

BEFORE THE SELWYN DISTRICT COUNCIL

IN THE MATTER OF

The Resource Management Act 1991

AND

IN THE MATTER OF

Resource consent application
RC216016 to establish and operate a
PAK'nSAVE supermarket and
associated carparking, signage and
landscape, and to undertake soil
disturbance under NES, at 157 Levi
Road, Rolleston

AND

IN THE MATTER OF

**FOODSTUFFS (SOUTH ISLAND)
PROPERTIES LIMITED**
Applicant

**EVIDENCE OF WILLIAM PETER REEVE
ACOUSTIC ENGINEER ENGAGED BY THE SELWYN DISTRICT COUNCIL
DATED 11 JUNE 2022**

Qualifications and experience

1. My full name is William Peter Reeve.
2. I am a Senior Acoustic Engineer with Acoustic Engineering Services Limited, an acoustic engineering consultancy with head office based in Christchurch. I hold a Bachelor of Engineering with Honours from the University of Auckland. I am a member of the Acoustical Society of New Zealand.
3. I have over ten years' experience in the field of acoustic engineering consultancy and have been involved with a large number of environmental noise assessments on behalf of applicants, submitters and as a peer reviewer for Councils. My experience includes assessing noise from commercial activities which have carparks, loading bays and mechanical plant similar to this Application.
4. I am familiar with the site and general area.
5. While this matter is not before the Environment Court, I have read and agree to comply with the Code of Conduct for Expert Witnesses (Environment Court Practice Note 2014). I confirm this evidence is within my area of expertise, except where I state I am relying on facts or information provided by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Background

6. I have been engaged by the Selwyn District Council to review the acoustics information provided in support of the Application to establish a Pak 'n Save supermarket at 157 Levi Road. I provided a peer review of the Applicant's acoustic report in February 2022.
7. I have now reviewed relevant information contained within the Further Information Response from the Applicant, and the

submissions received which mention noise. I have also reviewed the interim decision for Private Plan Change 71 (PC71) regarding land adjoining this site.

Peer review summary

8. In this section I summarise key findings from my peer review, which I have updated to reflect the current status of PC71.
9. The noise limits proposed for site activity when received at residentially zoned properties are 50 dB $L_{Aeq(15 \text{ min})}$ daytime (0700 - 2200 hours) and 40 dB $L_{Aeq(15 \text{ min})}$ night time (2200 - 0700 hours). This is consistent with the Proposed District Plan limits and I consider these limits to be appropriate and consistent with typical guidance for the protection of residential amenity.
10. The highest daytime noise levels are predicted for a combination of customer traffic (off peak) and delivery activity during the main morning delivery sequence. The resulting levels are 45 - 50 dB $L_{Aeq(15 \text{ min})}$ at residential boundaries on the opposite side of Levi and Lincoln Rolleston Roads, which complies with the proposed limit.
11. Noise levels predicted for customer traffic in the peak evening period (40 - 47 dB $L_{Aeq(15 \text{ min})}$) and at off-peak times (41 - 48 dB L_{Aeq}) also comply with the proposed daytime limit. It is not clear why the off-peak levels are 1 dB higher than the evening peak hour predictions, although this could be due to an allowance for additional activity by service vehicles (rubbish trucks, etc.).
12. The levels reported for carparking and light vehicle movements are consistent with what I would expect from my own analysis. I agree that noise from this activity is likely to comply with the proposed limit at residential boundaries on the opposite side of Levi and Lincoln Rolleston Roads.
13. It is not practical for heavy vehicle deliveries at night to comply with these proposed limits at residential properties near the access, so this part of the activity has been excluded from the proposed

noise limits.

14. The proposed noise limit may be exceeded by in the order of 9 dB $L_{Aeq(15 \text{ min})}$ and up to 12 dB $L_{Aeq(15 \text{ min})}$ if the two night time delivery trucks arrive or depart within the same 15 minute period.
15. I agree that the duration of the noise source at any individual receiver will be short (likely less than 30 seconds per truck). However, given that the typical delivery schedule shows a bread delivery at 4:30 am and a chilled and frozen goods delivery at 4:45 am, I have some concern that the potential for sleep disturbance has not been adequately assessed at the closest residential properties, especially if existing vehicle activity, including heavy vehicles on Levi / Lincoln Rolleston Roads is minimal at this time.
16. If the Applicant can provide sufficient evidence that noise from these heavy vehicle movements will be consistent with existing traffic passing in the area at this time of the morning, or that maximum noise levels received at dwelling facades from the types of vehicles anticipated will be low enough to meet typical sleep disturbance guidelines that may reduce this concern.
17. I also raised concerns about the potential for noise effects if dwellings were to be established along the eastern and south eastern boundaries of the proposed Pak 'n Save site, and the main route for delivery vehicles. This included discussion of refrigerated trucks, where part of the noise source is elevated above screening. The subsequent interim approval in part of Plan Change 71, which enables residential use of the land along the eastern boundary, means this point is particularly relevant.
18. I understand from the Applicant Reply for Plan Change 71, that a confidential agreement has been reached between the developer of this site and Foodstuffs South Island Limited which *“incorporates a package of measures which address the interface between the respective sites should consent be granted for the Pak N Save Supermarket”*. While the applicant has been asked to provide comment, at this stage I do not know what these measures are,

which leaves me unable to provide comment on whether I consider these measures appropriate to manage noise effects. Just because an agreement between the parties has been reached, does not mean noise effects on these dwellings will be reasonable.

19. I note that as a part of PC71 proceedings, Mr Rob Hay, as acoustic expert for Foodstuffs, noted that some no-build or greenway/open space setback would be required to achieve an acceptable noise level at new residential dwellings, with the extent required dependent on the degree of acoustic screening along the boundary. I agree that this is likely the case.
20. Given the stage of development, no detailed assessment of either construction noise or mechanical services noise has been undertaken. However, I agree that if the activity is compliant with the conditions proposed by MDA for these sources, noise will be appropriately controlled. Given the nature and location of the development, as well as the potential measures discussed for mechanical plant this appears to be realistic for dwellings setback across roads.
21. However, given that PC71 will enable residential development closer to the Pak 'n Save than has been discussed in the noise assessment, it may be appropriate for the Applicant to confirm whether the proposed night-time mechanical plant levels and construction noise limits in NZS 6803:1999 are still likely to be met.
22. I also note that both the construction noise and mechanical plant noise conditions do not provide any explicit requirement for a more detailed assessment to be undertaken at a later date and provided to Council. This would be typical, and I would recommend these conditions updated to include such provisions.
23. If this Application is approved, I consider it appropriate that the use of broadband reversing alarms be made a condition of the Resource Consent. Based on my experience, 'beeper' reversing alarms can be a significant noise source from supermarket loading bay areas. The tonal and intermittent character of this noise can result in this noise

source being perceived as particularly annoying for residential receivers.

Submissions

24. I have reviewed all of the submissions, many of which raise broad concerns about increased noise from the activity. The focus is generally on traffic noise (both cars and heavy vehicle deliveries). Other noise which may be generated by the proposed activity has also been mentioned by some submitters, including mechanical plant, other noise sources in the carpark and construction noise.
25. Based on my review of submissions, I understand key concerns to be:
 - a. That residents have already been exposed to dramatic increases in traffic noise in recent years and this is already causing nuisance. This proposal will make things worse by increasing the amount of traffic.
 - b. Noise from early morning / night-time deliveries and staff arriving for night-time stock fill. Concerns that trucks arriving at night will be different in character to a truck driving past.
 - c. Reversing beepers on forklifts being intrusive, especially at night.
 - d. That the levels of noise generated will be unacceptable for a residential site and detrimental for resident's wellbeing (particularly at night).
 - e. That noise from extra trucks and other construction works has not been considered.
 - f. A failure to address Section 16 of the RMA (duty to avoid unreasonable noise).

- g. Residents next to the service lanes of Rolleston Town Square and West Melton retail complexes complain about noise. Full disclosure needs to be provided for those buying new houses established alongside.
26. I have provided my opinion on some of the matters raised by submitters in my peer review and summary above. In particular, I have commented on noise from night-time deliveries, reversing beepers, appropriate limits to ensure noise levels are reasonable / appropriate in this environment, and potential effects on new residences established next to the service access.
27. I now comment on issues raised by submitters that have either not been covered, or where I think further detail will be useful.
28. Residents, along Levi Road in particular, have discussed how the traffic volumes have increased over time resulting in increased noise levels in the area. I acknowledge that there has likely been significant change to traffic noise in the area, given the increased population in Rolleston and the Christchurch Southern Motorway opening in 2020.
29. The acoustic assessment discusses the fact that these arterial roads are likely to get busier over time, regardless of whether the supermarket is in this location and will inherently have larger traffic numbers into the night and early hours of the morning, along with more heavy vehicles. While I agree that this may be the case, no quantitative assessment of night-time or early morning vehicle movements has been provided.
30. The assessment concludes that trip generation from the supermarket will not have any perceptible effect on noise generated on these roads, because *“approximately 2/3 of the customer movements are expected to be pass by and diverted trips already on the road network”*. I do not think that this argument provides sufficient detail to demonstrate that noise resulting from

increased trip generation will not be perceptible as asserted.

31. The traffic assessment describes a diverted trip, making up one third of movements, as coming from somewhere else on the road network. They are effectively new to this part of the network. Only one third of trips to the supermarket would be pass by trips.
32. Further information on the number of peak hour movements and their distribution has been subsequently discussed in more detail by the traffic experts. On page five of the transport peer review, the summary is that there will be a further 675 vehicles on the adjacent roading network in the peak hour, with 36% (243 vehicles) passing through the Lincoln Rolleston Road / Levi Road intersection.
33. In my opinion, whether the traffic noise increase from the supermarket will be of note will depend on the relative increase to traffic volumes from what is existing (or will likely exist at the time of construction). After reviewing figure 7.2 of the Integrated Transport Assessment, which shows the transaction profile of the Rolleston New World, it appears that the relative increase during the evening peak hour would be a reasonable proxy for noise effects at other times of day, on the assumption that traffic generated by the supermarket generally follows trends for traffic on the road network in the area. The Applicant should provide an assessment of whether this is likely to be the case, to allow for a judgement of likely noise effects.
34. It is important to recognise that relatively large increases in traffic volume are required for noise levels to increase by a notable amount. For example, a doubling in traffic volumes will only result in a 3 dB increase in noise level, which is typically considered a just noticeable difference. If the increase in traffic levels remains below this threshold in the peak evening hour, then I would consider noise effects to be acceptable.
35. Some submitters have requested that road surfacing is upgraded from chip seal to a quieter alternative. While I agree that this could reduce overall traffic noise levels by a reasonable amount, this type

of road improvement is outside the control of the Applicant and may not be required depending on the outcome of the further detail above.

36. I consider it unlikely that the volume of night-time staff movements for stock fill will be sufficiently high to be of concern from a noise perspective.
37. While I agree that a truck arriving into the service lane will be different in character to a truck driving past on the road, when travelling at a lower speed to enter the lane, it would often be quieter. I have recommended that the Applicant provides more comment on existing heavy vehicle movements during the night-time, at similar times to those proposed.
38. While construction noise has not been assessed in any detail, the Applicant has proposed a condition requiring “measurement and assessment” in accordance with NZS 6803:1999. This standard contains desirable upper limits for the reasonable protection of health and amenity, which should be achieved where practicable. These are much higher than normal District Plan limits on the basis that noise from construction work is generally of limited duration.
39. The proposed wording of the condition does not require compliance with these limits, and they are not always practical to meet for some sites. However, given the nature of the development, the limits are likely reasonable to achieve for properties across Levi and Lincoln Rolleston Roads. I have recommended that the Applicant provides comment on potential construction noise at adjoining PC71 sites. This may inform whether it is reasonable to provide a condition requiring compliance with the noise limits in this standard.

William Peter Reeve

11 July 2022