**BEFORE INDEPENDENT HEARING COMMISSIONERS**
**AT NELSON**

**I MUA NGĀ KAIKŌMIHANA WHAKAWĀ MOTUHAKE**
**KI WHAKATŪ**

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|---|---|
| **IN THE MATTER** | **of the Resource Management Act 1991** |
| **AND** | |
| **IN THE MATTER** | **of the hearing of submissions and further submissions on Plan Change 29 to the Operative Nelson Resource Management Plan** |

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# SUMMARY STATEMENT OF JON ROBERT STYLES ON BEHALF OF NELSON CITY COUNCIL

## NOISE

**26 AUGUST 2024**

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## 1. INTRODUCTION

1.1. My full name is Jon Robert Styles. This is my second statement of evidence in this process.

1.2. My Evidence in Chief (**EiC**) is dated 17 June 2024. My experience, qualifications and agreement to abide by the Environment Courts' Code of Conduct are set out in my EiC.

1.3. This statement is primarily a summary statement, but I also address some matters raised by Mr Witte, Mr Saxton and Mr Fitchett and also mentions the outcome of expert conferencing with Ms Jenkin from Port Nelson.

## 2. EVIDENCE OF MR WITTE, MR SAXTON AND MR FITCHETT

2.1. Mr Witte, Mr Saxton and Mr Fitchett have filed non-expert briefs of evidence relating to the State Highway acoustic treatment provisions.

2.2. Many of the issues raised by these submitters are related to process and planning or legal matters. I respond only to the technical noise matters within my area of expertise.

### Benefactors of the controls

2.3. At his paragraph 2.3, Mr Witte states that "…*the benefits of any acoustic controls largely accrue to NZTA."* I assume that Mr Witte is referring to the benefits of mitigating of potential reverse sensitivity effects on NZTA.

2.4. I disagree with this. I have spent many years of my career working to change the narrative around plan controls of this nature. In the past, they have been described as "reverse sensitivity controls". In my view, the primary reason for controls of this nature is to reduce the potential adverse health effects arising from chronic exposure to high land transport noise. My EiC describes the sorts of effects I consider are important and that can be reduced and potentially avoided.

2.5. If these effects are addressed adequately, the potential reverse sensitivity effects on NZTA will also be mitigated.

2.6. So I consider that the benefits of the state highway acoustic controls accrue largely to the community. Having said that, I acknowledge that the costs also fall on the community.

**Local roads**

2.7. Mr Witte, Mr Saxton and Mr Fitchett raise the point that there are local roads in Nelson that carry as much or more traffic than State Highway 6 and therefore have the potential to generate noise levels that are high enough to warrant a response.

2.8. I agree that this is the case. I set out my views on this from paragraph 10.37 of my EiC. Essentially, I agree that the effects generated by traffic on local roads could justify controls like those applying to land around state highway 6, but I understand that there is no scope in the PC29 to address it.

**Reduction of the noise at source**

2.9. Mr Witte and Mr Fitchett consider that the focus should be on the reduction of noise at the source using measures available to the road controlling authority.

2.10. I agree, although my experience is that these measures are generally slow to be rolled out, and often have only a very limited effect in areas that are already developed. The net result is that even if a range of measures are adopted by the road controlling authority, the noise effects are likely to reduce by only small amounts and the effects will still be likely to extend well beyond the road corridor.

2.11. For example, a low noise road surface will only reduce road noise by maybe 3dB in 80-100kph speed zones, and perhaps only 1-2dB in 50-60kph speed zones. The range of noise levels of interest is 55dB $L_{Aeq(24hr)}$ at the edge of the modelled overlay area, to more than 70dB $L_{Aeq(24hr)}$ closer to some busy parts of State Highway 6. The small reductions available through road surface improvements are important, but modest.

2.12. My experience is that low noise road surfaces are expensive and

often require more maintenance and often have a shorter life than the cheaper surfaces commonly used.

2.13. Speed reductions will also reduce noise, but the benefits of small speed reductions (10-20kph) are generally small.

2.14. Enforcing noise regulations on particularly noisy vehicles can also reduce overall noise levels, but reducing the noise of the low number of high noise vehicles is unlikely to make much of a difference to the chronic exposure that generates the effects I am concerned about.

2.15. Notwithstanding these limitations, I support the proposition that there needs to be a clear focus for reducing traffic noise within the road corridor. I understand that there is no scope in this process to achieve such an outcome.

**Screening**

2.16. At his paragraph 7.11, Mr Witte states:

> *"However, should a property owner choose the acoustic fence option the first issue they face is that proposed rule REr43A applies only to "an* existing (my emphasis) *solid and continuous building, fence.(or) wall… that blocks the line of sight from all parts of doors and windows to the new or altered habitable spaces to any part of the road surface of the state highway. "(REr43A a. ii)."*

2.17. I agree with Mr Witte that the word "existing" is problematic. I consider that the word "permanent" may be a better option. The objective of this word is to ensure that the screening can be relied on to reduce noise on an ongoing basis.

**Calibration of noise models**

2.18. At his paragraph 7.14, Mr Witte states that he understand that the noise model used by NZTA to calculate the extent of the overlay has not been calibrated by actual measurements of road traffic noise.

2.19. I have worked with NZTA on these sorts of provisions in district plans all over New Zealand, including on appeal through the Environment Court in a number of cases.

2.20. Through that experience, I am aware that the noise model used by the NZTA to create the overlay has been prepared using known and robust modelling software, using road noise surface corrections that are specific to New Zealand roads and vehicles and road traffic noise algorithms that represent the New Zealand vehicle fleet. The modelling work has been calibrated in many situations across the NZTA's national road mapping project. I am satisfied that the model is sufficiently accurate and well-calibrated for the purpose of informing acoustic treatment controls.

2.21. This information is not obvious in the information available in this process.

## 3. PORT NELSON

3.1. I attended the expert conferencing session on noise controls. Ms Jenkin attended on behalf of Port Nelson as an expert planner. No acoustics experts attended.

3.2. I understand that Port Nelson does not request any technical amendments to the acoustic standards.

## 4. SUMMARY

4.1. PC29 proposes to enable residential intensification in areas of Nelson that may be exposed to high noise levels from transport infrastructure, Port Nelson, Nelson Airport and in zones that contain other potentially noisy commercial activities. The noise from these activities could have an adverse effect on the health and wellbeing of people and communities if it is not managed appropriately.

4.2. PC29 seeks to enable a greater intensity of and flexibility for residential development in the following specific areas that are likely to be exposed to noise levels that are high than desirable for residential activity:

i. The Suburban Commercial Zone (SCZ)

ii. The Inner City Zone (ICZ)

iii. Close to State Highway 6 and inside the State Highway Noise Overlay

iv. Within the Port Effects Control Overlay

v. Within the Airport Effects Control Overlay

4.3. I consider that it is incontrovertible that the adverse effects on the health and wellbeing of communities has the potential to be serious if it is not managed carefully. The adverse effects are chronic and include high levels of annoyance, sleep disturbance and the early onset of hypertension and ischemic heart disease. The nature of these effects can often mean that those affected do not self-report them.

4.4. I consider that carefully drafted and workable land use and development controls are required to ensure that people are protected from the potential adverse noise effects, especially where there is a drive to intensify residential activity in potentially noisy areas.

4.5. Accordingly, I broadly support the acoustic insulation controls that PC29 proposes. However, I have made several recommendations for amendments within the scope of the submissions received.

4.6. In summary, my recommendations are:

i. To create a definition for “Acoustic Insulation”. This sets out that acoustic insulation means the work required to a building to ensure that the indoor design level or façade insulation requirement set out in the rules is achieved. The definition also includes provision of a mechanical ventilation and cooling system. The definition is similar to the definition for Acoustic Treatment, but does not include any reference to Port Nelson Limited and their responsibilities to fund or part fund treatment inside the Port Effects Control Overlay.

ii. To broaden the range of activities subject to the acoustic insulation controls, from Bedrooms in Residential Units to Habitable Spaces in Residential Activity;

iii. To insert a rule or note that makes it clear that acoustic insulation controls are applied cumulatively where an activity is subject to compliance with more than one. For example, a Residential Unit in the SCZ and also within the State Highway Noise Effects Overlay would have to comply with the acoustic insulation requirements of both rules. This ensures that indoor noise levels will remain reasonable for the occupants.

iv. To insert a rule or note to clarify that an activity subject to more than one rule requiring mechanical cooling and ventilation can be deemed to comply where it complies with any one of the applicable rules.

v. To amend the requirements for mechanical ventilation and cooling in AP19.3 to:

1. Control the noise from the system itself to reasonable levels;

2. To remove the requirement to achieve six air changes per hour (which will reduce the cost of the system)

3. To allow alternative designs that will achieve the performance- based outcomes specified in the appendix

4. Include an allowance for a statistical approach to the meteorological design conditions, where the internal temperature requirement does not have to be met for the very hottest 2.5% of the time.

vi. To move to a modelled noise level contour to define the extent of the State Highway Noise Overlay, instead of the standard 100m distance in the notified PC29. This better-reflects the land that could actually be affected by noise from the State Highway and significantly reduces the number of properties and area of land that is affected by the controls.

vii. Notwithstanding my support for the modelled overlay, I agree with many submitters that the road controlling authority has a responsibility to minimise the noise from the roads as far as practicable, so that the receiving environment only has to deal with the effects that cannot practicably be contained within the road corridor. I understand that the imposition of specific rules or controls to manage noise in the road corridor are outside the scope of PC29.

viii. I agree with submitter S333 (R Witte) that there is no effects-based reason why the acoustic insulation controls should apply only to the State Highway and not to busy local roads. However, I understand that there is no scope in PC29 to apply the rules to local roads.

ix. I have provided a description of the approximate costs of implementing the various acoustic controls.

x. I have addressed the way that the proposed rules require acoustic insulation for additions and alterations to residential buildings. I

have provided a description of what I consider to be the ideal health effects-based outcome, but I acknowledge that there are practical limitations that will mean the ideal outcomes might not be practicable. I leave the planning experts to determine the most appropriate trigger for the acoustic controls in relation to additions and alterations.

xi. I have provided a description of the factors that are relevant to determining whether intensification should be enabled in the Airport Effects Control Overlay and the Port Effects Control Overlay.

4.7. I have provided a response to several submission points seeking various additional acoustic controls in Residential zones that are not exposed to high noise levels from commercial activities, State Highway 6, the Port or Airport. The submissions seek outcomes such as specific acoustic controls between terraced housing and apartments, and noise controls on residential activity for the more intense style of living generally. My advice is that such additional controls are either covered by other legislation (e.g. the Building Code and s326 of the RMA) or are otherwise not warranted.

26 August 2024

**Jon Robert Styles**