APPENDIX 2 – MARKED UP VERSION FOLLOWING HEARING

Key

Italics – not part of PC41

Grey – altered by submission

Underlined – altered from operative text

2 DEFINITIONS

~~**Activities Sensitive to Aircraft Noise (ASAN)** – means any residential activity, visitor accommodation, retirement villages, day care facility, buildings used for overnight patient medical care or educational facility (including all associated outdoor spaces for such activities).~~[1]

~~**Bird Management Plan:** means a document that outlines how farmer managers bird populations while also managing adverse effects (including noise) on the surrounding environment. It includes the following:~~

- ~~A map showing the issues;~~
- ~~Description of the area and the bird problems;~~
- ~~Damage caused by birds;~~
- ~~Management strategies and resources;~~
- ~~Monitoring records; and~~
- ~~Communications with neighbours.~~[2]

Commercial Boating Activities: means activities involving the use of the surface of water for boating operations undertaken for hire or reward by means of any type of powered vessel or equipment designed to be used for floatation and navigation on or through the surface of water, and includes any aircraft whilst such aircraft is on the surface of the water.

Habitable room ~~means any room in a dwelling that is used or that can be used as a sitting room, a living room, a bedroom, a dining room or a family room.~~ means a space used for activities normally associated with domestic living or community activities, but excludes any bathroom, laundry, water-closet, pantry, walk-in wardrobe, corridor, hallway, lobby, clothes-drying room, or other space of a specialised nature occupied neither frequently nor for extended periods.[3]
Note that this definition is based on the Building Code definition of 'Habitable Space'.[4]

L$_{AF}$[5]max: means the maximum noise level, measured in decibels, which is permitted at any time.

L10 is that sound level which is equalled or exceeded 10% of the total measurement time.

L95 is that sound level which is equalled or exceeded 95% of the total measurement time.

LAeq: means the time-averaged sound level (or equivalent sound level) that has the same mean square sound pressure level as the time-varying sound level under consideration.

Noise Sensitive Activities: means buildings or parts of buildings used for, or able to be used for the following purposes:

- Residential activity; or
- ~~Educational activity; or~~ Community activity; or
- ~~Healthcare activity; or~~[6]

[1] Submissions 17 & 18 MidCentral Public Health Services and Wanganui District Council
[2] Submission 29 Wanganui Federated Farmers of New Zealand and Further Submissions 1 & 5 Horticulture NZ and MidCentral Public Health Services
[3] Submission 24 New Zealand Transport Agency and Further Submissions 4 Architectural Designers New Zealand Inc
[4] Submission 24 New Zealand Transport Agency and Further Submissions 4 & 5 Architectural Designers New Zealand Inc
[5] Submission 17 – MidCentral Public Health Services and Further Submission 1 Horticulture NZ
[6] Submissions 17, 18, 24 MidCentral Public Health Services, Wanganui District Council New Zealand Transport Agency and Further Submissions 1 and 4 Horticultural NZ and Architectural Designers New Zealand Inc

- ~~Marae activity~~. Visitor Accommodation[7]

Noise means unwanted sound or vibration[8] affecting people. For the purposes of this Plan, the following sounds and vibrations[9] are exempt from this definition provided that best practicable options are implemented to minimise noise:

a. Vehicles being driven on a road (within the meaning of Section 2(1) of the Transport Act 1962),
b. All reasonable noise arising from within the designated rail corridors as long as it is generated for "Railway Purposes"
c. Crowd noise at a park, reserve or any land zoned as recreation, racecourse, conservation and amenity or showgrounds.
d. Livestock noise and ~~intermittent~~[10] noise from mobile[11] rural machinery in the rural zones.
e. Non-commercial boating activities on the Whanganui River.
f. Emergency sirens.

Noise event means an event that is a cumulative maximum period of up to seven hours on any day, during which time the noise generated by a temporary event exceeds the normally applying District Plan noise limits.

Notional Boundary: means a line 20 metres from the exterior wall of a dwelling or the legal boundary where this is closer.

Reverse sensitivity: The conflict between incompatible land uses where a newly established activity complains about the effects on amenity (environmental qualities i.e. levels of noise) from a legally established pre-existing activity.

[7] Submissions 17, 18 & 24 MidCentral Public Health Services, Wanganui District Council and New Zealand Transport Agency and Further Submissions 1 and 4 from Horticulture NZ and Architectural Designers New Zealand Inc
[8] Submission 25 KiwiRail Holdings Limited and Further Submission 2 New Zealand Transport Agency
[9] Submission 25 KiwiRail Holdings Limited and Further Submission 2 New Zealand Transport Agency
[10] Submission 29 Wanganui Federated Farmers of New Zealand and Further Submission 1 & 5 from Horticulture NZ and MidCentral Public Health Services
[11] Submission 29 Wanganui Federated Farmers of New Zealand and Further Submission 1 & 5 from Horticulture NZ and MidCentral Public Health Services

Chapter 3 – Rural Environment

3.3 POLICIES

3.3.4 *To ensure a Rural Production zone where the following characteristics are maintained:*

…

e. rural activities and practices and odours from rural activities are acceptable, provided best practicable options are used.

f. a varied noise environment may exist including intermittent noise from rural machinery and equipment;

3.3.8 *To achieve a Rural Living zone with the following amenity characteristics:*

…

f. A rural living environment with low traffic and moderate noise levels given the relatively low productive use made of land, and low development density.

3.3.12 *To define a Rural General zone where the following characteristics are maintained:*

…

e. rural activities and practices and odours from rural activities are acceptable, provided best practicable options are used.

f. a varied noise environment may exist including intermittent noise from rural machinery and equipment;

3.3.14 *To define rural settlement areas where the following characteristics are maintained:*

b. a range of residential, community and rural activities that are developed and managed in such a way that their effects are compatible with the rural character and amenities of the settlement and surrounding rural area;

3.5 PERFORMANCE STANDARDS- Rural Production

3.5.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17.
Note that Chapter 17 contains requirements for noise sensitive activities.[12]

~~Emissions shall not exceed the following limits when measured within 20 metres of any dwelling (other than any other dwelling on the site from which the noise is being emitted).~~

~~7am to 6pm~~	~~55 dBA(L10)~~
~~All other times~~	~~45 dBA(L10) Lmax: the lower of L95 background sound plus 30 dBA or 75 dBA~~

~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in District Wide Rule 10.8.~~
~~Note: Livestock noise is exempt from the noise standards in this zone.~~
~~These standards shall be read with and are subject to the provisions of Appendix D - Noise.~~

~~**3.5.3 Vibration.**~~

~~No activity shall cause a vibration considered offensive or objectionable[13].~~

3.7 PERFORMANCE STANDARDS – Rural Lifestyle

3.7.2 Noise.

[12] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc
[13] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[14]

~~Emissions shall not exceed the following limits when measured within 20 metres of any dwelling (other than any other dwelling on the site from which the noise is being emitted).~~

~~7am to 6pm 55 dBA (L10)~~
~~All other times 45 dBA(L10) Lmax: the lower of L95 background sound plus 30 dBA, or 70 dBA~~

~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in District Wide Rule 10.8.~~
~~The above noise standards shall not apply to sirens or warning devices used by emergency services.~~
~~These standards shall be read with and are subject to the provisions of Appendix D - Noise.~~

~~3.7.4 Vibration.~~

~~No activity shall cause a vibration considered offensive or objectionable[15]. In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall apply.~~

3.9 PERFORMANCE STANDARDS – Rural General

3.9.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[16]

~~Emissions shall not exceed the following limits when measured within 20 metres of any dwelling (other than any other dwelling on the site from which the noise is being emitted).~~

~~7am to 6pm 55 dBA(L10)~~
~~All other times 45 dBA(L10) Lmax: the lower of L95 background sound plus 30 dBA or 75 dBA~~

~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in Chapter 19.~~
~~Note: Livestock noise is exempt from the noise standards in this zone.~~
~~These standards shall be read with and are subject to the provisions of Appendix D - Noise.~~

~~3.9.3 Vibration~~.

~~No activity shall cause a vibration considered offensive or objectionable[17]~~.

3.11 PERFORMANCE STANDARDS – Rural Settlement

3.11.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[18]

[14] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc
[15] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services
[16] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc
[17] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services
[18] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc

~~Emissions shall not exceed the following limits when measured within 20 metres of any dwelling (other than any other dwelling on the site from which the noise is being emitted).~~

~~7am to 6pm 55 dBA(L10)~~
~~All other times 45 dBA(L10) Lmax: the lower of L95 background sound plus 30 dBA or 75 dBA~~

~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in District Wide Rule 10.8.~~
~~Note: Livestock noise is exempt from the noise standards in this zone.~~
~~These standards shall be read with and are subject to the provisions of Appendix D - Noise.~~

~~3.11.3 Vibration~~.

~~No activity shall cause a vibration considered offensive or objectionable~~[19].

Chapter 4 – Residential Environment

4.3 POLICIES

4.3.2 To ensure activities in the Residential zone that:

c. avoid or mitigate nuisance from noise, light spill and vibration;

4.5 PERFORMANCE STANDARDS - Residential

4.5.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[20]

~~Sound emissions from any activity shall not exceed the following limits when measured on, or within, the boundary of any other site zoned for residential purposes.~~

~~7am to 6pm 50 dBA(L10)~~
~~All other times 40 dBA(L10) Lmax: the lower of L95 background sound plus 30 dBA, or 70 dBA~~

~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in Chapter 19.~~
~~The above noise standards shall not apply to emergency sirens.~~
~~These conditions shall be read with and are subject to the provisions of Appendix D - Noise.~~

~~4.5.3 Vibration~~.

~~No activity shall cause a vibration considered offensive or objectionable.~~ [21]~~In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall apply.~~

~~4.5.10 Reverse sensitivity adjacent to rail corridor~~

~~a. Any new construction, or alteration, of a habitable room in a noise sensitive activity on land adjacent to the KiwiRail designation on Eastown Road and located within~~

[19] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services
[20] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc
[21] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

~~30 metres of the rail corridor (measured from the nearest edge of the rail corridor) shall be designed, constructed and maintained to meet an internal noise of:~~
~~i. 35dBA LAeq (1hour) inside bedrooms;~~
~~ii. 40dBA LAeq (1hour) inside other habitable rooms;~~
~~iii. Compliance with this Rule 4.5.10 shall be achieved, prior to the construction or alteration of any noise sensitive activity, by the provision, to the Council of an acoustic design certificate from a suitably qualified acoustic engineer demonstrating that the above internal sound levels will be achieved.~~

4.7 PERFORMANCE STANDARDS Coastal Residential

4.7.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[22]

~~Sound emissions from any activity shall not exceed the following limits when measured on, or within, the boundary of any site zoned for residential purposes.~~
~~7am – 6pm 50dBA(L_{10})~~
~~All other times 40dBA(L_{10})~~
~~L_{max}: the lower of L_{95} background sound plus 30dBA or 70dBA~~
~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in District Wide Rule 10.8.~~
~~Note: Livestock and associated farming noise is exempt from the noise standards in this zone.~~
~~These conditions shall be read with and are subject to the provisions of Appendix D – Noise.~~

~~**4.7.3 Vibration.**~~
~~No activity shall cause a vibration considered offensive or objectionable~~.[23] ~~In assessing whether vibration is offensive or objectionable, the limits set in NZS2631:1985-1989, Parts 1-3 shall be used.~~

Chapter 5 – Commercial Environment

5.2 OBJECTIVES

5.2.3 To ensure that development and activities in the central city area, maintain or enhance the high quality amenity of the area.

…
The characteristics, or distinguishing qualities, that contribute to the amenity of **the central city area** include:
…

~~o High levels of sound emitted from activities;~~
Provision for noise associated with commercial activities are tolerated

5.3 POLICIES

5.3.2 Define a Central Commercial zone with the following characteristics:

…
f. ~~Higher levels of sound emitted from activities.~~
Provision for noise associated with commercial activities are tolerated

[22] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc
[23] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

5.3.3 Define Outer Commercial zone with the following characteristics:

b. protection for the amenity values of neighbouring residential areas;

5.3.4 Define an Arts and Commerce zone with the following characteristics:

…

f. ~~Higher levels of sound emitted from activities~~.
Provision for noise associated with commercial activities are tolerated

5.3.5 Define a Riverfront zone with the following characteristics:

f. ~~Higher levels of sound emitted from activities~~.

Provision for noise associated with commercial activities are tolerated

5.3.14 To define a Neighbourhood Commercial zone where the following characteristics are maintained:

i. address the effects at the zone boundaries from noise, light spill, vibration, visual amenity and advertising.

5.5 PERFORMANCE STANDARDS – Arts and Commerce

5.5.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17.
Note that Chapter 17 contains requirements for noise sensitive activities.[24]

~~Sound emissions from any activity when measured at or within the boundary of any site or at the outside wall of any building on any site, other than the site from which the sound is emitted, shall not exceed the following:~~

~~At all times 65 dBA L10~~
~~At all times L max: the lower of L95 background sound level plus 30dBA, or 80dBA~~

~~Sound emissions from any activity when measured at or within the boundary of any site in the Residential zone, shall not exceed the following:~~

~~7am to 6pm 55 dBA L10~~
~~6pm to 7am 45 dBA L10 Lmax: the lower of L95 background sound level plus 30dBA, or 70 dBA~~

~~Where it is impractical to measure outside the building, measurements shall be made inside (with windows closed). Where indoor measurements are made, the noise limits stated above shall be reduced by 15dB.~~
~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in District Wide Rule – 10.8~~
~~These standards shall be read with and are subject to the provisions of Appendix D – Noise.~~

~~**5.5.2 Vibration.**~~
~~No activity shall cause a vibration considered offensive or objectionable.~~[25]

~~**5.5.2 Residential use.**~~

[24] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc
[25] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

a. Noise Insulation

Any habitable room in a building used for a Residential Activity within the Arts and Commerce zone shall be protected from noise arising from another site, either within the same building or outside the building by ensuring that the external sound insulation level achieves the following minimum performance standard:

$D_{nT,w} + C_{tr} > 30$ dB

Compliance with this performance standard shall be achieved by ensuring habitable rooms are designed and constructed in a manner that:

- accords with the schedule of typical building construction set out in Appendix D - Noise; or
- accords with an acoustic design certificate signed by a suitably qualified acoustic engineer stating the design as proposed will achieve compliance with the above performance standard.

5.7 PERFORMANCE STANDARDS - Riverfront

5.7.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[26]

Sound emissions from any activity when measured at or within the boundary of any site or at the outside wall of any building on any site, other than the site from which the sound is emitted, shall not exceed the following:

At all times	65 dBA L10
At all times	L max: the lower of L95 background sound level plus 30dBA, or 80dBA

Sound emissions from any activity when measured at or within the boundary of any site in the Residential zone, shall not exceed the following:

7am to 6pm	55 dBA L10	
6pm to 7am	45 dBA L10	Lmax: the lower of L95 background sound level plus 30dBA, or 70 dBA

Where it is impractical to measure outside the building, measurements shall be made inside (with windows closed). Where indoor measurements are made, the noise limits stated above shall be reduced by 15dB.

Temporary activities such as sporting, recreational, entertainment, cultural or similar events and outdoor gatherings, with the prior approval of the territorial authority, are not subject to the noise standards stated in this rule. For such events Council will use its powers under the Act to ensure that the general duty under sections 16 and 17 to avoid unreasonable noise of activities on the environment are met.

The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in the District Wide Rules. These standards shall be read with and are subject to the provisions of Appendix D – Noise.

5.7.2 Residential use.

a. Noise Insulation

Any habitable room in a building used for a Residential Activity within the Riverfront zone shall be protected from noise arising from another site, either

[26] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc

within the same building or outside the building by ensuring that the external sound insulation level achieves the following minimum performance standard:

$D_{nT,w} + C_{tr} > 30$ dB

Compliance with this performance standard shall be achieved by ensuring habitable rooms are designed and constructed in a manner that:

- accords with the schedule of typical building construction set out in Appendix D - Noise; or
- accords with an acoustic design certificate signed by a suitably qualified acoustic engineer stating the design as proposed will achieve compliance with the above performance standard.

5.7.3 Vibration.

No activity shall cause a vibration considered offensive or objectionable. [27]

5.9 PERFORMANCE STANDARDS – Central Commercial

5.9.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[28]

Sound emissions from any activity when measured at or within the boundary of any site or at the outside wall of any building on any site, other than the site from which the sound is emitted, shall not exceed the following:

At all times 65 dBA L10

At all times L max: the lower of L95 background sound level plus 30dBA, or 80dBA

Sound emissions from any activity when measured at or within the boundary of any site in the Residential Zone shall not exceed the following:

7am to 6pm 55 dBA L10

6pm to 7am 45 dBA L10 Lmax: the lower of L95 background sound level plus 30dBA, or 70 dBA

Where it is impractical to measure outside the building, measurements shall be made inside (with windows closed). Where indoor measurements are made, the noise limits above shall be reduced by 15dB.

The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in Chapter 19.

These standards shall be read with and are subject to the provisions of Appendix D – Noise.

5.9.3 Vibration.

No activity shall cause a vibration considered offensive or objectionable. [29]

In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall be used.

5.9.6 Residential use.

a. Noise Insulation

Any habitable room in a building used for a Residential Activity within the Central Commercial zone shall be protected from noise arising from another site, either within the same building or outside the building by ensuring that the external sound insulation level achieves the following minimum performance standard:

[27] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services
[28] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc
[29] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

~~$D_{nT,w} + C_{tr} > 30$ dB~~

~~Compliance with this performance standard shall be achieved by ensuring habitable rooms are designed and constructed in a manner that:~~

- ~~accords with the schedule of typical building construction set out in Noise (reference A4); or~~
- ~~accords with an acoustic design certificate signed by a suitably qualified acoustic engineer stating the design as proposed will achieve compliance with the above performance standard.~~

5.11 PERFORMANCE STANDARDS – Outer Commercial

5.11.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[30]

~~Sound emissions from any activity shall not exceed the following limits when measured at the site boundary:~~

~~7am to 10pm 65 dBA L10~~

~~10pm to 7am 55 dBA L10 Lmax: 70dBA or L95 background sound level plus 30dBA, whichever is the lower.~~

~~Sound emissions from any activity shall not exceed the following limits when measured on any land zoned for residential purposes:~~

~~7am to 6pm 55dBA L10~~

~~6pm to 7am 45 dBA L10 Lmax: 70dBA or L95 background sound level plus 30dBA, whichever is the lower.~~

~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in Chapter 19.~~

~~These standards shall be read with and are subject to the provisions of Appendix D – Noise.~~

~~**5.11.3 Vibration.**~~

~~No activity shall cause a vibration considered offensive or objectionable~~. [31]

~~In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall be used.~~

5.13 PERFORMANCE STANDARDS – Neighbourhood Commercial

5.13.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[32]

~~Sound emissions from any activity when measured on any land zoned for residential purposes shall not exceed the following:~~

~~7am to 6pm 55 dBA L10~~

~~6pm to 7am 45 dBA L10 70dBA Lmax: or L95 background sound level plus 30dBA, whichever is the lower.~~

~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in Chapter 19.~~

~~The above noise standards shall not apply to emergency sirens.~~

~~Rule 5.13.1 shall be read with and are subject to the provisions of Appendix D - Noise.~~

[30] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc

[31] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

[32] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc

5.13.3 Vibration.

No activity shall cause a vibration considered offensive or objectionable. [33]
In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall apply.

5.13.4 Residential use.

b. Any habitable room in a building used for a Residential Activity shall meet the following requirements.

Noise in Habitable rooms at all times shall not exceed 35 dBA L10.

If this standard cannot be meet with doors and windows open then forced air ventilation or air-conditioning is required.

Compliance with this performance standard shall be achieved by ensuring habitable rooms* are designed and constructed in a manner that:

i. Accords with the schedule of typical building construction set out in Appendix D – Noise; or

ii. Accords with an acoustic design certificate signed by a suitably qualified acoustic engineer stating the design as proposed will achieve compliance with the above performance standard.

Chapter 6 – Industrial Environment

6.3 POLICIES

6.3.5 To define manufacturing areas where the following characteristics are maintained:

c. protection for the amenity values of neighbouring areas;

6.5 PERFORMANCE STANDARDS - Manufacturing

6.5.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17.
Note that Chapter 17 contains requirements for noise sensitive activities.[34]

Sound emissions from any activity in the Manufacturing zone shall not exceed the following limits when measured within the boundary of any land zoned central commercial, outer commercial or neighbourhood commercial:

7am to 10pm 65 dBA L10
10pm to 7am 55 dBA L10 75dBA Lmax: or L95 background sound level plus 30dBA, whichever is the lower.

Sound from any activity in the Manufacturing zone when measured on any land zoned for residential or rural purposes shall not exceed the following:

7am to 6pm 55 dBA L10

[33] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services
[34] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc

~~6pm to 7am 45 dBA L10 85dBA Lmax or L95 background sound level plus 30dBA, whichever is the lower.~~

~~The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in District Wide Rule 10.8. These standards shall be read with and are subject to the provisions of Appendix D – Noise.~~

~~6.5.3 Vibration.~~

~~No activity shall cause a vibration considered offensive or objectionable.~~[35]

~~In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall be used.~~

Chapter 7 Airport Enterprise Zone

7.1 ISSUES

7.1.5 Wanganui Airport Air Noise

Airport flight operations create significant levels of noise over a wide geographical area beyond the Airport itself. Some activities are more sensitive to this noise than others, including residential dwellings and schools. Over time, there is an increased probability of conflict between the needs of both uses. It is improbable that the Wanganui Airport can be moved, and reducing operating hours for air operations may result in a reduction of the viability of the continued operation of the Airport.

7.2 OBJECTIVES

6.2.4 Air Noise

The adverse effects of operational noise from the Wanganui Airport are minimised.

7.3 POLICIES

6.3.6 Establishment of compatible activities

Provide for the establishment or expansion of activities in the Airport Enterprise Zone, that:

a. are not sensitive to air noise;
b. do not compromise the safe and efficient operation of airport activities; and,
c. are compatible with noise, flight paths and aeronautical equipment required to operate the airport.

6.3.10 Airport operating requirements

The airport shall be operated so that the day/night noise level (Ldn) produced by airport operations shall not exceed:

a. 65dBA at or outside the Air Noise Boundary; and
b. 55dBA at or outside the Outer Control Boundary.

7.5 PERFORMANCE STANDARDS – Airport Enterprise

7.5.1 Noise ~~excluding air noise~~

All activities shall comply with the noise standards provided in Chapter 17.

[35] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

Note that Chapter 17 contains requirements for noise sensitive activities.[36]

~~a. Sound emissions from any land use activity in the Airport Enterprise Zone, excluding Airport operational noise, shall not exceed the following limits when measured within the boundary of any land zoned Central Commercial, Outer Commercial or Neighbourhood Commercial:~~

~~7am to 10pm 65 dBA L10~~
~~10pm to 7am 55 dBA L10 75dBA Lmax: or L95 background sound level plus 30dBA, whichever is the lower.~~

~~b. Sound emissions from any land use activity, excluding Airport operational noise, in the Airport Enterprise Zone shall when measured on any land zoned for residential purposes shall not exceed the following:~~

~~i. 7am to 6pm 55 dBA L10~~

~~ii. 6pm to 7am 45 dBA L10~~

~~85dBA Lmax or L95 background sound level plus 30dBA, whichever is the lower.~~

6.7.2 Residential Units Internal Noise

a. New Aircraft Hanger Dwellings shall:

i. be fitted with acoustic insulation to ensure that noise does not exceed L_{dn} 40 dBA in any *habitable room* with all doors and windows shut.

ii. require an Acoustic Design report from a suitably qualified Acoustic Engineer confirming that any new *building* is designed to meet the (i) above.

6.7.3 Aircraft Engine Testing

a. No person shall operate an aircraft engine for the purpose of engine testing unless carried out in compliance with the following noise levels within the notional boundary to any dwelling in the rural zone or within the boundary of any residentially zoned site:

Monday to Sunday	7.00am to 10.00pm	55dBA Leq(2hours)
All other times		45dBA Leq(2hours)
All days 10.00pm to 7.00am		75dBA Lmax

b. On each occasion of testing the date, time, duration and reason for the tests shall be retained in a log which must be supplied to Council if requested

c. Aircraft engine testing shall be measured in accordance with New Zealand Standard NZS 6801:2008 “Acoustics – Measurement of environmental sound”.

~~**7.5.5 Vibration**~~

~~No activity shall cause a vibration considered offensive or objectionable~~. [37]~~In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall be used.~~

Chapter 8 – Reserves and Open Spaces

8.3 POLICIES

[36] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc
[37] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

8.3.1 *Ensure adequate provision, and distribution of recreational facilities and opportunities, and define reserves and open spaces to ensure the following characteristics are enhanced or maintained:*

…

e. Avoidance of nuisance from traffic, noise, glare or other adverse environmental effects on the surrounding environments.

8.5 PERFORMANCE STANDARDS – Reserves and Open Space

8.5.1 Noise.

All activities shall comply with the noise standards provided in Chapter 17. Note that Chapter 17 contains requirements for noise sensitive activities.[38]

~~a. Sound emissions (including public address systems) shall not exceed the following limits:~~

~~7.00am to 10.00pm 50dBA (L10) at or beyond any Residential zone boundary~~
~~7.00am to 10.00pm 60dBA (L10) at or beyond any other boundary~~
~~10.00pm to 7.00am 40 dBA (L10) at or beyond any boundary~~

~~b. In the defined circumstances the following noise limits will apply to events:~~

~~**Springvale Park:**~~

~~i. For up to five days per calendar year, but a maximum of two days consecutively,~~

~~8.00am to 12.30am~~	~~55dB L_{Aeq} at or beyond any Residential Zone boundary~~
	~~65 L_{eq} at 63Hz~~
	~~55 L_{eq} at 125Hz~~
~~8.00am to 12.30am~~	~~60dB L_{Aeq} at or beyond any other zone boundary~~
	~~70 L_{eq} at 63Hz~~
	~~60 L_{eq} at 125Hz~~
~~12.30am to 8.00am~~	~~40dB L_{Aeq} at or beyond any other zone boundary~~
	~~50 L_{eq} at 63Hz~~
	~~40 L_{eq} at 125Hz~~

~~ii. and for up to 10 days per calendar year.~~

~~8.00am to 11.00pm~~	~~55dB L_{Aeq} at or beyond any Residential Zone boundary~~
	~~65 L_{eq} at 63Hz~~
	~~55 L_{eq} at 125Hz~~
~~8.00am to 11.00pm~~	~~60dB L_{Aeq} at or beyond any other zone boundary~~
	~~70 L_{eq} at 63Hz~~
	~~60 L_{eq} at 125Hz~~
~~11.00pm to 8.00am~~	~~40dB L_{Aeq} at or beyond any other zone boundary~~
	~~50 L_{eq} at 63Hz~~
	~~40 L_{eq} at 125Hz~~

~~**Cooks Gardens**~~

~~i. for up to six days per calendar year.~~

~~8.00am to 11.00pm~~	~~55dB L_{Aeq} at or beyond any Residential Zone boundary~~
	~~65 L_{eq} at 63Hz~~
	~~55 L_{eq} at 125Hz~~
~~8.00am to 11.00pm~~	~~60dB L_{Aeq} at or beyond any other zone boundary~~
	~~70 L_{eq} at 63Hz~~
	~~60 L_{eq} at 125Hz~~
~~11.00pm to 8.00am~~	~~40dB L_{Aeq} at or beyond any other zone boundary~~
	~~50 L_{eq} at 63Hz~~
	~~40 L_{eq} at 125Hz~~

[38] Submission 25 KiwiRail, Further Submission 4 Architectural Designers New Zealand Inc

Noise shall be measured and assessed in accordance with the following standards:

- New Zealand Standard NZS 6801:2008 "Acoustics – Measurement of environmental sound"
- New Zealand Standard NZS 6802:2008 "Acoustics – Environmental Noise.

c. For any event generating noise above the standard limits, a Management Plan must be prepared and submitted to *Council** at least one week prior to the event.

d. Compliance with exceptions to the standard noise limits for the Reserves and Open Space zone must be confirmed for each event by either an approved Council officer or suitably qualified and experienced acoustic consultant at the expense of the event organiser. A report detailing the results of noise monitoring for each event shall be provided to the Customer Services Manager, by the event organiser, within one week of the event.

e. For each venue a list of potentially affected residents shall be identified, with those parties shall be advised at least seven days before any event occurs, and the hours of operation shall be included in addition to contact details of a person responsible for the management of the event.

f. Crowd noise from people in a park or reserve is considered a reasonable and acceptable effect of the use of recreation reserves, and as such shall not be controlled using rules in this Plan.

g. The above noise standards shall not apply to temporary military training activities as these activities are subject to separate standards contained in Chapter 19.

These standards shall be read with and are subject to the provisions of Appendix D - Noise.

8.5.3 Vibration.

No activity shall cause a vibration considered offensive or objectionable.[39]

In assessing whether vibration is offensive or objectionable, the limits set in NZS 2631: 1985-1989, Parts 1 - 3 shall apply.

[39] Submission 28 New Zealand Defence Force, Further Submission 5 MidCentral Public Health Services

13 SUBDIVISION AND INFRASTRUCTURE

13.3 Policies

13.3.32 Require subdivision creating additional allotments intended to support building development to provide safe and stable building platforms suitable for building development.

13.3.41 Avoid, remedy or mitigate any adverse effects generated by land use activities, subdivision or development adjoining major infrastructure, such as land transport networks where such adverse effects have the potential to reduce the safety and efficiency of the land transport network. Adverse effects include glare, inappropriate lighting, smoke or discharges that enter into the land transport network.

13.3.42 Ensure that land use activities, subdivision or development adjoining strategic land transport networks, including the railway corridor avoid, remedy or mitigate adverse reverse sensitivity effects of noise and vibration from that land transport network.

13.5 Performance Standards

13.5.6 Site suitability.

b. In addition, the identified building platform shall be required to meet the following requirements:

i. Shall be free of buildings and structures (where intended for future development), building restrictions, easements, yard setback requirements, or other restrictions to building.

ii. Shall be identified on the proposed plan of subdivision.

iii. Shall not be subject to material damage by erosion, falling debris, subsidence, or slippage.

iv. Shall meet the requirements for 'good ground' for 'conventional residential development' in NZS: 3604 2011 for standard timber framed buildings.

v. Exceed a minimum of one metre in height above subsurface groundwater at all times, and

vi. Have the ability to achieve compliance with the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZCEP: 34 2001) for the likely activities on any such allotment.

vii. For allotments in the Residential and Rural Lifestyle zones, shall be located outside the electricity transmission yard.

viii. Excluding allotments in the Residential and Rural Lifestyle zones, each allotment shall be able to be provided with a building platform that is not within 20 metres of the centreline of any electrical transmission lines which are designed to operate at or above 110kV.

ix. Must comply with 17.5.2(a) (Noise Sensitive Activities) and if 17.5.2 (b) applies this will be lodged on a section 221 certificate.[40]

[40] Submissions 26 Architectural Designers New Zealand Inc, 27 Paul McKenna and Further Submission 2 NZ Transport Agency

Chapter 17 - Noise

The objectives, policies and rules in this chapter apply across the District. They are grouped together to prevent repetition throughout the Plan.

The emission of noise is an intrinsic part of most activities which has the potential to produce adverse effects in the community.
The controls in the District Plan reflect the need for some flexibility while providing noise control standards that are achievable for the community, yet ensure protection from excessive or unreasonable noise.

The New Zealand Noise Standards, are nationally based standards which give guidance to the measurement of noise and the appropriate levels at which to control noise effects. They have been used as basic guidance documents on the approach to noise in this Plan.
Notwithstanding the noise standards specified in the Plan, the Council reserves the powers conferred on it by the relevant sections of the Resource Management Act 1991 to control any noise which has become an objectionable element or nuisance.

In particular, Section 16 of the Act imposes a duty on all persons to avoid unreasonable noise and Section 17 of the Act imposes a duty on all persons to avoid, remedy or mitigate adverse effects, whether or not the activity complies with the rules in this Plan. The Council has powers under Section 322 of the Act to issue "Abatement Notices" and under Section 327 to issue an "Excessive Noise Direction" and these mechanisms can be used to ensure that the best practicable means is adopted to reduce noise levels.

Equipment such as ventilation, air-conditioning and refrigeration plant in commercial and industrial zones may cause a nuisance to neighbouring residents notwithstanding that they may comply with the Plan's noise standards. Accordingly, to avoid the possibility that Council may take abatement action in future and require expensive remedies, the location and sound insulation of new ~~plant~~ activities should be carefully considered to minimise noise nuisance.

Airports, and their associated flight operations, generate noise. This noise is distributed over a wide geographical area, and can vary from barely perceptible to significant nuisance depending on the sensitivity to air noise of the activity where the noise occurs. These provisions manage the relationship between air noise and land use activities that may be sensitive to that air noise. ~~The following provisions should be read in conjunction with the Airport Enterprise Zone.~~ Note that aircraft noise generated in flight is not controlled under the Resource Management Act.[41]

Vibration is often assessed at the same time as noise effects. However, there are no relevant New Zealand Standards to assess vibration effects, therefore the issue is dealt under the nuisance provisions of the Health Act 1956 or as an adverse effect that there is a duty to manage under section 17 of the RMA.

[41] Submission 29 Wanganui Federated Farmers of New Zealand and Further Submissions 1 & 5 Horticulture NZ and MidCentral Public Health Services

17.1 ISSUES

17.1.1 Activities can produce unwanted sound that affects the health and safety of people as well as the amenity of an area.

17.1.2 Noise sensitive activities located in existing high noise environments and the adverse effects of that noise cannot reasonably be mitigated.

17.2 OBJECTIVES

17.2.1 To enable noise at levels which do not have an adverse effect on human health.

17.2.2 An acoustic environment within each zone that is compatible with the character of the area.

17.3 POLICIES

17.3.1 Ensure that new land use activities, subdivision or development adjoining strategic land transport networks including, the railway corridor, avoid, remedy or mitigate any potential adverse reverse sensitivity effects of noise and vibration; generated by ~~from~~ that land transport network provided that best practicable options have been implemented by the transport operator.

17.3.2 To manage noise emissions at levels, time restrictions or in locations which protect the health of individuals and the community.

17.3.3 Ensure that noise occurs ~~at~~ within[42] limits that maintain and reflect the amenity values and character of the locality by:

a) Limiting the sources, type, duration, timing or location of the noise;

b) New noise sensitive activities are acoustically isolated to mitigate any adverse noise effects from existing noise generating activities. ~~Noise sensitive activities are sound insulated to mitigate any adverse noise effects; from existing noise generating activities.~~ [43]

c) Requiring adoption of the 'best practicable option' and regular maintenance of noise generating equipment or activities; and

d) Requiring the use of landscaping to mitigate the perception of noise.

17.3.4 To maintain the character and amenity values of the rural zones with respect to noise, without unduly restricting rural activities. Limits for noise received by occupants of dwellings will be set to avoid restrictions on rural activities, provided that such activities adopt the best practicable option.

17.3.5 To ensure that there is a uniform approach to the measurement of noise effects and assessment of their adverse effects, all sound emissions shall be measured and assessed in accordance with:

a. New Zealand Standard 6801:2008 Acoustics - Measurement of Environmental Sound.

[42] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[43] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ

b. New Zealand Standard 6802:2008 Acoustics - ~~Assessment of~~[44] Environmental Noise.
c. New Zealand Standard 6803:1999 Acoustics – Construction Noise
d. NZS 6805:1992 Airport Noise Management and Land Use Planning
e. New Zealand Standard 6806:2010 Acoustics -[45] Traffic Noise from New or Altered Roads
f. New Zealand Standard 6807:1994 Noise Management and Landuse Planning for Helicopter Landing Areas
g. New Zealand Standard 6808:2010 Acoustics – Wind Farm Noise
h. New Zealand Standard 6809:1999 Acoustics -[46] Port Noise Management and Land Use Planning
i. AS/NZS1276.1:1999 Acoustics- Rating of sound insulation in buildings and of building elements Part 1: Airborne sound insulation.
j. ISO 140-5:1998 Acoustics – Measurement of Sound Insulation In Buildings And Of Building Elements Part 5: Field Measurements Of Airborne Sound Insulation Of Façade Elements And Facades.

17.4 RULES

17.4.1 Restricted Discretionary Activities.

The following activities are restricted discretionary activities throughout the District:

a. Events at Springvale Park or Cooks Gardens that do not comply with the performance standards for noise.

Council restricts its discretion to the following matters:

i. Preparation of an Operational Noise Management Plan by a suitably qualified and experienced acoustic consultant suitable to Council and containing:
- Description of activity including layout and position of noise sources on site;
- Description of sound sources including auxiliary sound sources
- Hours of operation;
- Proposed Management methods in line with the 'Best Practical Option' [BPO] defined under the RMA and related sections of the Act including s.16 and s.17 requirements;
- Noise monitoring procedures;
- Community consultation and liaison including a list of potentially affects residential sites.

b. Any permitted activity in a zone that does not comply with the noise performance standards in 17.5

Council restricts its discretion to the following matters:

i. The potential effects on human health;

ii. Limiting the sources, type, duration, timing or location of the noise;

iii. Preventing noise sensitive activities within certain distances of the source of the noise unless sound insulated;

iv. Requiring the use of the 'best practicable option' and regular maintenance of noise generating equipment or activities; and

v. Requiring the use of landscaping to mitigate the perception of noise.

17.4.2 Discretionary Activities

[44] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[45] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[46] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ

The following activities are discretionary activities throughout the District:

a. Any activity that produces noise that is not provided for as a permitted or restricted discretionary activity.

17.5 PERFORMANCE STANDARDS - Noise

17.5.1 General.

All Activities shall implement best practice options to minimise adverse noise effects.

Note: Council may require confirmation of compliance with any of these standards, from a suitably qualified and experienced acoustic expert.

17.5.2 Noise Sensitive Activities (including dwellings).

a. Noise Sensitive Activities shall be located at least 20 metres from the nearest traffic lane of a State Highway where the posted speed is at least 70km/hour.[47]

b. New, altered (more than 10% of the existing habitable gross floor area)[48] or relocated buildings for a noise sensitive activity on any site within any ~~rural~~[49], commercial or ~~industrial~~ manufacturing[50] zone (excluding the Airport Enterprise Zone) or within 30 metres of a railway designation (District Plan reference: D204) [51] or within 50 metres of any portion of the State Highway 3 designation (District Plan reference: D207) where a posted speed limit exceeding 70km/hr applies[52]

must ~~shall~~[53] comply with at least one of[54] the following:

~~a~~i. All ~~Any~~[55] habitable rooms within a new or altered building ~~shall~~ is[56] be designed to achieve an insulation rating of no less than ~~$D_{nT,w}$ + C_{tr} > 30 dB~~ $D_{2m,nT,w}$ + C_r > 30 dB[57] for the external building envelope of each habitable room when tested and verified in accordance with the following standards:

~~i. AS/NZS1276.1:1999 Acoustics- Rating of sound insulation in buildings and of building elements Part 1: Airborne sound insulation.~~

[47] Submission 24 New Zealand Transport Agency and Further Submission 4 Architectural Designers New Zealand Inc
[48] Submission 25 KiwiRail Holdings Limited and further submissions 2 & 5 – NZ Transport Agency and MidCentral Public Health Services
[49] Submission 26 Architechural Designers New Zealand Inc and Further submission 5 MidCentral Public Health Services
[50] Minor change to clarify that the zone in the Industrial Environment chapter of the District Plan, the Manufacturing Zone, must comply with this requirement.
[51] Minor change to clarify the exact point to measure from.
[52] Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services
[53] Minor change to improve readability.
[54] Minor change to improve readability.
[55] Minor change to improve readability.
[56] Minor change to improve readability.
[57] Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services

- AS/NZS ISO717.1:2004 Acoustics – Rating of sound insulation in buildings and of building elements – Airborne sound insulation. [58]

~~ii. ISO 140-5:1998 Acoustics – Measurement of Sound Insulation in Buildings and of Building Elements Part 5: Field Measurements of Airborne Sound Insulation of Façade Elements and Facades.~~

- ISO 16283-1:2014 Acoustics – Field measurement of sound insulation in buildings and of building elements – Part 1: Airborne sound insulation. [59]

~~b. Compliance with this performance standard shall be achieved when the design and construction of each habitable room:~~

This can be achieved by using ~~accords with~~[60] the exact construction specification and schedule as set out in 17.6.

~~Note: A new dwelling constructed to the Building Code will comply with this performance standard.~~[61]

or

ii. An acoustic design certificate is provided to Council by a suitably qualified acoustic engineer (suitable to Council) which confirms that when built to the recommended design and specification will achieve the minimum acoustic insulation standard of ~~$D_{nT,w}$ + C_{tr} > 30 dB~~ $D_{2m,nT,w}$ + C_r > 30 dB[62] for the external building envelope of each habitable room.

or

iii. An acoustic design certificate is provided to Council by an suitably qualified acoustic engineer (suitable to Council) stating the outdoor noise level at the most affected exterior of the building containing the habitable room will be unlikely to exceed:

55dB $L_{Aeq(1hr)}$ for rail traffic noise

57 dB $L_{Aeq(24hr)}$ for road traffic noise[63]

This can be used where a landscaping or physical noise insulation solution is proposed[64].

or

iv. Evidence is provided of a solid and continuous building, fence, wall or landform that blocks the line of sight from all windows and doors of every new or altered habitable room to any part of the road surface of the State Highway

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[58] Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services
[59] Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services
[60] Reformatting as a result of adopting a more flexible approach to reverse sensitivity for noise.
[61] Correction as the building code only brings the noise insulation up to $D_{2m,nT,w}$ + C_r > 28 dB, not the 30dB required.
[62] Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services
[63] Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services
[64] Submission 29 Wanganui Federated Farmers of New Zealand and Further Submission 5 MidCentral Public Health Services

Designation. [65]

c. If the above standard cannot be met with open-able doors and windows then:

i. mechanical air ventilation ~~shall be~~ is[66] required in accordance with provisions of the New Zealand Building Code G4- Ventilation.

~~ii.. At the same time as meeting this requirement, the sound of the system must not exceed 30 dB $L_{Aeq(30secs)}$ when measured 1m away from any grille or diffuser.~~[67]

- The occupant must be able to control the ventilation rate in increments up to a high air flow setting that provides at least 6 air changes per hour.
- The sound of the system must not exceed 35 dB LAeq(30secs) when measured 1m away from any grille or diffuser.[68]

17.5.3 Mining Explosives.

a. The measurement of blast noise (air blast) from explosives related to mining, quarry, mineral processing or construction activity shall be carried out in accordance with AS 2187.Part 2: ~~1993~~ 2006 Explosives Storage and Use Part 2: Use of Explosives.[69]

b. Blast noise (air blast) from explosives related to mining, mineral processing or construction activity shall not exceed a peak sound pressure level of 128dB ~~unweighted BZ~~.[70]

c. Blast noise (air blast) shall be measured at any point within the notional boundary of any dwelling unit, other than a dwelling unit on the same site as the activity.

d. Neighbouring sites shall be advised of pending blasts, at least 48 hours and again at least 1 hour before any such blast.

e. ~~The limit of particle velocity (p~~[71] ~~Peak particle velocity)~~ from ~~blast noise (air blast~~) blast vibration[72] measured on any foundation of an adjacent occupied building not connected with the site, or suitable location adjacent to the building, shall not exceed 25mm/second for commercial buildings or 10mm/second for dwellings and buildings of similar design.

17.5.4 Telecommunication cabinets.

Noise emission levels shall comply with Clause 9 of the Resource Management [National Environmental Standards for Telecommunication Facilities] Regulations 2008.

17.5.5 Commercial Boating.

Sound emissions from commercial boating activities shall not exceed the following limits:

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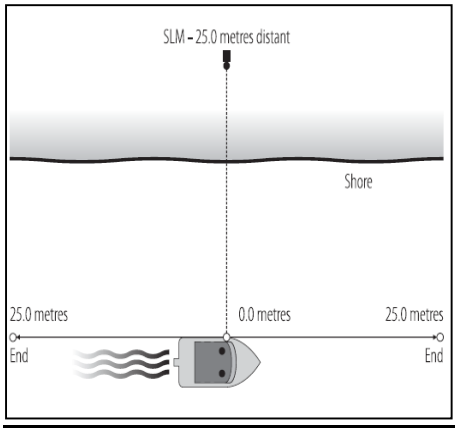
[65] Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services
[66] Minor correction in order to improve readability
[67] Consequential amendment Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services
[68] Submissions 24 & 29 - New Zealand Transport Agency & Wanganui Federated Farmers of New Zealand and Further Submissions 1, 4 & 5 – Horticulture NZ, Architectural Designers New Zealand Inc & MidCentral Public Health Services
[69] Minor correction in order to quote the correct standard.
[70] Submission 17 – MidCentral Public Health Services
[71] Minor correction in order to improve readability
[72] Submission 17 – MidCentral Public Health Services

a. When the boat is "wide open throttle" the noise measured at 25 metres will be less than:
77 dB L_{ASmax} for vessels to be operated between 0800 and 2000 hours;
67 dB L_{ASmax} for vessels to be operated between 2000 and 0800 hours.



17.5.6 RURAL ENVIRONMENT.

All activities within the Rural Production, Rural Lifestyle or Rural General zones shall comply with the following:

a. Noise emissions shall not exceed the following limits ~~when measured from~~ at any point within[73] the notional boundary, unless provided for elsewhere in this section.

~~AVERAGE MAXIMUM NOISE LEVEL~~ NOISE LIMIT[74] dB LAeq(15min)			LAF[75]max dBA
Daytime ~~7~~6[76].00am-7.00pm	**Evening** 7.00pm-10.00pm	**Night time** 10.00pm-7.00am	**Night time** 10.00pm – ~~7~~6[77].00am
50	**45**	**40**	**75**

b. The operation of **gas guns** for the purpose of bird scaring shall be permitted provided that:

i. The gas gun device shall be located so that the maximum number of devices does not exceed one device per four hectares of land in any single land holding, except that in the case of a single land holding less than four hectares in area, one device shall be permitted.

ii. The device shall only be operated between 6.30 am and 8.00 pm on any day.

iii. The operation of the device shall be controlled so that the maximum number of discharges per time period does not exceed 6 within any 60 minute period.

iv. Sound emitted from the device shall not exceed L_{AE} ~~75~~ 65[78] dB measured within the notional boundary of any rural dwelling or at any point within a residential zone. Sound

[73] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[74] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[75] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[76] Submission 29 – Wanganui Federated Farmers of New Zealand and Further Submission 1 & 5 – Horticulture NZ and MidCentral Public Health Services
[77] Submission 29 Wanganui Federated Farmers of New Zealand and Further Submission 1 Horticulture NZ
[78] Submissions 2-16 from various residents of Westmere and further submissions 1 and 3 from Horticulture NZ and Federated Farmers

levels shall be measured in accordance with NZS6801:2008 *Acoustics – Measurement of Sound*.

v. No device shall be placed in such a manner that any public place receives noise exceeding exceed L_{AE} 90 dB measured in accordance with NZS6801:2008 *Acoustics – Measurement of Sound*.

c. The operation of **avian distress alarms** for the purpose of bird scaring shall be permitted provided that:

i. The device shall not used within 300 metres of a notional boundary of any dwelling ~~unless a Bird Management Plan is prepared and accepted by Council.~~[79]

ii. The device shall only be operated between 6.30 am and 8.00 pm on any day.

iii. Sound emitted from the device shall not exceed LAeq(15 min) 50 dB when measured within the notional boundary of any rural dwelling or at any point within a residential zone;

iv. No device shall be placed in such a manner that in any public place receives noise exceeding exceed L_{Amax} 80 dB

d. The operation of **Frost Fans** for the purpose of protecting a crop from frost from bud burst to harvest shall be permitted provided that noise (excluding maintenance and testing) does not exceed 55 dBA Leq (15min):

i. At any point within the notional boundary of any noise sensitive activity; or
ii. At a distance of 300 metres from the device.

17.5.7 RESIDENTIAL ENVIRONMENT.

All activities within the Residential, Coastal Residential or Rural Settlement zones shall comply with the following:

a. Sound emissions from any activity shall not exceed the following limits at any point within ~~when measured on, or within~~[80], the boundary of any other site zoned for residential, coastal residential or rural settlement purposes.

~~**AVERAGE MAXIMUM NOISE LEVEL**~~ **NOISE LIMIT**[81] **dB LAeq(15min)**			**LAF**[82]**max dBA**
Daytime 7.00am-7.00pm	**Evening** 7.00pm-10.00pm	**Night time** 10.00pm-7.00am	**Night time** 10.00pm – 7.00am
55	**45**	**40**	**75**

17.5.8 COMMERICAL ENVIRONMENT.

[79] Submission 29 – Wanganui Federated Farmers of New Zealand and Further Submissions 1 & 5 – Horticulture NZ and MidCentral Public Health Services
[80] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[81] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[82] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ

All activities within the Arts and Commerce, Riverfront, Central Commercial, Neighbourhood Commercial or Outer Commercial zones shall comply with the following:

a. Sound emissions from any activity shall not exceed the following limits at any point within the zones specified:[83]

	~~AVERAGE MAXIMUM NOISE LEVEL~~ NOISE LIMIT[84] dB LAeq(15min)			LAF[85]max dBA
	Daytime 7.00am-7.00pm	Evening 7.00pm-10.00pm	Night time 10.00pm-7.00am	Night time 10.00pm – 7.00am
~~At a~~ Residential Zone ~~Boundary~~[86]	55	45	40	75
Other ~~Boundaries~~ Zones	65			85

17.5.9 INDUSTRIAL ENVIRONMENT.

All activities within the Manufacturing zone shall comply with the following:

a. Sound emissions from any activity shall not exceed the following limits ~~when measured at the following boundaries~~ at any point within the zones specified:[87]

	~~AVERAGE MAXIMUM NOISE LEVEL~~ NOISE LIMIT[88] dB LAeq(15min)			LAF[89]max dBA
	Daytime 7.00am-7.00pm	Evening 7.00pm-10.00pm	Night time 10.00pm-7.00am	Night time 10.00pm – 7.00am
~~At~~ Residential Zone ~~Boundary~~	55	45	40	75
Other ~~Boundaries~~ [90]Zones	65		55	75

17.5.10 AIRPORT ENTERPRISE ZONE.

All activities within the Airport Enterprise zone shall comply with the following:

a. Sound emissions from any activity (excluding airport operational noise) shall not exceed the following limits when measured within the boundary of any land zoned Central Commercial, Outer Commercial or Neighbourhood Commercial:

~~AVERAGE MAXIMUM NOISE LEVEL~~	LAF[92]max dBA

[83] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[84] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[85] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[86] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[87] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[88] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[89] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[90] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ
[92] Submission 17 – MidCentral Public Health Services and Further Submission 1 – Horticulture NZ

~~AVERAGE MAXIMUM NOISE LEVEL~~ NOISE LIMIT[91] dBA(10min)		
Daytime 7.00am-10.00pm	**Night time** 10.00pm-7.00am	75 or L95 background sound level plus 30dBA, whichever is lower
65	**55**	

b. Sound emissions from any activity (excluding airport operational noise) shall not exceed the following limits when measured within the boundary of any land zoned for residential purposes:

~~AVERAGE MAXIMUM NOISE LEVEL~~ NOISE LIMIT[93] dBA(10min)		LAF[94]max dBA
Daytime 7.00am-6.00pm	**Night time** 6.00pm-7.00am	85 or L95 background sound level plus 30dBA, whichever is lower
55	**45**	

c. Residential Units Internal Noise.

New aircraft hanger dwellings shall:

i. be fitted with acoustic insulation to ensure that noise does not exceed L_{dn} 40 dBA in any habitable room with all doors and windows shut.

ii. require an Acoustic Design report from a suitably qualified Acoustic Engineer confirming that any new building is designed to meet the (i) above.

d. Aircraft Engine Testing.

i. No person shall operate an aircraft engine for the purpose of engine testing unless carried out in compliance with the following noise levels within the notional boundary to any dwelling in the rural zone or within the boundary of any residentially zoned site:

~~AVERAGE MAXIMUM NOISE LEVEL~~ NOISE LIMIT[95] dBA Leq(2 hours)		LAF[96]max dBA
Monday to Sunday 7.00am-10.00pm	**All other times**	All days 10.00pm-7.00am
55	**45**	**75**

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ii. On each occasion of testing the date, time, duration and reason for the tests shall be retained in a log which must be supplied to Council if requested.

iii. Aircraft engine testing shall be measured in accordance with New Zealand Standard NZS 6801:2008 “Acoustics – Measurement of Environmental Sound”.

17.5.11 NATURAL ENVIRONMENT.

All activities within the Reserves and Open Spaces zone shall comply with the following:

a. Sound emissions from any activities (including amplified sound ~~public address systems~~) shall not exceed the following limits:

	~~AVERAGE MAXIMUM NOISE LEVEL~~ NOISE LIMIT[97] dB LAeq(15min)		**LAF[98]max dBA**
	Daytime 7.00am-10.00pm	**Night time** 10.00pm-7.00am	**Night time** 10.00pm – 7.00am
~~At~~ Residential Zone ~~Boundary~~	**50**	**40**	**75**
Other ~~Boundaries~~ [99]Zones	**60**	**40**	**75**

b. The following noise limits shall apply to events at the specified locations:

i. Events at Springvale Park:

	For up to 5 calendar days per year but for no more than 2 consecutive days			**For up to ten calendar days per year**	
	8.00am – 12.30am	12.30am – 8.00am		8.00am – 11.00pm	11.00pm – 8.00am
~~At~~ Residential Zone ~~Boundary~~	55 dB $L_{Aeq(15min)}$	40 dB $L_{Aeq(15min)}$		55 dB $L_{Aeq(15min)}$	40 dB $L_{Aeq(15min)}$
	65 dB $L_{Aeq(15min)}$ at 63Hz	50 dB $L_{Aeq(15min)}$ at 63Hz		65 dB $L_{Aeq(15min)}$ at 63Hz	50 dB $L_{Aeq(15min)}$ at 63Hz
	55 dB $L_{Aeq(15min)}$ at 125Hz	40 dB $L_{Aeq(15min)}$ at 125Hz		55 dB $L_{Aeq(15min)}$ at 125Hz	40 dB $L_{Aeq(15min)}$ at 125Hz
Other ~~Boundaries~~ [100]Zones	60 dB $L_{Aeq(15min)}$	40 dB $L_{Aeq(15min)}$		60 dB $L_{Aeq(15min)}$	40 dB $L_{Aeq(15min)}$
	70 dB $L_{Aeq(15min)}$ at 63Hz	50 dB $L_{Aeq(15min)}$ at 63Hz		70 dB $L_{Aeq(15min)}$ at 63Hz	50 dB $L_{Aeq(15min)}$ at 63Hz
	60 dB $L_{Aeq(15min)}$ at 125Hz	40 dB $L_{Aeq(15min)}$ at 125Hz		60 dB $L_{Aeq(15min)}$ at 125Hz	40 dB $L_{Aeq(15min)}$ at 125Hz

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ii. Events at Cooks Gardens:

	For up to 6 calendar days per year	
	8.00am – 11.00pm	11.00pm – 8.00am
~~At~~ Residential Zone ~~Boundary~~	55 dB $L_{Aeq(15min)}$	40 dB $L_{Aeq(15min)}$
	65 dB $L_{Aeq(15min)}$ at 63Hz	50 dB $L_{Aeq(15min)}$ at 63Hz
	55 dB $L_{Aeq(15min)}$ at 125Hz	40 dB $L_{Aeq(15min)}$ at 125Hz
Other ~~Boundaries~~ [101]Zones	60 dB $L_{Aeq(15min)}$	40 dB $L_{Aeq(15min)}$
	70 dB $L_{Aeq(15min)}$ at 63Hz	50 dB $L_{Aeq(15min)}$ at 63Hz
	60 dB $L_{Aeq(15min)}$ at 125Hz	40 dB $L_{Aeq(15min)}$ at 125Hz

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17.6 NOISE INSULATION TABLE

The schedule describes the minimum requirements necessary to achieve an external sound insulation level of ~~$D_{nT,w}$ + C_{tr} > 30 dB~~ $D_{2m,nT,w}$ + C_r > 30 dB[102]

Building Element	Minimum Construction Requirement	
External Walls of Habitable Rooms	Stud Walls: • Exterior cladding:	20mm timber or 9mm compressed fibre cement sheet over timber frame (100mm x 50mm)
	• Cavity infill:	Fibrous acoustic blanket (batts or similar of a minimum mass of 9kg/m³) required in cavity for all exterior walls. Minimum 90mm wall cavity
	• Interior lining:	One layer of 12mm gypsum plasterboard. Where exterior walls have continuous cladding with a mass of greater than 25kg/m² (e.g. brick veneer or minimum 25mm stucco plaster), internal wall linings need to be no thicker than 10mm gypsum plasterboard.
	• Combined superficial density:	Minimum not less than 25kg/m² being the combined mass of external and internal linings excluding structural elements (e.g. window frames or wall studs) with no less than 10kg/m² on each side of the structural elements.
	Mass Walls:	190mm concrete block, strapped and lined internally with 10mm gypsum plasterboard, or 150mm concrete wall.
Glazed Areas of Habitable Rooms	Glazed areas up to 10% of floor area	6mm glazing single float
	Glazed areas between 10% and 35% of floor area	6mm laminated glazing
	Glazed areas greater than 35% of floor area	Require a specialist acoustic report to show conformance with the insulation rule.
	Frames to be aluminium window frames with compression seals.	
Skillion Roof	Cladding:	0.5mm profiled steel or 6mm corrugated fibre cement, or membrane over 15mm thick ply, or concrete or clay tiles.
	Sarking	17mm plywood (no gaps).
	Frame:	Minimum 100mm gap with fibrous acoustic blanket (batts or similar of a minimum mass of 9kg/m³).
	Ceiling:	Two layers of 10mm gypsum plasterboard (no through ceiling lighting pementrations unless correctly acoustically rated). Fibrous acoustic blanket (batts or similar of a minimum mass of 9kg/m³).
	Combined superficial density:	Combined mass with cladding and lining of not less than 25kg/m² with no less than 10kg/m² on each side of structural elements.
Pitched roof (all roofs other than skillion roofs)	Cladding:	0.5mm profiled steel or tiles, or membrane over 15mm thick ply.
	Frame:	Timber truss with 100mm fibrous acoustic blanket. (batts or similar of a minimum mass of 9kg/m³) required for all ceilings.
	Ceiling:	12mm gypsum plaster board.
	Combined superficial density:	Combined mass with cladding and lining of not less than 25kg/m².
Floor areas open to outside	Cladding:	Under-floor areas of non-concrete slab type floors exposed to external sound will require a cladding layer lining the underside of floor joists of not less than 12mm ply.
	Combined superficial density:	Floor to attain a combined mass not less than 25kg/m² for the floor layer and any external cladding (excluding floor joists or bearers).
External door to habitable rooms	Solid core door (min 25kg/m²) with compression seals (where the door is exposed to exterior noise)	

[102] Minor Correction to improve readability