

BEFORE the Kapiti Coast District Council Hearings Panel
The Proposed District Plan; Kapiti Coast District Council

Under: of the Resource Management Act 1991

In the matter of a submission by the NZ Transport Agency (submitter number 457) on the Proposed Kapiti Coast District Plan

And In the matter of Chapter 12: General and District-wide (excluding Financial Contributions)

Primary Statement of Evidence of Angela Kim Penfold for the NZ Transport Agency regarding Chapter 12: *General and District-wide (excluding Financial Contributions)*

Dated 15 April 2016

Executive Summary

1. This evidence addresses:
 - a. definitions and maps associated with Chapter 12 General District Wide Provisions (**Chapter 12**) of the Kapiti Coast Proposed District Plan (**PDP**);
 - b. signs, and;
 - c. noise and reverse sensitivity.
2. I accept all of the Council officer's recommendations in the section 42A report regarding signs, although I do suggest one word change for navigation of the plan.
3. I accept the recommendations in the section 42A report in relation to the following definitions:
 - a. Noise emission level;
 - b. Signs, and;
 - c. Community purpose/charity event signs
4. The Kapiti Coast District Council (**Council**) and the NZ Transport Agency (**Transport Agency**) agree that the State highway network needs to be protected from reverse sensitivity. It is the Transport Agency's responsibility to avoid, remedy or mitigate noise effects from new transport infrastructure on existing land uses. It is the responsibility of landowners of new noise sensitive activities to protect themselves against noise from designated State highways.
5. With reference to Mr Smith's evidence, I suggest the following changes to Chapter 12: Noise, and to any associated PDP provisions:
 - a. Removal of the 'noise corridor' black dashes shown on the PDP maps around the State highways, and the associated definition;

- b. Replacement of the above 'noise corridor' black dashes with two overlays, being a 'transportation noise buffer area' and a 'transportation noise effects area', and;
 - c. An amended rule framework that recognises the different nature of traffic noise from other typical noise generators, the importance of outdoor amenity and the need for long term good health outcomes.
6. When developing the above framework I have endeavoured to keep it simple in response to the number of general submissions the Council has received regarding the overall workability of the PDP.
7. Consistent with advice provided by Mr Smith, the maximum distance for reverse sensitivity restrictions would be capped at 100 metres from the State highway. The Council section 42A report suggests 80 metres is appropriate, but based on Mr Smith's advice I consider 100 metres to be more suitable.
8. I consider that the rule framework in this evidence would provide better achievement of Objective 2.14 Access and Transport than the rule framework suggested in either the PDP or the section 42A report.

Introduction

9. My full name is Angela Kim Penfold. I am a Senior Resource Planner within the Planning and Investment Group for the NZ Transport Agency (**Transport Agency**).
10. I hold a Bachelor of Resource and Environmental Planning (hons.) from Massey University. I have 15 years' experience in the planning field in New Zealand.
11. For the past six years I have worked at the Transport Agency as a Senior Resource Planner, where I have promoted the effective integration of land-use and transport and worked in the preparation of statutory plans under the Resource Management Act 1991 (**RMA**).

12. I confirm that I have authority to give evidence on behalf of the Transport Agency.

Code of Conduct

13. I have read the Environment Court's Code of Conduct for Expert Witnesses, and I agree to comply with it. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are 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. I understand that the Code of Conduct requires me to assist the Hearings Panel impartially on matters within my expertise, and not to advocate for the Transport Agency.

Scope of Evidence

14. My evidence addresses the following matters:

- a. Chapter 1: Definitions (allocated to Chapter 12) (please note that for ease of reading, while some definitions are discussed in the definitions section of my evidence, others are discussed alongside their associated rule);
- b. Chapter 12: Signs;
 - i Policy 12.8 Safety;
 - ii Policy 12.9 Sign Assessment Criteria;
 - iii The PDP and Signs - Summary
- c. Chapter 12: Noise/Reverse Sensitivity;
 - i Transport Agency – Reverse Sensitivity;
 - ii Maps: Zones and Features (allocated to Chapter 12);
 - iii Policy 12.11 Noise Sensitive Activities;
 - iv Policy 12.12 Transport Network Development;

- v Policy 12.13 Noise from the Transport Network;
 - vi Reverse Sensitivity: Permitted Rules and Standards;
 - vii Reverse Sensitivity: Restricted Discretionary Rule;
 - viii Overall approach of the PDP to State highway reverse sensitivity;
- d. Further Submissions, and;
- e. Conclusions.

Chapter 1: Definitions (allocated to Chapter 12)

- 7 The Transport Agency made a primary submission seeking that the definition 'noise emission level' be changed to 'noise imission level' to reflect the true and actual terminology¹.
- 8 Ms Hinton does not think the change is necessary as the term, as notified, is a commonly accepted term and is frequently used in other plans and in planning guidance².
- 9 I agree with Ms Hinton's assessment and conclusion, as familiarity with the term 'noise emission levels' is commonly accepted.
- 10 The Transport Agency withdraws its submission on the definition 'noise emission level', so long as the definition remains unchanged from the notified version.
- 11 The Transport Agency made a primary submission on the definition of sign seeking clarification of whether 'visible from a public place' includes a State highway³.
- 12 Ms Hinton's section 42A report accepts the Transport Agency's submission⁴ and has provided the following relief:

¹ Submission summary number 457.4

² Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) Paragraph 200

³ Submission summary number 457.6 and 457.11

⁴ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) Paragraph 94

Sign means anything visible from a public place
(including from roads or state highway) which [...]

- 13 I agree with the addition of the text, as set out above and in Ms Hinton's report.
- 14 The Transport Agency also made a submission in support of the definition *Community purpose event/charity event signs*⁵. Ms Hinton, in her report, has accepted this support and the definition remains unchanged. I support this definition, in its notified form.

Chapter 12: Signs

- 15 The Transport Agency made a primary submission in support of the approach taken by the Council to the management of signs on properties adjacent to the State highway and in close proximity to State highway intersections⁶.
- 16 I support the approach outlined in the PDP and as confirmed by Ms Hinton.

Policy 12.8 Safety

- 17 The Transport Agency sought the following change to Policy 12.8B in its primary submission⁷:

Signs will be designed and located so they do not interfere with the safe and efficient use of roads (including State highways) and pedestrian/cycle ways.

- 18 Ms Hinton agrees with the amendment sought as it will improve the clarity of the policy⁸.

⁵ Submission summary number 457.10

⁶ Submission summary number 457.63

⁷ Submission summary number 457.58

⁸ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) paragraph 110

Policy 12.9 Sign Assessment Criteria

- 19 The Transport Agency also sought the following amendment to Policy 12.9(c) Safety⁹:

The degree of effects of the proposed sign(s) on the safety and efficiency of the adjacent and surrounding road network

- 20 Ms Hinton does not agree with this amendment as she considers the issue of safety is adequately addressed by clause (a) of the policy and therefore should not be duplicated¹⁰. I support Ms Hinton's position.

- 21 For plan navigation purposes, I suggest that the title 'Safety' be replaced with the term 'Transport' as it will provide more clarity for plan users.

The PDP and Signs - Summary

- 22 I confirm that I am satisfied that the policies contribute to the achievement of Objective 2.14(b) and (e). I also confirm that I consider rules 12C.1.1.1, 12C.1.1.2a, 12C.1.1.2, 12C.1.1.10 and 12C.1.1.11 implement the policies appropriately.

Chapter 12 Noise/Reverse Sensitivity

Transport Agency – Reverse Sensitivity

- 23 The Transport Agency has an established approach to proactively avoid or manage reverse sensitivity effects¹¹. The policy involves working with local authorities, land owners and developers.

Maps: Zones and Features (allocated to Chapter 12)

- 24 The Transport Agency made a primary submission seeking clarification of the black dashes identified on the plan maps around the State highways¹².

⁹ Submission summary number 457.58

¹⁰ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) paragraph 110

¹¹ Guide to the management of the effects on noise sensitive land use near to the state highway network; <https://www.nzta.govt.nz/resources/effects-on-noise-sensitive-land>

25 Ms Hinton clarifies that the black dashes do demarcate a specific area¹³ and she proposes a definition of 'noise corridor' associated to the dashed lines;

Noise Corridor means the notation on District Plan Maps which demarcates an area adjacent to State Highway 1 and the rail corridor within which the acoustic insulation requirements of Rule 12D.1.12 in Chapter 12 apply¹⁴.

26 I consider that the definition of 'noise corridor' is very similar to that of the 'excessive noise routes':

Excessive Noise Routes means the existing alignment of State Highway 1 through the district, and includes any future route(s) within the Plan as an alternative route for this highway.

27 I also consider that neither definition is critical to the implementation of the PDP.

28 Upon consideration, I submit that the black lines be removed and replaced with the Transportation Noise Buffer Area and the Transportation Noise Effects Area overlays that are suggested by Mr Smith and that I support. In addition, I consider that all references to 'noise corridors' and 'excessive noise transport corridors' and 'transportation noise effect routes'¹⁵ should be replaced with one of:

- a. 'State highway designations and the rail corridor',
- b. 'State highway designations' or
- c. 'the rail corridor'

as appropriate. These are straightforward descriptions that do not require definitions and are applicable to both policies and rules.

¹² Submission summary number 457.65

¹³ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions)

¹⁴ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) Paragraphs 473 and 480

¹⁵ Refer to paragraph 39 of this evidence

Policy 12.11 Noise Sensitive Activities

29 I submit that Policy 12.11 Noise Sensitive Activities is amended as follows:

Community health and welfare will be maintained and enhanced through appropriate noise limits and through avoiding or managing the location of *noise sensitive activities* close to land zoned, designated, or used for noisy activities.

30 The Transport Agency's route for the Peka Peka to Otaki Expressway in Kapiti Coast District is designated but not zoned nor currently used for noisy activities. Hence it would not be covered by the policy as it currently reads.

31 While this specific request was not included in the Transport Agency's primary submission, I consider that primary submission provides sufficient scope via bullet point 2 of section 3.2, which stated:

Address the impact of development on existing and proposed transport infrastructure.

Policy 12.12 Transport Network Development

32 Kiwirail has suggested amendments to Policy 12.12 – Transport Network Development¹⁶. I support those amendments as providing clarity to plan users about situations when transport infrastructure noise mitigation will occur.

Policy 12.13 Noise from the Transport Network

33 The Transport Agency made a primary submission¹⁷ that partially supported Policy 12.13. Within this partial support, the Transport Agency sought an amendment¹⁸ to include a reference to 'no build' buffer strips and for the identification of “

¹⁶ Submission summary number 447.28

¹⁷ Submission summary numbers 457.62 and 457.59

¹⁸ Submission summary number 457.59

34 'transportation noise effects areas'. These amendments were sought to provide alignment between plan provisions.

35 Ms Hinton supports the Transport Agency's submission for the term "transportation noise effects area" to replace "excessive noise corridors", and support the replacement of the term throughout the Plan, insofar as the term remains defined as per the notified Plan as¹⁹:

Means the existing alignment of State Highway 1 through the district, and includes any future route(s) within the Plan as an alternative route for this highway.

36 While I am always pleased to have relief supported by the Council Officer, upon reflection, I now consider that the phrase 'State highway designations or the rail corridor' is preferable, for the reasons outlined paragraphs 24-28, above. I will incorporate this term into my preferred wording of the policy in paragraph 39, below.

37 The Transport Agency submission²⁰ stated that Policy 12.13 referred to acoustic insulation rather than acoustic mitigation. Ms Hinton disagrees²¹ stating that the policy as notified refers to the 'adoption of acoustic mitigation measures'. I agree with Ms Hinton and hence the Transport Agency is not pursuing that change.

38 The Transport Agency did partially support the policy as it was notified, which included the explanatory text²². That explanatory text has been removed and with it a useful clarification, being:

This policy provides new residential development with improved protection from excessive traffic noise. The implementation of such protection is the responsibility of the *building* owner.

39 . Accordingly, I submit that the policy be amended as follows:

¹⁹ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) paragraph 241

²⁰ Submission summary number 457.59

²¹ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) Paragraph 241

²² Submission summary number 457.62

All *noise sensitive activities* in close proximity to State highway designations or the rail corridor shall be protected by the building owner from adverse effects of noise, through the adoption of acoustic mitigation measures.

Reverse Sensitivity: Permitted Rules and Standards

- 40 The section 42A report sets out a recommended structure for permitted reverse sensitivity activities and associated standards²³.
- 41 The structure fails to account for the nature of transport noise reverse sensitivity effects and does not specify an internal noise level. It also caps the extent of effects at 80 metres from the highway rather than 100 metres from the highway as requested by the Agency. Mr Smith considers that successful management of transport noise reverse sensitivity must include these elements
- 42 If it is helpful to the Panel, Appendix 1 contains a proposed permitted activity structure that I consider addresses the above issues. While it forms part of my evidence, the amended technical requirements in Appendix 1 have been provided by Mr Smith.
- 43 Essentially, the proposed standards remove the section 42A clause relating to noise sensitive activities within 40 metres of the highway (in paragraph 47, below I recommend that these activities become restricted discretionary). This clause is replaced by a separate transport noise standard for properties within the Transportation Noise Effects Area. The separate clause enables specification of an internal noise level, to a maximum of 100 metres from the State highway.
- 44 In developing the permitted activity standards, a key consideration has been usability of the District Plan. Because of my suggested Restricted Discretionary Rule, Standard 12D.1.12.2 as shown in the section 42A report would no longer be required. Accordingly, while I propose a new standard, the number of standards overall remains unchanged. I also consider that Mr Smith's suggestion for overlays of the Transportation

²³²³ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) Rule 12D.1.12

Noise Buffer Area and the Transportation Noise Effects Area will make it easier for plan users to determine if the rules apply to them, as opposed to specifying distances that need to be measured.

- 45 I have also relied upon Mr Smith's opinion that the compliance costs for the method proposed in our evidence is similar to that proposed in the section 42A report.
- 46 The Transport Agency's primary submission sought some clarity around altered buildings and this has been provided by Ms Hinton in the section 42A report standards. I have included this in Appendix 1.

Reverse Sensitivity: Restricted Discretionary Rule

- 47 The Transport Agency's primary submission sought a rule seeking to prohibit new buildings within 40 metres of an existing State highway or an identified future State highway. However, the Transport Agency is no longer seeking a prohibited activity status. While I agree that there needs to be some controls, in my view it is more appropriate that the activity status is restricted discretionary. This is because Mr Smith considers that noise effects can be managed through a performance standard and therefore development may be appropriate.
- 48 However, the development needs to be carefully managed to ensure that outdoor living spaces are useable and because of concerns about the duration of the effectiveness of mitigation measures. It is important that these concerns are addressed appropriately for the Transportation Noise Buffer Area because the noise effects have potential to be significant for occupants of the building. In addition, I note that amenity is listed in section 7 of the RMA as a matter to which particular regard must be had.
- 49 As an example, Mr Smith has advised me about the effectiveness of timber noise walls over a period of time. These are a common form of noise mitigation, and in Mr Smith's experience, their performance rapidly deteriorates, despite initially meeting the performance standards. It is therefore important that the Council has the ability to review the

construction detail and confirm that the wall will be sufficiently robust to maintain its acoustic properties over time.

50 I have considered whether a controlled activity status might be more appropriate than restricted discretionary, however, this would require a performance standard for outdoor living spaces.

51 As this Rule would only be to manage one issue, reverse sensitivity, I consider that a restricted discretionary status is more suitable than full discretionary or non-complying.

52 I suggest the following Rule:

12D.3.4

New or altered noise sensitive activities or buildings containing noise sensitive activities within the transportation noise buffer area.

53 I request that the Rule have capacity to consider the NZ Transport Agency as an affected party.

54 I consider that no additional restricted discretionary standards would be required.

55 I suggest that Council restrict its discretion as follows:

- a. The proximity to the State highway designation;
- b. The siting of the noise sensitive activity on the site, including areas of outdoor amenity;
- c. The extent of compliance with the building performance standards of Rule 12D.1.12.2-6 (as shown in Appendix 1 of my evidence);
- d. The effective duration of the mitigation;
- e. The potential to construct buildings outside the transport noise buffer area;

- f. The potential impact upon the operation of the State highway designation;
- g. The potential for reverse sensitivity effects to occur.

56 With this approach, Standard 12D.1.12.2 as shown in the section 42A report would no longer be required.

57 I note that there appears to be inconsistency in the section 42A report regarding the activity status of noise sensitive activities within 40 metres of a transportation noise effects route. In relation to this activity, paragraph 402 states:

Under the PDP, this activity would be assessed as a discretionary activity and this is considered to be an appropriate activity status as it requires a full assessment against the plan's provisions.

58 However, this is not borne out by standard 12D.1.12.2 which sets out a permitted activity standard for compliance for noise sensitive activities within 40 metres of a new or yet to be formed State highway.

59 Malcolm Hunt Associates²⁴ has noted the following:

...Standard 2 ... of the new Rule states that where new or altered habitable rooms are established closer than 40 metres from the highway, a higher insulation standard applies to address the higher noise levels found in close proximity to the highway.

60 I consider that the Malcolm Hunt Associates report fails to address the issue of outdoor amenity.

Overall approach of the PDP to State highway reverse sensitivity

61 While I have addressed various reverse sensitivity provisions above, it is important to look at them as a cohesive group and ensure that they

²⁴ Pg 21 Review of Noise Matters Raised In Submissions on Chapter 12, Malcolm Hunt Associates, March 2012

are achieving the objectives of the PDP. The most pertinent Objective is 2.14 (d) Access and Transport, which states:

To ensure that the transport system in the Kapiti Coast District:

...

(d) minimises adverse effects on land uses and vice versa;

...

62 There are three related policies, being:

- a. Policy 12.11 noise sensitive activities;
- b. Policy 12.12 Transport network development; and,
- c. Policy 12.13 Noise from the transport network.

63 I have supported on all three, above, albeit with improvements. Importantly, I consider that all three, working together, provide a comprehensive policy regime for the management of noise effects and reverse sensitivity in relation to State highway designations. They clearly lay out expectations for both noise generators and noise sensitive activities.

64 However, I consider that the section 42A report fails to implement the policies clearly. As an example, there is a disconnect between the terms used in the

- a. policies (transportation noise effects route²⁵);
- b. the rules and standards (any formed State Highway or any transport corridor designated for State Highway purposes that has yet to be formed²⁶), and;

²⁵ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) Policy 12.13

²⁶ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions) Rule 12D.1.12.1

c. the maps (noise corridor²⁷).

65 Transport noise is considered worthy of its own policies, but the rules and standards are combined with other noise generators.

66 In terms of the performance of the section 42A recommended rule structure:

a. The façade performance approach for noise sensitive activities that are more than 40 metres and less than 80 metres from the highway could potentially achieve Objective 2.14(d). I consider, however, that the alternative approach of specifying an internal noise level would have similar levels of compliance cost, provide greater certainty that the effects would be managed and would specifically address the actual effects.

b. If new noise sensitive activities within 40 metres of a State highway designation could be constructed as a permitted activity, I consider that there is a risk they would create reverse sensitivity effects for the State highway. This is contrary to the outcome specified in Objective 2.14(d).

67 In comparison, I consider that the regime that Mr Smith and I have developed would enable better management of reverse sensitivity and hence would better achieve the outcomes sought by Objective 2.14(d).

Further Submissions

68 There are several further submissions²⁸ on the Transport Agency's submission. I will group these together for the purposes of this evidence as they all contain the same points and/or concerns, being reverse sensitivity. The further submissions consider that the imposition of additional noise standards on buildings within a certain distance of the current and future state highway network would be unreasonable for private landowners.

²⁷ Proposed Kapiti Coast District Plan 2012, section 42A report: Part B – Chapter 12 General and District Wide Provisions (excluding Financial Contributions)

²⁸ Further submitter numbers are: 057, 058, 059, 060, 061, 102, 153, 178, 179, 180, 181, 182, 183, 184, 185, 186, and 187

69 I note two points in relation this below.

- a. The use of the land is only restricted for noise sensitive activities. Other activities such as farming will not be affected. Moreover, the rules will only apply to new noise sensitive activities.
- b. The Transport Agency is no longer seeking to prohibit noise sensitive activities within 40 metres of the highway. This means that if the land owner can demonstrate the reverse sensitivity effects are avoided, remedied or mitigated, a resource consent for the activity can be granted.

70 Accordingly, I consider that the concerns of the further submissions are resolved.

Conclusions

71 Generally, the signs rules in the section 42(a) report are acceptable.

72 The Council and the Transport Agency are aligned that reverse sensitivity needs to be managed. The conversation is about the best way to ensure that both the operation of strategic transport and the health of nearby occupiers are protected.

73 My reasons for adopting the approach set out above are:

- a. Usability and clarity of plan;
- b. Best management of effects as laid out in Mr Smith's evidence;
- c. Best achievement of the outcome specified in Objective 2.14(d) Access and Transport, and;

- d. A robust approach to effects management based on the Guide²⁹, which is underpinned by nation wide research and evidence.

Angela Kim Penfold

15 April 2016

²⁹ Guide to the management of the effects on noise sensitive land use near to the state highway network;
<https://www.nzta.govt.nz/resources/effects-on-noise-sensitive-land>

Appendix 1

Suggested permitted activity standards

Rule 12D.1.12 – Acoustic insulation for *noise sensitive activities*

Standard 1

Any new or altered habitable room within a building that houses any noise sensitive activity on a site within any of the following:

- a. the area between the *air noise boundary* and the *outer control boundary* of the Kapiti Coast Airport;
- b. Civic and Community Zone;
- c. any *Centres Zone*;
- d. Industrial/Service Zone;
- e. within 40m of the boundary of a designation for rail corridor purposes;
- f. ~~greater than 40m, and not greater than 80m, from the nearest edge of the carriageway of any formed State Highway, or any transport corridor designated for State Highway purposes that has yet to be formed;~~

shall be protected from noise arising from outside the *building* by ensuring the *external sound insulation level* of the room achieves a performance standard of not less than $D_{2m,nT,w} + C_{tr} > 30$ dB.

Standard 2

~~Any new or altered *habitable room* within a *building* that houses any *noise sensitive activity* on a *site* within 40m of the nearest edge of the carriageway of any formed State Highway, or any transport corridor designated for State Highway purposes that has yet to be formed, shall be protected from noise arising from outside the *building* by ensuring the *external sound insulation level* of the room achieves a performance standard of not less than $D_{2m,nT,w} + C_{tr} > 35$ dB.~~

Any new or altered habitable room within a building that houses any noise sensitivity activity that is in or partly within the Transport Noise Effects Area as shown on the planning maps shall be designed, constructed and maintained to achieve the indoor design noise levels from road traffic of 40 dB_{Aeq(42h)}.

Standard 3

For any designated corridor that has yet to be formed, the location of the

nearest edge of the carriageway shall be deemed to be as indicated on the drawings referenced in the designation conditions or an approved Outline Plan, whichever is the latest, or 5m inside the designation boundary if there are no such drawings or approved Outline Plan

Standard 4

Compliance with standard 1 above shall be achieved by either:

- a. a statement by Licensed Building Practitioner that the construction of the external building elements of the new or altered *habitable room* conform with **Schedule 12.1**; or
- b. constructing the *habitable room* in accordance with an acoustic design certificate prepared by an acoustic engineer acceptable to Council that describes the proposed design of the *building* that will achieve compliance with the specified performance standard for sound insulation with a ventilation system installed as required under (f) below; or
 1. providing an acoustic design certificate prepared by an acoustic engineer acceptable to Council stating the outdoor free-field noise level at the most affected exterior wall of the *building* containing the *habitable room* will be unlikely to exceed;
 - 55 dB $L_{Aeq(1hr)}$ for rail traffic noise
 - 57 dB $L_{Aeq(24hr)}$ for road traffic noise.

Standard 5

Compliance with standard 2) above shall be achieved by either:

- a. constructing the *habitable room* in accordance with an acoustic design certificate prepared by an acoustic engineer acceptable to Council that describes the proposed design of the *building* that will achieve compliance with the specified internal noise level ~~performance standards for sound insulation~~ with a ventilation system installed as required under (f) below; or
- b. providing an acoustic design certificate prepared by an acoustic engineer acceptable to Council stating the outdoor noise level at the most affected exterior of the *building* containing the *habitable room* will be unlikely to exceed:
 - ~~55 dB $L_{Aeq(1hr)}$ for rail traffic noise~~
 - 57 dB $L_{Aeq(24hr)}$ for road traffic noise.

Standard 6

Where *habitable rooms* required to be insulated under standards 1 or 2 contain operable windows, a ventilation system shall also be installed. This ventilation system shall:

- a. achieve the requirements of Section G4 – Ventilation of the New Zealand Building Code 2011, and, while meeting this minimum requirement, the sound of the system shall not exceed 30 dB $L_{Aeq(30s)}$ when measured 1m away from any grille or diffuser; and
- b. provide ventilation at incremental rates controlled by the occupant up to a high air flow setting that provides at least 6 air changes per hour, and, while meeting this requirement, the sound of the system shall not exceed 35 dB $L_{Aeq(30s)}$ when measured 1m away from any grille or diffuser; and
- c. provide cooling that is controlled by the occupant and can maintain the temperature at no greater than 25°C; and
- d. result in air pressure inside the habitable room that is no more than 10Pa above ambient external air pressure.

Note: for the purposes of this rule, the term ‘altered habitable room’ means any *habitable room* that is (or is proposed to be) expanded in floor area by 10% or more, or involves the fitting of new or replacement windows in external walls with an area more than 5% of the floor area of the room.