night-time noise performance standards provided by the District Plan. This includes both construction (temporary) and operational (long-term) effects.
- 9.2 Further, I consider that compliance with the noise limits and recommended mitigation and management measures would ensure that the noise emission from the Proposal is reasonable. The Council noise expert agrees with this conclusion.
- 9.3 I agree with the recommended conditions put forward by the Council Planner, subject to the amendments sought by Woolworths (and as detailed in Attachment 1 to Ms Panther Knight's evidence).

Curt Robinson
9 August 2019