

IN THE MATTER

of the Resource Management Act 1991
("RMA" or "the Act")

AND

IN THE MATTER

of the **Proposed Te Tai o Poutini Plan**

**STATEMENT OF EVIDENCE OF STEPHEN JACK PEAKALL ON BEHALF
OF WEST COAST REGIONAL COUNCIL**

Dated 19 July 2024

Introduction

1. My full name is Stephen Jack Peakall. I am an Acoustical Consultant with Marshall Day Acoustics in Auckland. I have been in this position since May 2005.
2. I hold a degree in Environmental Engineering obtained from the University of West England (United Kingdom) and a postgraduate diploma in Acoustics and Noise Control from the United Kingdom's Institute of Acoustics, of which I am also a member. I am also a full professional member of the Acoustical Society of New Zealand.
3. I have over 20 years' experience in environmental noise issues, specialising in environmental noise assessment and control. Over the last 19 years I have been involved in the investigation, assessment and reporting on numerous environmental noise matters, covering a wide variety of noise generating activities.
4. My professional experience includes noise and vibration advice on projects for various clients, including most New Zealand airports, Waka Kotahi NZ Transport Agency ("Waka Kotahi"), Transpower NZ, KiwiRail and several quarries and mines throughout the country. I am currently involved in environmental noise and vibration assessment work that includes computer noise modelling, noise measurement surveys, strategic noise mapping and noise effects assessments.

Code of Conduct for Expert Witnesses

5. I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023. I confirm that I have considered all material facts that I am aware of that might alter or detract from the opinions I express, and that this evidence is within my area of expertise, except where I state that I am relying on evidence of another person.

Scope of Evidence

6. In this evidence I have been asked by the West Coast Regional Council (**Council**) to provide a summary of my expert acoustical opinion regarding the Proposed Te Tai O Poutini Plan (**pTTPP**).
7. My evidence is in general limited in scope to responding to the technical acoustical aspects of the submissions received on the pTTPP.

8. In this regard, there are some submissions that are extensive and make comment on almost all the rules. I therefore discuss each of those rules in turn.
9. However, I also provide my opinion on other aspects of the plan rules that I consider need amending, despite there being no specific submissions.
10. I have previously assisted the Council in the preparation of the airport noise boundaries associated with Greymouth, Hokitika, Westport, Karamea aerodromes/airfields, and Franz Joseph heliport. The resultant contours I prepared are included in the pTTPP planning maps, and have associated noise and land use planning controls.
11. I provide additional commentary relating to those rules where I consider this necessary.

Proposed Te Tai O Poutini Noise and Vibration Provisions

12. The pTTPP is structured so that the bulk of noise and vibration objectives, policies and rules are contained in one single chapter, being a sub chapter of the General District Wide matters. However, there are also other relevant parts of the plan that I consider, noticeably the Definitions section, as well as some specific references in individual zone chapters.
13. Generally, this makes it easier to reference noise and vibration obligations as all the relevant noise objectives, policies and rules are in one place.
14. For each noise chapter provision I discuss in the following sections, I respond to submissions received, and provide any additional information or clarification that I feel is pertinent.
15. My evidence cross references the S42A report prepared by Ms Evans in almost all sections. The S42A Report contains a recommended set of refined noise objectives, policies and noise rules for the Ngā Oro (Noise chapter of the pTTPP). I have had input into the development and refinement of these rules, and support their use in the pTTPP. I discuss the technical reasons for the revision of the rules, where required, in the following sections.

Definitions

16. Several submissions (Federated Farmers (S524), Silver Fern Farms (S441)) seek that a new definition of noise sensitive activity be added

to the Definitions chapter. In my opinion, a new definition is not required, because the existing rule framework and definitions already provided within the 'Definitions' chapter include all relevant 'noise sensitive activity'.

17. That is, the definition of 'Sensitive Activity' covers all activities that are 'noise sensitive'. This means that the rules of the chapter refer to the full range of activities that need or would need protection from unreasonable noise. The noise rules then go on to reference 'habitable rooms' within sensitive activities that require protection.
18. Several refinements to the acoustic insulation rule are proposed, that ensure all sensitive spaces defined as 'habitable rooms' within a 'sensitive activity' would be included in the consideration of required acoustic insulation. I discuss this in more detail in paragraphs 41 to 76 below relating to Rule R3.
19. The submission from Federated Farmers seeks that a definition of 'audible bird scaring' devices is added. In my opinion, an appropriate definition for 'audible bird scaring devices' should be:

'Audible bird scaring devices' means a gas gun, avian distress alarm or other such device used for the purposes of scaring birds

Objectives and Policies

20. Most of the submissions relate to the rules of the plan, as this is the section with the most direct relevance, and it is the rules that dictate what can or cannot be carried out in the district.
21. I consider the objectives and policies are generally appropriate, but I make the following comments.
22. Of the submissions received regarding Objectives 1 to 3, I consider that the following relief should be granted;
23. With respect to Objective 1, the Te Whatu Ora submission (S190) request to insert the word 'unreasonably' should be accepted, but that both the Buller Conservation Group (S552) and Inta (S553) submissions should be rejected (because their concerns are adequately addressed in Objective 2), so that the Objective reads as follows:

"The benefits of noise generating activities are provided for in a way that is compatible with the role, function and character of each zone

*and does not **unreasonably** compromise community health, safety and wellbeing.*

24. With these suggested modifications, I consider Objective 1 to be appropriate.
25. Regarding Objective 2, I consider that this should be retained in its entirety. I note that the submissions of Federated Farmers of New Zealand and Horticulture New Zealand (S486) seek a definition of noise sensitive activity should be included. I have discussed this in paragraphs 16 to 19 above.
26. In all other matters, I agree with the proposed wording of Ms Evans and her rationale and justification for amending the Objectives and Policies, and her recommendation to either accept or reject the other relevant submission points, as they relate to noise.
27. Therefore, I consider that the Objective and Policies now proposed by Ms Evans in her S42A report (Noise Chapter provisions section) represent a balance between the need to allow for some noise generating activities, whilst ensuring those activities do not exceed a reasonable level.

Noise Rules

28. I now comment directly on the noise rules in turn, with reference to the relevant submission, whether in support or in opposition to the particular noise rule under consideration, and provide updated wording where required.
29. Also, where I feel it is necessary from a technical perspective I also provide additional commentary as to how the rule could be reworded to improve the outcomes, irrespective of whether there is scope to do so or otherwise.

Noise Rule R1

30. Noise Rule R1 relates to the General Standards that apply across the district. This rule covers the general measurement and assessment methods to be applied, and where necessary refers to additional assessment methods for specific noise sources.
31. There is a connection between the Overview section of the chapter and Rule R1 that is referred to in the Te Whatu Ora (S190) submission. Whilst the submitter seeks to include the reference to NZS 6801 and NZS 6802 in the Overview section, I consider that

Rule R1 is the best location to set out all of the relevant Standards that are to be applied in the District.

32. This makes it easier for the implementation of the rules overall, and for simplicity, keeps all relevant assessment standards in one rule location. This means that in any given scenario, a Plan user can refer to the relevant measurement and assessment standard, and where alternative assessment methods would be required, easily see those alternatives detailed in Rule R1
33. In this sense, the Rule should also be expanded to refer to each of the applicable New Zealand Standards that relate to noise. This is in essence the relief sought by Te Whatu Ora.
34. This means Rule R1 should also include reference to;
 - (a) *New Zealand Standard NZS 6805:1992 Airport Noise Management and Land Use Planning*
 - (b) *New Zealand Standard NZS 6806:2010 Acoustics - Road-traffic noise - New and altered roads*
35. Furthermore, Rule R1 4) should simply refer to New Zealand Standard NZS 6808:2010 *Acoustics – Wind farm noise* in it's entirety and not just the measurement clause. This is consistent with the relief sought in the Te Whatu Ora submission.
36. For each of those New Zealand Standards I recommend for inclusion within the Rule, I refer simply to the standard in its entirety. This is slightly different to the way the chapter was originally drafted, and different to how the NPS sets out the applicable standards.
37. In my opinion all of the standards contain full details of how to measure and assess the specific noise sources they cover, and there is no need to include or exclude specific clauses. The Standards all give advice on how to implement their requirements correctly, and specific text in the District Plan rules is not needed.
38. For example, the originally drafted wording of Rule R1 4) regarding NZS 6808 only provides requirements for the measurement of wind farm noise, but then provides no rules relating to how such noise should be adequately assessed. By referring to this standard in full, such assessment methods and criteria are inherently included.
39. This also applies to the use of NZS 6805 (airport noise), NZS 6806 (traffic noise) and NZS 6809 (port noise).

Noise Rule R2

40. I consider that Rule R2 as proposed is generally acceptable, but that some adjustments and more explicit definitions to some of the clauses should be provided, specifically;
- (a) Rule R2 6) refers to people noise at recreational activities. I agree that this type of noise should be exempt, but that the noise from children at daycare facilities should not be exempt. Whilst it may be expected to experience children at play in a residential context, such a concentration of children noise, as may be experienced at a daycare facility, should be subject to control via the general zone noise rules. This approach is consistent with most other Districts around New Zealand.
 - (b) Rule R2 12) In my opinion a definition of 'infrequent' and/or 'intermittent' needs to be provided to ensure potential noise effects are not unreasonable. This is because the current wording does not define the number of days that such activity could occur and is therefore open to interpretation. I recommend that the exemption applies for no more than 30 days in any 12 month period. I understand that this level of activity could enable most agricultural aircraft operations to occur, whilst also providing adequate respite at other times. If this is added, then Rule R2 11) could remove the reference to aircraft.
 - (c) With my suggested amendments, noise effects from such agricultural aircraft operations are thus still controlled to a reasonable level, meaning that the concerns raised in the Te Whatu Ora submission are dealt with. This submission sought either a full deletion of the exemption, or if the exemption was retained, restrictions in terms of timing and duration controls.
 - (d) I consider that the exemption is suitable in the form I propose, because such rural activities should be allowed to occur within rural zones because they are a necessity, but with appropriate limitations applied. Therefore I do not consider that the exemption should be deleted.
 - (e) In terms of Rule R2 14) relating to the Rifle Range Protection Area, it is my opinion that any exemption should apply to daytime hours only, to avoid the potential for unreasonable night-time noise effects. Nevertheless, because of the general potential for daytime noise effects to also occur, I consider that

new noise sensitive activity should be protected from rifle range noise and as such I recommend acoustic insulation requirements be imposed. These should be included in the provisions of Rule R3, which I discuss in paragraphs 59 to 69 below.

- (f) The exemption listed in Rule R2 15) should be deleted in its entirety, as despite being harder to adequately assess, this should not be an exclusion. Activities such as dog kennels and certain industrial activities that involve impulsive sound can have significant noise effects and need to be suitably assessed.
- (g) The Te Whatu Ora submission in relation to R2 16) should be accepted. I agree that audible bird scaring devices should be controlled by way of a numerical limit on the frequency of operation (number per hour) as contained in the pTTPP text, but that also a limit on the noise level is appropriate to control effects as well. The suggestion of a numerical noise limit of 65 dB L_{AE} is in my opinion, appropriate.
- (h) The Te Whatu Ora submission in relation to R2 17) should also be accepted. The limitation that the exemption does not apply to amplified music events, is in my opinion appropriate. Such events have the potential to cause unreasonable noise effects that could be significant. A restriction of the number of events that can occur in a given period is also appropriate. I consider a maximum number of events that could occur under the exemption to be on no more than 12 occasions per calendar year. This enables some flexibility in hosting temporary events whilst also providing nearby sensitive receivers with respite from such events.

Noise Rule R3

- 41. Noise Rule R3 relates to the noise and vibration insulation requirements for new sensitive activity that establishes near activity that generates elevated noise and/or vibration levels. Generally the provisions of the rule are appropriate but with some updates to account for some technical issues with the proposed drafting, and to ensure all potential noise sources are included.
- 42. In its submission, Waka Kotahi (S450) is generally supportive of the intent and detail of the noise rules but in Rule R3 1 a and b) seeks that rather than defining a distance to the carriageway edge, that a specific high transport noise overlay be implemented. I agree with the

intent of this request, as it more accurately shows relevant noise exposure for the specific State Highways in the District. These can often be lower flow roads, but at elevated speeds, and so their noise emissions are different to a metropolitan highway.

43. I understand that a similar approach has been implemented in other District Plans in recent times and that an Overlay for use in the pTTPP is being prepared by Waka Kotahi. However, I have not seen or reviewed this Overlay to date. I do however make the following comments:
44. The use of such an overlay would ensure that new noise sensitive activity is still adequately protected, without placing an undue burden on developers or the Council in the administration of sound insulation requirements. In my opinion, this would then address the concerns raised in most of the submissions on this part of the rule.
45. For this reason, the High Noise Overlay sought by Waka Kotahi is preferable to the setback distances included in the notified pTTPP.
46. However, I consider that either approach is generally acceptable to ensure new noise sensitive activity is adequately insulated from the effects of road traffic noise.
47. In either case, several submissions raise concerns about the costs Rule R3 1) would cause in its implementation. To ease the consenting burden on the Council and to reduce certification costs for applicants seeking to establish a sensitive activity, an Appendix of 'acceptable construction types' has been developed (Refer Attachment A to this evidence).
48. Any application using the construction types in this Appendix would inherently satisfy the sound insulation requirements so that a satisfactory internal noise environment for occupants is provided. This means that certification in accordance with either Rule R3 1 a i) or R13 is not required. Instead, should such an application conforming to the acceptable construction types be received, then Council Building Consent officers would be able to review this and provide confirmation that the constructions are acceptable, thus bypassing other specialist input.
49. The text of Rule R3 1) should be updated to deal with the proposed Overlay. However as shown in the S42A Report by Ms Evans, until the Overlay is provided alternative wording of the Rule is used (this still refers to the setback distances as per the notified pTTPP). I

agree that this is appropriate, but confirm that the Overlay would provide a more desirable outcome.

50. To re-iterate, I propose the use of the Acceptable Construction Table.
51. Regarding this, I note that the recommended acceptable constructions, and associated list of exclusions, is deliberately conservative so that all likely development scenarios are catered for. That is, any application, no matter how close to the state highway, or which state highway it is next to, would be constructed so as to achieve a satisfactory internal noise environment.
52. The Waka Kotahi submission also seeks to limit the extent to which vibration assessment is needed. Rather than applying to all sensitive activity within 80m of the Highway, the submission seeks that Rule R3 a iii) applies only to buildings within 20m of the State Highway. Based on the levels of vibration typically generated by traffic, I agree that this distance is appropriate and therefore recommend this submission point is accepted.
53. The Kiwirail submission (S442) seeks the provision of refined acoustic insulation requirements. I agree that Rule R3 1 c) should be slightly updated, but to specify a distance of 60m within which the rule requirements apply. If this is updated, and reference to the acceptable construction table is also applied as an alternative noise certification method, then in my view this adequately addresses all the concerns and proposed amendments outlined in the Kiwirail submission.
54. I form this view because I do not consider a buffer distance of 100m to be necessary for noise sensitive activity that may establish, given the likely intensity of use of the rail corridors in the District. A buffer of 60m should therefore apply. This would then address Kiwirail's submission points for vibration also.
55. Regarding the latter, I do not consider the proposed rule 3 b) in the submission is strictly necessary but would provide an equivalent 'alternative construction' methodology for vibration, in the same manner as I propose for noise. Therefore, this submission point should be accepted. I have included reference to this submission point as revised text in the Advice Note to Rule R3 (shown in Ms Evans' S42A report), and as an additional Part B to the Acceptable construction table in my Attachment A.
56. Finally, the submission refers to refining the definition of sensitive activity.

57. I propose a minor clarification to the rule R3 text to address this; this relates to the definition of 'sensitive activity' and 'habitable space' in the pTTPP. Whilst these definitions themselves remain unchanged in the Definitions Chapter, for the avoidance of doubt specific clarification in Rule R3 is provided on what constitutes a sensitive space and therefore additional wording is provided. This mainly relates to sleeping areas.
58. Additional reference to Haast Airfield is also added in Rule R3 c) to ensure new noise sensitive activity in proximity to this airfield is also protected.
59. Finally, as I discuss in paragraph 40 e) above, I consider that new sensitive activity should be protected from rifle range noise and as such I recommend acoustic insulation requirements be imposed.
60. I have recommended a new Clause R3 f) be included specifically to address acoustic insulation requirements for sensitive activity potentially exposed to rifle range noise.
61. This proposed rule is based on the assessment of rifle range noise prepared as part of the Residential Zone hearings and recently updated 16 July, that provides a series of noise overlays for the Westport Rifle Range. It is also informed by new information contained in the supplementary documentation of Mr Barr on behalf of Buller District Council (**BDC**). This contains new Rule R3 provisions and new proposed zoning maps.
62. The noise overlays detail where noise mitigation would be required in the form of acoustic insulation or mitigation to ensure acceptable noise levels are achieved. In essence, this is in areas exposed to greater than 55 dB L_{AFmax} .
63. I have recommended using these overlays to inform where acoustic insulation requirements are triggered, and as such, the noise contours from this assessment should form an Overlay in the planning maps, used in conjunction with my proposed updates to Rule R3.
64. I note that the proposed rules (shown as Rule R3 f) in the S42A Report) would likely mean that new sensitive activity attempting to establish inside the 60 dB L_{AFmax} contour would not likely be able to demonstrate compliance with proposed Rule R3 f ii).
65. The reason for this is it is very difficult to provide noise attenuation screening (bunds or fencing) that provides a noise reduction of more than 10 decibels. Therefore, it follows that a sensitive activity

established at the 60 + dB overlay, may not be able to be screened to ensure external noise levels fall below 50 decibels (as the rule would require).

66. As I understand it, there are no significant areas in the proposed zoning where rifle range noise levels exceed 60 dB L_{AFmax} , for sensitive activity.
67. This effectively means that sensitive activity is unlikely to be consented at any such locations and is therefore a de facto form of sensitive activity avoidance. From a purely acoustical perspective, because of the relatively elevated noise levels, this is a preferential outcome.
68. My updated Rifle range acoustic insulation requirements are shown as new Clause R3 f) in the rules appended to Ms Evans' S42A Report.
69. As I state in paragraph 61 above, I have reviewed the supplementary documentation prepared by Mr Barr on behalf of BDC, including the revised zoning maps. Whilst I agree with the intention of the proposed amendments to the Rule R3 text, to ensure certainty that sensitive activity is adequately designed, I prefer the amendments I recommend.
70. Regarding protecting sensitive activity from noise emissions from other zones, I propose some minor amendments to the wording of Rule R3 e) to ensure that bedrooms are adequately protected from night-time noise intrusion, but that they are treated the same as other habitable rooms in terms of daytime noise requirements.
71. I make one minor technical change to the ventilation requirements of Rule R3 g), insofar as making the noise level requirements of ventilation systems to be 'at least 1m' from the diffuser. This reflects that the relevant noise exposure location from ventilation systems is often not that close the system itself.
72. I note that the submission from Mathers (S228) relating to vibration seeks the removal of all vibration limits in the rules because there is no specific New Zealand Standard relating to vibration.
73. This logic is flawed; just because no vibration standard exists does not mean that vibration effects should be uncontrolled. I note that there is no specific rail noise standard, nor indeed a specific standard relating to other general types of activities, such as childcare centres, or rifle ranges etc. These types of activities still require consideration,

and where needed, specific rules. Therefore, this part of the submission should be rejected.

74. The contention that the effect generating activity should provide the information required for assessment would be unusual. This information is readily available for those seeking to establish a new sensitive activity and is very much dependent on the site under consideration. Therefore, it should be considered at the time of the application, and by the applicant themselves.
75. There are numerous submitters (Wiskerke (s95), Nomura (S151), Building – Coast wide (S223), Hofmans (S504), Millar (S505) etc) who seek the deletion of some of, or all the components of Rule R3. In my opinion these requests should be rejected because sensitive activity should be protected, and noise and vibration generating activity should also be protected from reverse sensitivity effects. This is a core aspect of why the noise rules exist in the first place and is recognised in the Objectives and Policies of the pTTPP.
76. Several Avery (S507, S608, S509, S510) submissions also seek to include acoustic insulation provisions for sensitive activity establishing within 100m of quarry operations. In my view this is unnecessary. This is because such quarry activities will have a duty imposed to not exceed the noise rules of proposed new Rule X) of the Plan anyway. This would ensure that noise levels are at a level low enough to render acoustic insulation unnecessary for new dwellings nearby.

Noise Rule R4

77. I understand that the NZDF submission (S519) supports the notified rule of the pTTPP. Three submitters (Te Whatu Ora (S190.538), Westport Pistol Club (S336.011) and Westport Rifle Club Incorporated (S457.010) seek the correction of typographical issues. The first relates to a clarification of the distance in Rule R4 1 bi) and the second relates to updating the noise metric from dBC to L_{Cpeak} . I agree with both suggestions that the distance be corrected and for the latter, that reference to L_{Cpeak} should be used.
78. In all other respects I consider Rule R4 to be acceptable.

Noise Rule R5-R8, R11

79. In my opinion Rules R5 to R8 and R11 are not appropriate to control noise in an acceptable manner. The reasons for this are that in their current form, the rules seek to control the noise dependent on the

zone in which the noise generating activity occurs as well as the effects in the zone in which they are received. Focussing on the latter approach gives rise to a more acceptable outcome in that the actual and potential noise effects are controlled.

80. This means that if adopted, the noise effects arising from activities in the District would be controlled to an acceptable level by using the prescribed provisions of the pTTPP.
81. I therefore propose widespread updates to these rules, but also in a manner consistent with the relief sort in the Te Whatu Ora (S190) submission. I note that this submission in essence seeks the same outcome as I advocate in the preceding paragraphs.
82. So in that sense I agree with that submission and the relief sought to improve plan useability and for consolidation reasons, recommend that Rules R5, R6, R7, R8 and R11 are replaced with one overall general noise rule and associated table. I provide the details in the following paragraphs.
83. I recommend the new rule should be:

Activities Generating Noise Not covered by Rules R2, R4, R9 or R10

<p>The maximum noise from any activity shall not exceed the following noise limits at any point at or within the boundary of any site zoned:</p> <p>RESZ Residential Zone SETZ Settlement Zone FUZ Future Urban Zone MPZ Māori Purpose Zone HOSZ Hospital Zone OSZ Open Space Zone NOSZ Natural Open Space Zone SFZ Scenic Visitor Zone</p>	Maximum noise limits			
	Daytime (Monday– Friday) 7:00am-10:00pm	Saturdays, Sundays and Public Holidays 7:00 am – 10:00 pm	Night-time 10:00pm-7:00am	
	55 dB LAeq	50 dB LAeq	45 dB LAeq	70 dB LAFmax
<p>The maximum noise from any activity shall not exceed the following noise limits at any point at the notional boundary of any site zoned:</p> <p>GRUZ General Rural Zone RLZ Rural Lifestyle Zone</p>	Daytime (Monday– Friday) 7:00am-10:00pm	Saturdays, Sundays and Public Holidays 7:00 am – 10:00 pm	Night-time 10:00pm-7:00am	
		55 dB LAeq	50 dB LAeq	45 dB LAeq

The maximum noise from any activity shall not exceed the following noise limits at any point at or within the boundary of any site zoned:	Daytime (Monday– Friday) 7:00am-10:00pm	Saturdays, Sundays and Public Holidays 7:00 am – 10:00 pm	Night-time 10:00pm- 7:00am	
SARZ Sport and Recreation Zone PORTZ Port Zone AIRPZ Airport Zone CMUZ Commercial and Mixed Use Zones STADZ Stadium Zone LIZ Light Industrial Zone	60 dB LAeq	55 dB LAeq	50 dB LAeq	75 dB LAFmax
GIZ General Industrial Zone BCZ Buller Coalfield Zone MEZ Mineral Extraction Zone	65 dB LAeq	65 dB LAeq	65 dB LAeq	n/a

Activity Status where compliance is not achieved: Restricted Discretionary

84. I note that this is in some instances a departure from the notified noise rules in terms of both the numerical limit that applies, as well as the times of day and night to which the noise limits apply.
85. The reason for this is to primarily make the noise rules consistent with the advice given in NZS 6802. Notwithstanding that this standard does allow scope to deviate from its recommendations, I consider that a simplified approach to the noise limits and when they apply is advantageous in this case. The amendments to limits also arise from Te Whatu Ora’s submissions on restructuring the rules to focus on the receiving environment and various other submissions seeking changes to the daytime and night-time hours and noise limits.
86. Proposed new Rule X ensures sensitive activities across the district are treated similarly and in most cases, independent of the type of noise generating activity they may be subjected to.
87. This means the degree of received noise effect is also likely to be consistent across the district.
88. I have recommended a consistent definition of what constitutes the daytime and night-time period. In my opinion, this reduces ambiguity in rule implementation.
89. Further, I consider that the evening period is often a time when noise sensitivity is not necessarily heightened, and therefore does not require greater protection than the general daytime period. This is why I propose the daytime period extends to 10pm. I note that this is typical of many rules applied in District Plans across the country.

90. By defining these rules in the way I recommend, it should make it easier for the pTTPP to be implemented, and to ensure overall noise assessment is fairer for both noise generating activities when establishing, whilst also ensuring adequate protection for sensitive activities.
91. I note that the noise limits I propose are at the upper end of acceptability in terms of the guidance values of NZS 6802. That is, noise exposure at the level permitted by my proposed rules is relatively permissive, and that any noise levels received above this limit would not be acceptable. Conversely, such noise limits do not allow unfettered noise emissions to occur but do allow noise generating activities to establish without undue burden on their noise emissions.
92. Whilst I note that several submissions oppose any relaxation of the noise rules, the noise limits proposed are similar to that allowed in other districts in New Zealand and there are also submissions seeking that the limits be increased. I address these submissions in the following paragraphs.
93. Several submissions (Heward (S353) Perkins (s462), Wilson (S81) and Langridge (S252) for example, and others generally) seek that the applicable noise limits are made more stringent, to protect amenity values and sensitive activity that exists in the District. Whilst I acknowledge lower noise limits would increase this protection, a balance is required between the ability to generate noise and the overall protection from unreasonable noise.
94. In my opinion, lower noise limits are not warranted, as the level of protection proposed is adequate. I note also that a noise limit of 45 dB is sought by one submitter (Heward) in relation to daytime noise emissions. Historically in some Districts such a noise limit was imposed to provide greater protection for sensitive activity but was often unworkable because those noise limits are very stringent. Also, in many cases such limits were significantly below the ambient noise environment. This meant that noise effects would often be similar to those if higher noise emissions had been allowed.
95. A daytime noise limit of 45 dB is therefore considered overly stringent, often provides no greater protection, and can prevent otherwise reasonable noise generating activity to establish.
96. There are several submitters that also seek greater protections through the use of more restrictive hours than notified, and conversely

there are those who seek less restrictive hours. My table above provides times when lower noise limits would apply in zones where sensitive activity is most likely, particularly at night and on the weekends. This allows for some periods of respite.

97. Conversely, I have recommended the implementation of daytime hours extending in all zones to 10pm. As I discuss above in paragraph 89 this allows noise generating activity to occur at a reasonable level until 10pm. The trade off would be lesser limits at these times on the weekends and public holidays.
98. Overall, my recommended noise rules that I propose become new Rule X, represent a balance between the requests made by all the submitters, and ensure adequate protection for noise sensitive activities, whilst allowing a reasonable amount of noise generating activity to occur.
99. I also acknowledge that the submission from Wilson (S81) (amongst others) seeks a more stringent noise limit of 50 decibels during the daytime in the Rural Zone specifically. I do not consider this is appropriate in this case. Whilst I accept some degree of sensitive activity is anticipated in the Rural Zone, the zone remains a zone in which noise generating activity is enabled and in some cases at elevated levels. It is in essence a working zone where industry is enabled, even if rural in nature. This means that the daytime noise limit to facilitate this should still be set at 55 decibels.
100. Silver Fern Farms, in its submission, seeks that Rule R8 be amended to allow for a noise level emission similar to that contained in the operative Westland District Plan, specifically relating to night-time noise emissions. I note that the Westland District Plan contained noise limits in terms of the L_{10} metric. This metric is no longer used and despite allowing slightly more noise to be made, should not be referenced in the pTTPP.
101. In my opinion, the upper limit of acceptability for night-time noise for sensitive activities would be 45 dB L_{Aeq} . The Silver Fern Farms submission effectively seeks Rule R8 to retain a numerical limit of 50 dB L_{Aeq} at night. In my opinion this is too high and should be rejected. Whilst a night-time noise level of 50 dB L_{Aeq} may be appropriate for noise received by some activities in the industrial zones, it is not acceptable for sensitive activities in residential or rural zones.
102. Further, I do not consider daytime noise levels in excess of 55 dB L_{Aeq} should be allowed for sensitive activity in residential zones.

Therefore, I consider that these specific submission points be rejected.

103. Regarding zoning, I have read the evidence of Mr Humpheson and Mr Tuck on behalf of Silver Fern Farms in the Residential Zone Hearing Stream, and agree that in terms of rezoning land near the site under consideration, an applied zoning with lower amenity expectations is a more desirable outcome.
104. Overall, I also note that my proposed amendments, including for the Rural zones, are broadly in line with the existing rule framework of the Buller, Grey and Westland Districts in terms of the numerical noise limits that apply.
105. On balance the recommended noise rules reflect a fair balance between allowing noisy activity to establish and operate in the District, without causing unreasonable noise effects to occur for sensitive receivers located nearby.
106. In terms of the Rural Zones, whilst I note that for example Resource extraction is anticipated, there is still a likelihood of conflicting sensitive activities in the zone (e.g. residential) that means the noise limits I propose above are the minimum standards for protection.
107. On this latter note, Horticulture New Zealand and Federated Farmers of New Zealand seek a minor amendment to include the General Rural Zone (GRUZ) as a higher noise environment in the policies.
108. I don't agree with this on the basis that the rural zone, whilst having the potential for some higher noise generating activity (largely envisaged to be rural production activities) also accommodates sensitive activity. This occurs to an extent greater than anticipated in commercial zones, thus delineating them from such zones, and meaning they should not be considered as 'higher noise environment' zones.

Noise Rule R9

109. With respect to Rule R9, my proposed updated general noise rule table outlined in paragraph 83, and inclusion of the Port Noise Standard NZS 6809 as a standard referenced in Rule R1 means that Rule R9 would become somewhat obsolete. However, I address the Te Whatu Ora submission (S190) point relating to this rule. This essentially seeks that a Port Noise Management Plan also be

implemented that sets out the methods to ensure the provisions of NZS 6809 are implemented. I agree with this submission point.

110. Therefore, I recommend that Rule R9 be retained, and that the Te Whatu Ora submission be accepted. This then ensures:
- (a) Noise from 'Port Activity' in the Port zone is adequately controlled via the provisions of NZS 6809. To give this proper effect, I also recommend that for the avoidance of doubt, the word 'Port' be added into the rule R9 text as shown in the rule wording in Ms Evans' S42A Report.
 - (b) Noise from general activity, as emitted from the Port zone itself (for example, cafes, workshops etc that are not defined as 'Port Activity') are also controlled via the provisions of my proposed rule R5X.

Noise Rule R10

111. Rule R10 relates to noise emissions from airports in the Airport Zone, and more specifically aircraft operations that occur at several existing aerodrome and airport facilities.
112. Whilst my updates to Rule R1 allow such airport operational noise to be addressed by the use of NZS 6805, I consider it remains appropriate to retain this rule, but with some modifications to the wording.
113. I consider it appropriate to include the Haast aerodrome in the list of facilities covered by the rule as I understand this is recommended to be included in the Airport Zone.
114. I also support an update to the engine testing provisions that would apply. Te Whatu Ora (S190) have made a submission seeking such an update and generally seek more stringent controls, effectively in line with the general noise rules.
115. I consider that this is an appropriate method to control engine testing noise with one notable exception. Rather than set out and duplicate the rules that would apply, it is considered more effective to make all aircraft engine testing subject to the general noise limits of the underlying zoning rules (as per my Table at paragraph 83 above). However, I also recommend that noise from essential unplanned engine testing be exempt from the noise rules in Rule R10. I provide overall rule updates, reflected in the proposed provisions of Ms Evans' S42A report.

116. As an overall point, I would normally support the complete prohibition of sensitive activities in the airport noise boundaries.
117. It is desirable that new sensitive activities should be prohibited inside the noise boundaries, however I understand that there is an existing expectation of residential development in the residential zones surrounding the various airports and aerodromes in the districts.
118. On this basis and considering these are generally only just inside the noise boundaries then new residential activity can be accommodated, subject to appropriate sound insulation requirements of rule R3. However in contrast, for areas inside the noise boundaries in the Rural Zone where there is not currently an existing expectation for residential development, I would normally recommend that prohibition should apply.
119. Although Rule 10 7) did not attract any specific submissions, I make the following comments with respect to this rule. Overall the rule is somewhat ambiguous in its intent. The word 'monitoring' could refer to either noise modelling or noise measurements.
120. In addition, if it relates to noise measurements, this would be an overly onerous requirement. By way of example, the monitoring period of three months would be well in excess of that required at most other equivalent or slightly larger regional airports and would also exceed the duration required at some international airports in New Zealand.
121. As a result, to provide a pragmatic way of overcoming this issue, I recommend that the existing Rule R10 7) is deleted and at the same time accept the Te Whatu Ora submission seeking an additional clause for 'a Noise Management Plan'. This NMP would need to be developed for each airport/aerodrome. It would be in that NMP document more appropriate monitoring protocols could be implemented for each airfield, dependent on the scale and intensity of their use.

122. In my opinion, should the recommendations and adjustments I discuss in this evidence be implemented, through the updated noise chapter rules for the pTTPP as presented in the S42A Report, then the control of noise emissions and protection of sensitive activity within the District would be achieved.

Stephen Jack Peakall

July 2024

Attachment A

Proposed Noise APP1 – Appendix of Acceptable Constructions:

Part A: Approved construction requirements for compliance with Noise-R3 1 a i) and Noise-R3 1 c i)

Applicability	
	<p>Construction requirements detailed in this appendix are only applicable where:</p> <ol style="list-style-type: none"> 1. The building containing the sensitive activity is located with the State Highway Noise Control Boundary Overlay shown on the planning maps or is within 60m of an Existing Rail Corridor, 2. The building is a single level construction, 3. The floor of the building is a reinforced concrete slab, 4. No habitable room of the building is located less than 4.5 metres from the road boundary, 5. The total area of glazing in any habitable room is no greater than 20% of the total area of external walls of that room. 6. The roof of the building is a standard timber truss design, with a pitch of not less than 15 degrees. Ventilation of the roof space must only be via casual ventilation typical of the jointing, capping and guttering detail used in normal construction. <p>In all other situations, a design report from a suitably qualified acoustics specialist is required.</p>
Construction Options	
Exterior Walls Option 1	<p>Exterior cladding of Aerated Concrete or similar, with a surface mass not less than 27 kg/m².</p> <ul style="list-style-type: none"> • Timber framing of not less than 90 mm, with studs at 600 mm centres. A ventilated cavity is not required under this option but is permissible, with or without a rigid air barrier, • Fibrous insulation of minimum R2.6. This includes fibreglass, polyester and wool, but does not include polystyrene or other foam sheet insulation products, • 1 layer of 10 mm thick Standard Gib board or alternative gypsum board having a surface mass not less than 6 kg/m²,
Exterior Walls Option 2	<p>Exterior cladding of Profiled sheet metal not less than 0.45 mm thick.</p> <ul style="list-style-type: none"> • 20 mm thick battens forming a ventilated cavity, • Rigid air barrier consisting of Plywood not less than 9 mm thick or Fibre Cement not less than 4 mm thick, or alternative sheet product having a surface mass not less than 5 kg/m².

Applicability	
	<ul style="list-style-type: none"> • Timber framing of not less than 90 mm, with studs at 600 mm centres, • Fibrous insulation of minimum R2.6. This includes fibreglass, polyester and wool, but does not include polystyrene or other foam sheet insulation products, • 1 layer of 10 mm thick Standard Gib board or alternative gypsum board, having a surface mass not less than 6 kg/m²,
Exterior Walls Option 3	<p>Exterior cladding of Fibre Cement weatherboards, with a surface mass not less than 18 kg/m² (Hardies Linea or equivalent)</p> <ul style="list-style-type: none"> • 20 mm thick battens forming a ventilated cavity, • Rigid air barrier consisting of Plywood not less than 7 mm thick or Fibre Cement not less than 4 mm thick, or alternative sheet product having a surface mass not less than 3.8 kg/m². • Timber framing of not less than 90 mm, with studs at 600 mm centres, • Fibrous insulation of minimum R2.6. This includes fibreglass, polyester and wool, but does not include polystyrene or other foam sheet insulation products, • 1 layer of 10 mm thick Standard Gib board or alternative gypsum board, having a surface mass not less than 6 kg/m²,
Glazing and Exterior doors - All options	<ul style="list-style-type: none"> • Windows to consist of double glazing consisting of a minimum of 2 layers of 4 mm thick glass separated by a 12 mm airgap, with airtight seals, • External doors to be either double glazed to the same standard as windows, or be a solid timber construction with a surface mass not less than 24 kg/m² and incorporating full perimeter seals.
Roof – All Options	<ul style="list-style-type: none"> • Profiles metal roofing not less than 0.45 mm thick profiled steel or tiles, • Fibrous insulation of minimum R6. This includes fibreglass, polyester and wool, but does not include polystyrene or other foam sheet insulation products, • 2 layers of 10 mm Standard Gib board or alternative gypsum board, with each layer having a surface mass not less than 6 kg/m².

Part B: Approved construction requirements for compliance with Noise-R3 1 a iii) and Noise-R3 1 c iii)

Any new buildings or alterations to existing buildings containing a sensitive activity, closer than 60 metres to the boundary of an Existing Rail Corridor and is a single storey framed building with:

- a. a constant level floor slab on a full-surface vibration isolation bearing with natural frequency not exceeding 10 Hz, installed in accordance with the supplier's instructions and recommendations: and
- b. b. vibration isolation separating the sides of the floor slab from the ground; and
- c. c. no rigid connections between the building and the ground

In all other situations, a design report from a suitably qualified specialist is required demonstrating Compliance with Rule R3 1 c iii).